

**DECISION MEMO
MOWICH HUCKLEBERRY THINNING**

USDA Forest Service
Mount Adams District,
Gifford Pinchot National Forest
Skamania County, Washington
Sections 25, 26, T.4N, R.6E, W.M.

BACKGROUND

The Mount Adams District, Gifford Pinchot National Forest proposed a 63-acre huckleberry enhancement project, including commercial thinning of a dense overstory of 75-year old trees and underburning to reduce competing vegetation and improve huckleberry production. This project is located within Sections 25, 26, T.4N, R.6E, on the south side of Mowich Butte. The area consists of a second growth stand of Douglas-fir that was regenerated following a fire in 1926.

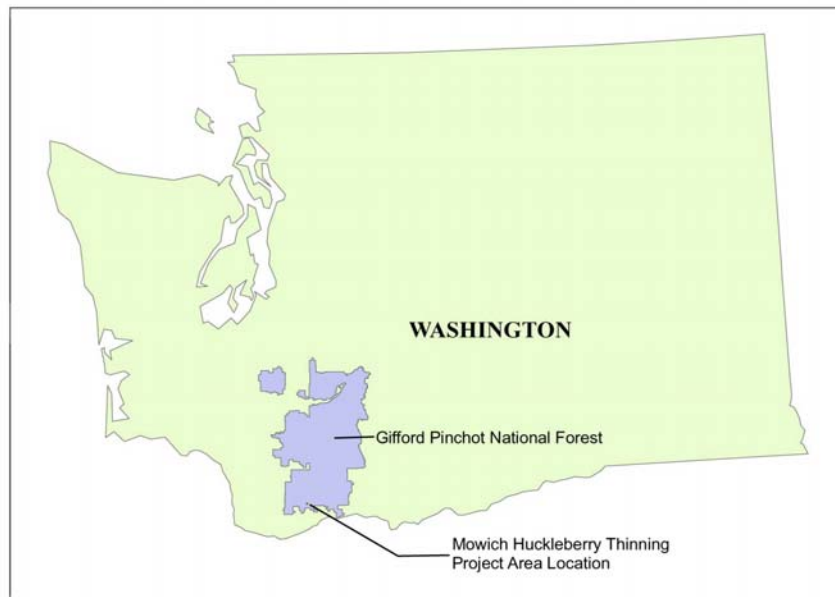


Figure 1. Mowich Huckleberry Thinning project area location.

PURPOSE OF AND NEED FOR ACTION

The purpose of this action is to restore conditions that benefit the continued production of native huckleberries (*Vaccinium membranaceum*) on the Mount Adams Ranger District to benefit local Native Americans, recreational berry pickers and local communities, as well as the natural ecosystems associated with these berry fields. The huckleberry shrubs and fruit production are in decline due to increased shade from the overstory trees and competition with other shrub species, such as vine maple. This action would thin the overstory stand to permit more light to reach the existing berry bushes, thus increasing berry production, and to remove competing vegetation to allow bushes to expand and occupy more growing space.

Within the project area, portions of Riparian Reserves would be thinned to improve the health and vigor of riparian forests and to improve habitat.

MANAGEMENT DIRECTION

Management Direction for the Mowich Huckleberry Thinning planning area is provided by 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*. The Mowich Huckleberry Thinning project is located within the Roaded Recreation management area (RM) and the General Forest management area (TS). The lands designated as Roaded Recreation are meant to accommodate dispersed recreation, including hiking, fishing, berry picking, camping, and wildlife viewing beside or near roads. The Visual Quality Objective is Partial Retention. There is no scheduled timber harvest within the RM management prescription, however trees may be removed to enhance the recreational objectives of this management area (USDA 1990, p. IV-96).

A small portion of the project is located within the General Forest management area (TS). The objective for these lands is to produce a predictable and sustainable level of timber sales other resources that will not degrade the environment (USDA 1990, p. IV-136).

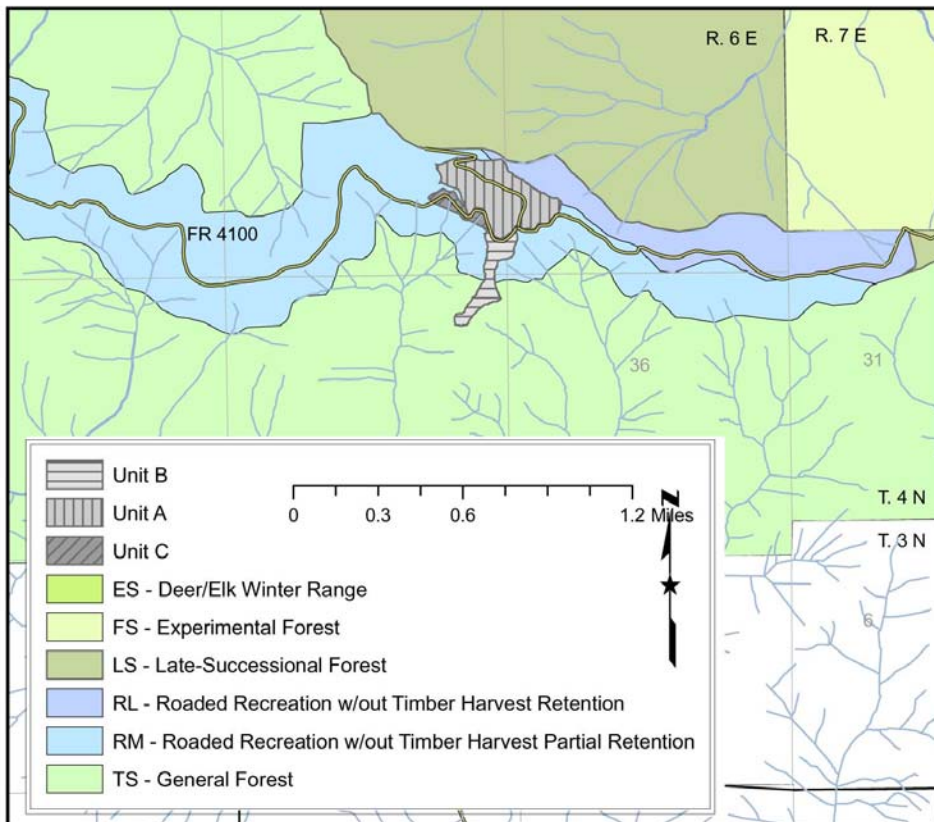


Figure 2. GPNF Forest Plan allocations in the vicinity of the Mowich Huckleberry Thinning project.

The area is partly within the (unnamed) Columbia River Frontal watershed (1707010513), which is neither a Tier 1 nor 2 watershed under the Northwest Forest Plan and partly within the Wind River watershed (1707010512). Thinning activities occur in the northern portion of the Rock Creek subwatershed of the Columbia River Frontal watershed. Recommendations from the *Rock Creek Watershed Analysis* (2000), encourage reducing the density of these stands as a means of enhancing the berry production. These dense stand conditions, if not managed, will limit the future berry production of the huckleberry plants, a key characteristic of the desired future condition for this area (USDA 2000, Chapter 4-3). Connected road-related actions extend into the Trout Creek subwatershed of the Wind River watershed. The range of natural variability is described by resource in the *Wind River Watershed Analysis* (1996, updated 2001) and the *Rock Creek Watershed Analysis* (2000).

The streams within the activity area are bordered by Riparian Reserves (indicated in Figure 3), in which thinning may occur with a prescription designed to meet aquatic objectives. The Riparian Reserves and the prescribed no-cut buffers are discussed further in the **Aquatics Resources** section, below.

PROPOSED ACTION

The Proposed Action would commercially thin approximately 47 upland acres and approximately 11 riparian acres within the Mowich Huckleberry Enhancement planning area using ground based logging systems (Table 1, Figure 2).

Table 1. Detail of Silvicultural Cutting Prescription/Riparian Planting/Slash Treatment/Logging System for the Mowich Planning area Treatment Units

| Unit # | Total Acres* | Upland Treatment/Ac. | Riparian Treatment/Ac. | Slash Treatment | Logging System |
|--------------|--------------|----------------------|------------------------|--|----------------|
| A | 43 | 31.7 | 8.3 | Under Burn | Ground |
| B | 14 | 13.4 | 0.5 | Under Burn | Ground |
| C | 6 | 1.9 | 2.5 | Jackpot Pile | Ground |
| Total | 63 | 47 | 11.3 | 4.4 acres hand piled 43 acres broadcast | -- |

* Includes approximately 5.4 acres of untreated riparian buffers.

The connected actions include, constructing approximately 0.5 miles of temporary roads, reconstructing approximately 1.0 mile of the Forest Road 41 (existing road), and road surface, culvert repairs, culvert replacements and drainage improvements spread along nine miles of Forest Road 43. The Proposed Action also includes, slash treatment, and removing temporary roads.

The proposed action would thin trees 8.0” or greater to a Curtis relative density (RD) of 27 (approximately 60 trees/acre and 25 to 35% canopy closure) within the uplands and to a Curtis RD42 (approximately 110 trees/acre and 50 to 55% canopy closure) within the treated portions of the Riparian Reserves. Thinning prescriptions in Riparian Reserves will favor retention of larger trees and the less well-represented tree species. The intent is to promote accelerated growth of dominant trees, and to increase structural and species diversity within the riparian areas. Trees cut in Riparian Reserves will be directionally felled away from the stream.

Approximately 43 acres (Units A and B) would be underburned after logging to stimulate plant re-growth and berry production. A percentage of the logging slash (limbs and needles) would be left on site to facilitate the burn. Unit C (4.4 acres) would be thinned and concentrations of slash would be burned (jackpot burning). A small dozer fire line would be constructed around the perimeter of the 63 acres in areas outside of the Riparian Reserve areas. Handline in lieu of dozer line would be constructed within the Riparian Reserves.

Road activities include all management of the road system including pre and post logging treatments; reconstruction and decommissioning of new temporary roads, and construction of log landings. No new permanent road construction will occur with the Mowich Huckleberry Thinning project. Construction of approximately 0.5 miles of temporary roads will occur to access unit A. Approximately 1.0 mile of the currently closed segment of Road 4100 and a portion of Road 4300 would be reconstructed to facilitate project implementation and would be re-closed after project activities.

Approximately 120 linear feet of down logs would be created or maintained and 2.6 snags per acre would be created over the entire 63 acres.

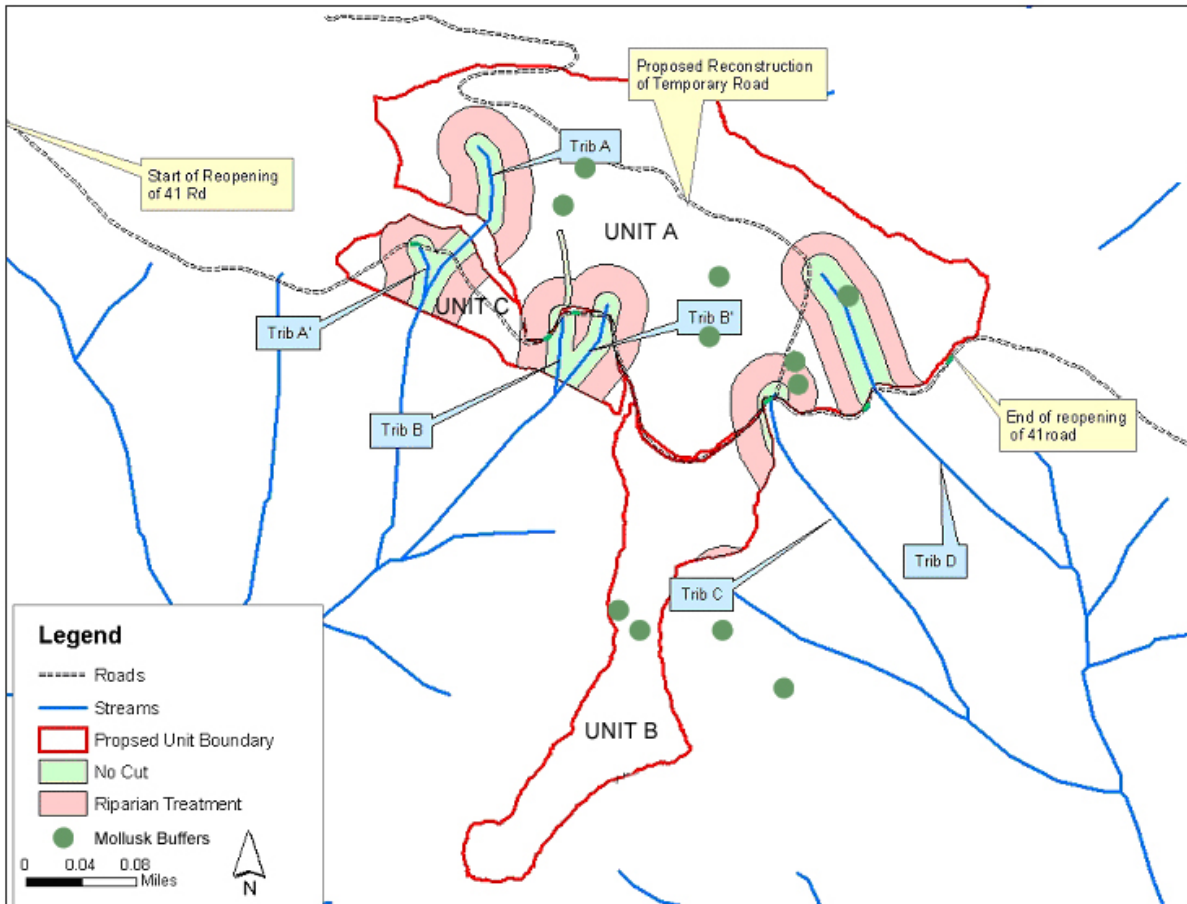


Figure 3. Mowich Huckleberry Thinning project.

PROJECT DESIGN FEATURES

To comply with standards and guidelines, best management practices, or on the basis of site-specific analysis the following specific design features have been incorporated into the project proposal and project contract specifications, as appropriate.

1. A monitoring plan would be developed to measure project implementation and effectiveness of meeting the purpose and need (huckleberry enhancement) of the project.
2. In areas outside of the Riparian Reserves, residual vine maple clumps left after logging, would be slashed prior to the underburn.
3. One end suspension would be achieved in all yarding activities.
4. Ground-based equipment would not travel over areas where rutting exceeds six inches in depth for a length of ten feet or more.
5. Landings, temporary roads, skyline corridors, and skid trails would be approved prior to timber felling. Approved skid trails and landings would not exceed 10% of the unit acreage. Equipment used in yarding and brush disposal activities would be confined to these pre-approved areas. The exception is that feller-bunchers would be permitted to operate outside of approved areas when operating on slash or forest debris. Skid roads and trails would be located on slopes less than 30%.
6. Contractor will be required to have a Spill Prevention Plan and spill kits for heavy equipment in place prior to excavation.
7. Proposed activities must meet the criteria of the programmatic *Biological Assessment for USDA Forest Service Programmatic Activities* (2003), the MOU with the Washington State Department of Fish and Wildlife, the MOA with the Washington State Department of Ecology and the Clean Water Act.
8. Erosion control measures will be implemented and at a minimum include a heavy application of mulch immediately after work is completed. Seeding may also occur and may be delayed until September when cooler, moister weather conditions would aid growth following seed germination. Seeding would be accomplished by the end of September.
9. Riparian vegetation such as willow, alder, and cedar trees will be planted at crossings where bankfull width is 20 feet or wider to provide shade and future sources of large woody debris. Planting may be delayed until the following spring, to aid survival of the young trees.
10. Following project completion Road 4100-405 and landings would be scarified to a depth of 18 inches (minimum). Scarification would be done with an excavator bucket or similar equipment to eliminate linear furrowing of the ground surface and to increase surface water infiltration. A minimum of 95% of the road surface would be scarified to meet this measure. To prevent re-compacting of the treated roadways and landings, no ground-based equipment would be operated on scarified portions of roads and landings after scarification is completed. Crossdrains or water bars would be installed every 150 feet or more frequently where slopes exceed 5%. Roads and landings would be seeded with native grasses, fertilized, and mulched with weed free straw.
11. The portion of the currently closed segment of Road 4100 that is reconstructed to facilitate project implementation would be re-closed after project activities are completed. Culverts would be removed and drainage would be stabilized prior to closure by use of waterbars

where necessary. Culvert removal sites would be stabilized by laying excavated culvert removal slopes back to a 2:1 slope (horizontal:vertical). Bottom width of these excavations would exceed bankfull width of the streams draining through them (widths to be provided by the Forest Service).

12. Yarding or vehicle traffic on Road 4100-405 would occur only during dry conditions and typically between July 1 and September 30 unless dry conditions persist longer into the fall. The September 30 end date for haul may be waived if conditions are good and haul-related sediment production is not increased due to increased precipitation. Conditions typically meriting waivers include: 1) daily precipitation levels remaining below the average daily maximum precipitation for the July 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 July through September period.
13. Following project completion skid trails would be scarified to break up surface compaction. Crossdrains or waterbars would be installed every 150 feet or more frequently where slopes exceed 5%. Available logging slash would be placed across the scarified surface. (Acceptable grass seed mix; a qualified specialist would specify type of weed free mulch; and application rates).
14. Prior to any expected seasonal period of precipitation and runoff, cross drains and grade breaks would be installed in all temporary roads, skid trails and landings.
15. Following project completion, dozer lines and handlines would be waterbarred to ensure that any surface runoff is dispersed and routed off the disturbed fireline. Spacing of waterbars would be variable depending on slope of the fireline. All hand firelines within Riparian Reserves would be seeded, mulched and fertilized following burning and prior to the wet season. If burning is to be done in the spring, this may require handlines near streams to be constructed in spring immediately prior to the burn.
16. Riparian Reserve thinning guidelines:
 - Riparian Reserve widths = 156' (intermittent streams).
 - No cut/entry buffers, to reduce the potential for sediment introduction, would be as follows:
 - Eastern most intermittent headwater stream in Unit A – 75-foot no cut/entry buffer.
 - Remainder of Riparian Reserves – 50-foot no cut/entry buffer. The exception being a 10-foot no cut/entry buffer at the head of a tributary as noted on the project map.
 - Cut trees would be directionally felled away from the stream channels and Riparian Reserves. The underburn would not be intentionally introduced within the Riparian Reserves, but would be allowed to back in under light burning conditions.
 - All aquatic features and Riparian Reserves would be located on Sale Area Maps. Riparian Reserve boundaries and cutting boundaries within Riparian reserves would be marked on the ground.
 - Daylight three trees per acre (largest diameter) within the riparian reserve treatment areas. Remove all Douglas-fir trees within an 18-foot radius of these trees.

- After burning, shade tolerant species (western redcedar [40%], western hemlock [60%]) would be planted within the Riparian Reserve areas. Vexar® tubing, with two sticks, would be placed on the western redcedar to deter animal browsing. Tubing should be completed within one week after planting. Red alder would be planted at the base of Road 4100-405.
 - Pacific silver fir, western hemlock, western red cedar, or hardwoods would not be harvested within the Riparian Reserves.
 - Use of ground-based equipment within Riparian Reserves would be minimized as described below to minimize disturbance of ground cover, soils and vegetation within Riparian Reserves.
 - Feller-bunchers (for cutting/bunching) and track mounted excavators (for loader logging) would be permitted to access trees within treated portions of Riparian Reserves. Skidders would operate from outside of Reserves.
 - Skidders and logging equipment may utilize Roads 4100 and the 4100-405 within the riparian. Log landings would be placed outside the Riparian Reserves.
 - Skid trails and heavy equipment would not be operated in the bottom of ephemeral channels and swales.
 - Trees cut within the Riparian Reserves would have the top attached to the last log when removed to avoid enhancing the fuel load with the riparian areas. No slash piling would be done within Riparian Reserves.
17. Known sites of the Malone's jumping slug would be protected with a no cut/burn buffer (120' radius circle), if required. Timber would be directionally felled away from the buffers.
18. Protect existing remnant down logs to the extent possible by falling trees away from the logs, and routing skid trails around them.
19. To the extent possible retain existing snags and live broken-top trees.
20. If needed following harvest and burning, top or girdle additional trees to increase snag density to at least 2.6 per acre, and fell trees to create at least 120 linear feet of hard logs per acre.
21. To control known populations of weeds within the planning area, on adjoining and/or access roads, weeds would be removed by hand pulling or by other methods determined to be appropriate, before project implementation. The following are site-specific control measures:
- Control specified invasive plants at staging areas, landings, culvert replacement sites, and along access roads for 1/2 mile preceding areas of ground disturbance (i.e. staging areas, and harvest units adjacent to roads), to 1/2 mile following area of ground disturbance, and within timber harvest units, as specified below:
 - Since very few invasive plants were noted adjacent to or nearby (within ~ 1/2 mile) of the treatment units, there is no need for pre-treatment of invasive plants along adjacent roadsides. However, there are known infestations of *Senecio jacobaea* (tansy ragwort) along Road 4300, adjacent to planned culvert replacements. To help prevent expansion of the existing infestation into areas that will be disturbed during the culvert work, hand control tansy ragwort along Road 4300 from milepost 0 to milepost 8.5, during the same season in which the road work will occur, but prior to project implementation. Re-vegetate disturbed areas with a native seed mix.

- For two field seasons following project completion, survey and control invasive plant occurrences along skid trails and landings, and scarified road segments (including Road 4100-405). If new invasive plant populations are located during surveys, population data shall be collected for entry into the Natural Resource Inventory System (NRIS) database using an NRIS compatible form provided by the District Botanist. After two years, invasive plant control needs within the project area should be re-evaluated, and a determination made as to whether further treatment is needed.
 - 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.
 - Minimize road maintenance clearing zones, as much as safety regulations would allow, to maintain shady conditions that help minimize invasive plant population expansion.
22. To help prevent the introduction and spread of new species of noxious weeds into the planning area, the contractor would be required to ensure that all logging equipment (harvesters, skidders, excavators) moved onto national forest lands is free of soil, seeds, vegetative matter, or other debris that could hold or contain seeds.
 23. Gravel, fill, sand stockpiles, quarry sites, and borrow material would be inspected for invasive plants before use and transport. Infested sources would be treated to remove the weeds before any use of pit material. Only gravel, fill, sand, and rock that is judged by Forest Service weed specialists to be weed free would be used.
 24. Weed-free straw and mulch would be used for all erosion control activities within the sale area and associated with road construction or reconstruction.
 25. Re-vegetate skid trails, landings, and scarified road segments (including 4100-405) with a native seed mix. Recommended seed mixes and application rates are provided in Appendix A of the Botanical Resource Report.
 26. A KV Collection Plan would be prepared to treat noxious weeds, fell 4 trees per acre within the riparian reserves for down woody material, and slash the vine maple. KV funding would be contingent upon excess receipts from the sale of the timber sale.
 27. A Brush Disposal Plan (BD) would be prepared to collect funds for the underburn. Washington State air quality standards and guidelines would be met.
 28. Prescribed fire (underburns, slash pile burns) would be conducted under specific environmental conditions and intensity levels, in accordance with pre-determined management objectives and guidelines. Risk management would be prepared as part of the burn in order to ensure minimal threat of fire escape. Treatment periods are generally late spring (late May through June) and late fall (mid October through November).
 29. Activity slash, within the units A and B, would not be piled, except at the designated landing locations. The purchaser would be required to yard tops attached down to a 4" diameter within the uplands.
 30. Public notification of logging activities would be posted on the haul routes and communicated through the Gifford Pinchot National Forest media outlets (i.e. website) during the huckleberry picking season (late July through early September).
 31. The following road improvement projects would be implemented, as funding allows:

Road 43

General work - brushing, grading, culvert inlet cleaning

- MP 0 – 1.65 Patch pot holes in asphalt
- MP 0.98 Remove existing culvert and replace with larger, fish passage road culvert. Remove failed asphalt and repave – 200 ft length
- MP 2.0 – 2.94 Place aggregate - approx 20 locations – each approx 125' long
- MP 2.96 Remove existing culvert and replace with larger
- MP 3.93 Remove existing culvert and replace with larger
- MP 5.45 Place aggregate 2 locations – each approx 125' long
- MP 5.96 Rebuild head wall inlet and construct splash apron outlet (approx 30 cy)
- MP 6.45 – 6.5 Place aggregate
- MP 6.82 Remove existing culvert and replace with larger
- MP 7.09 Install new culvert
- MP 7.09 Install new relief culvert
- MP 7.2 Pull ditch between here and 41 road
- MP 7.26 Install new relief culvert
- MP 7.81 Install new relief culvert
- MP 8.10 Remove 3' from culvert inlet and add rock headwall
- MP 8.19 Install new relief culvert

Road 4100 (mileage starts at Wind River Compound)

General - brushing, grading

- MP 8.5 install 24" diameter culvert
- MP 8.49 berm
- MP 8.1 install 24" diameter culvert. Remove after post sale activities.
- MP 7.97 install 18" diameter culvert. Remove after post sale activities.
- MP 7.94 const drain dip.
- MP 7.71 install 18" diameter culvert. Remove after post sale activities.
- MP 7.63 install 24" diameter culvert. Remove after post sale activities.
- MP 7.55 install road closure barrier (berm).
- After sale activities, waterbar the open portion of Road 4100, from junction with Road 43 south to the road closure point (Berm 8.49 MP). Area of concern is where road surface rutting and pooling of water is occurring. Include in post-haul maintenance of the timber sale contract.

PUBLIC INVOLVEMENT

A proposal to thin approximately 63 acres within this area was listed in the Schedule of Proposed Actions for the Gifford Pinchot National Forest as of October, 2005. The proposal was sent to 46 members of the public, other agencies, the Yakama Indian Nation and Cowlitz Tribe for comment during the scoping period that was initiated on December 2, 2005.

As of February 15, 2006, eight written comments were received in response to scoping. Comments generally urged the use of available research to design the project and post-project monitoring to evaluate effectiveness at meeting objectives for increased huckleberry production. The original

proposed action included fertilization of stands following overstory thinning. Some people commented that fertilization would have an adverse effect to the aquatic environment and preferred to see underburning used as a tool that represents a more natural function in huckleberry stand development. These comments resulted in modification of the original proposed action by dropping fertilization in favor of underburning in Stand B as a post-harvest treatment. Other comments questioned the need for temporary road construction.

Though this action may be categorically excluded, pursuant to the September 16, 2005, order issued by the U. S. District Court for the Eastern District of California in Case No. CIV F-03-6386JKS (*Earth Island, et al. v Ruthenbeck*) the proposal was issued for a formal 30-day public comment period beginning on June 5, 2006. Substantive comments were received from two sources. No significant issues were raised through public or internal scoping, therefore no alternatives to the proposed action were developed. A summary of public comments and Forest Service responses is found in Appendix A of this Decision.

EFFECTS ANALYSIS SUMMARIES

In addition to addressing the above categorical exclusion requirements, the following summarizes the project team's analysis reports. Complete reports and references are found in the Mowich Huckleberry Thinning project file

Vegetation/Fuels Summary

The proposed density reduction treatment is to restore the huckleberry component and increase the berry production, in the upland portion of the unit, by reducing the conifer canopy cover, increasing the sunlight to the forest floor, and reducing the vegetative competition in the understory by underburning. Fields of big huckleberry in the Pacific Northwest are considered a product of uncontrolled wildfires occurring before effective fire suppression (Minore and Dubrasich 1978). Currently, the stand, proposed for thinning, contains a high density of overstory trees, which is producing a closed forest canopy. Huckleberry production declines when open-grown huckleberry shrubs become heavily shaded. The plants generally show greatest productivity within sites that experienced disturbance about 50 years previously (Martin 1979). In addition, competing vegetation, within the understory, is currently crowding out the huckleberry plants. The habitat requirements of big huckleberry are less critical than those of many other western huckleberries (Camp 1942). The plants grow as an understory shrub under unbroken, closed forest canopies, but is more abundant and vigorous under partial tree canopies and in the open (Neiland 1958). In the absence of wildfire, silvicultural and prescribed underburn treatments to reduce the overstory and reduce the competing vegetation is necessary if increased levels of berry production are to be restored on Mowich Butte. If these conditions are not managed, both the existing conifers and competing understory will continue to suppress and limit berry production and delay restoration efforts.

Following the thinning treatment, the understory component of shrubs and forbs is expected to respond to increased light conditions and begin to reoccupy the newly available growing space. In particular, the vine maple component will begin to dominate the understory as it is an aggressive competitor when exposed to increased sunlight. The follow-up prescribed underburn is not expected to fully control this plant due to a high tolerance to fire and heat. It is anticipated that the vine maple component, within the stand, will respond favorably to the thinning and underburn and, if unchecked, will be a serious competitor with the huckleberry in the short and long term. The vine maple will continue to dominate the understory until the tree canopies begin to close and shade/restrict the plant. To reduce this impact to the huckleberry component, the vine maple will be slashed after thinning and

underburning. This procedure will set the vine maple plants back and give the huckleberries an equal start to become established.

The retained overstory component of conifers (60 trees per acre), within the uplands, will be sufficient to help reduce frost damage to the huckleberry plants on site. Huckleberry production is often reduced by frost damage when the plants are actively growing (Minore and Smart 1978). Plants, that are protected with an overstory of trees and/or are under heavy snow accumulations where active growth is delayed, have larger berry crops.

Foliage of big huckleberry is of low flammability, allowing for survival after low severity fires, with top-kill resulting from higher severity fires. Top-killed plants resprout from rhizomes. The underburn treatment is expected to produce a mosaic pattern within the unit. Slash concentrated areas are expected to burn hotter/longer than other areas of the unit. The riparian no-cut buffer areas are not expected to sustain fire due to the lack of "red slash" as a result of directional falling of the timber. The underburn may back into these areas, but should not affect the functionality of the reserves. Big huckleberry may reproduce through seed or by vegetative production from adventitious buds on rhizomes and root crown. Reproduction through seed is rare under natural conditions. Populations are usually maintained through lateral expansion of vegetative clones. The huckleberry shrubs are expected to sprout vigorously during the 1st year after burning, but are not expected to produce berries for at least three years and most likely more (Minore, et. al. 1979). Big huckleberry was slow to develop even in slash burn areas, showing 3% coverage at 3 postburn years, 6.7% coverage at 4 postburn years, and 11.5% coverage at 5 postburn years (Oswald and Brown 1993). The root structure (rhizome and root biomass) of the huckleberry plant appeared to be much greater than that of the shoots in a study conducted in 1975. Most of the observed rhizomes were deep enough to avoid damage from a light surface fire (Minore 1975).

Low to Moderate Severity Fire: Big huckleberry showed good vegetative response in lightly burned areas of western larch/Douglas-fir forests in western Montana. The same result was seen in moderate fires top-killing the majority of shrubs and consuming up to half of the litter (Steele and Stark 1977).

A comparison of postfire big huckleberry sprouts was made after spring (May-June) and fall (September-October) fires at the University of Montana's Lubrecht Experimental Forest. The number of stems present before burns was closely related to the number of stems postburn. Spring burns produced a lower mortality of adventitious buds on rhizomes than fall burns. Moist duff and soil present during spring burns served as a heat shield. Spring burns causing rhizome mortality occurred only in areas with duff and soil of low moisture content.

Moderate to High Severity Fire: Doyle and others (1998) evaluated plant species richness 17 years after the July 17, 1974, Waterfalls Canyon Fire, in Grand Teton National Park, Wyoming. Big huckleberry dominated (30-36% coverage) the understory of adjacent unburned areas with greatly reduced coverage (approximately 7%) in moderately burned areas and almost no coverage in severely burned areas. Big huckleberry populations were greatly reduced the 1st growing season following a high intensity fire in the Payette River drainage near, Lowman, Idaho (Steele and Geier-Hayes 1991).

Big huckleberry showed no postfire re-establishment through seed after the Sundance fire of 1967, a severe burn in northern Idaho (Stickney 1986).

In general, big huckleberry is slow to recover from moderate to high severity fire. After stand replacing fire in upland Douglas-fir/big huckleberry sites in Pattee Canyon, west-central Montana, big huckleberry showed "slow" recovery. In severely burned ravines, big huckleberry sprouted from

rhizomes at depths of 3.5 to 6 inches (9 to 15 cm). Before effective fire exclusion began in the early 1900s, fire return intervals in the area averaged 15.8 years (Crane et al. 1983).

In habitat types where big huckleberry is dominant, fires conducted when duff is relatively moist and not completely consumed result in heavy resprouts from rhizomes (Donnelly 1993, Norton et al. 1999, Reichert 1989). Low severity burning may stimulate lateral bud growth similar to pruning and assist in eradication of parasites (Norton et al. 1999). Burning that consumes large amounts of duff is most harmful to big huckleberry regeneration (Miller 1977). Quantity of heat released by fire and relative amounts of duff and soil moisture are controlling factors (Miller 1976).

Table 2. Characteristic Thinning Treatment Descriptions

| Treatment | Approx. Canopy Closure | Approx. Trees Per Acre (TPA) | Approx. Spacing | Relative Density (RD) |
|-------------------|------------------------|------------------------------|-----------------|-----------------------|
| Uplands | 25-30% | 60 | 28' x 28' | 27 |
| Riparian Reserves | 50-55% | 110 | 19' x 19' | 42 |

Wildlife Biological Evaluation Summary

Threatened or Endangered Wildlife Species

Except for northern spotted owl (*Strix occidentalis caurina*), there will be no impact to Threatened or Endangered wildlife species from the Mowich Huckleberry Thinning project.

The northern spotted owl was listed as a threatened species throughout its range in Washington, Oregon and northern California effective July 23, 1990. Loss of late-successional forest habitat from timber harvest was the primary reason for the listing.

The Mowich timber sale unit is classified in the Gifford Pinchot National Forest's GIS database as dispersal habitat. According to the Rock Creek Watershed Analysis (2000), the three sub-basins surrounding the Mowich unit are comprised of 75 acres nesting habitat (1.5%), 997 acres foraging habitat (20%), and 2,557 acres dispersal habitat (52%). A total of 73.5 percent of these sub-basins is useable by spotted owls for dispersal (this includes suitable nesting and foraging habitat).

Since this area burned over in 1929, there are few older stands near the proposed treatment unit that would be suitable for spotted owl nesting or foraging. The Mowich units are single story stands with few large snags, and no remnant trees that survived from the previous stand. The nearest suitable nesting habitat patch is adjacent to the Mowich units, but it is only 23 acres in size. The closest large patch of nesting habitat is within the Wind River Experimental Forest about 1.6 miles north. The nearest historical spotted owl activity center is about 1.7 miles east of the proposed unit.

The Mowich timber sale unit is not located within Critical Habitat.

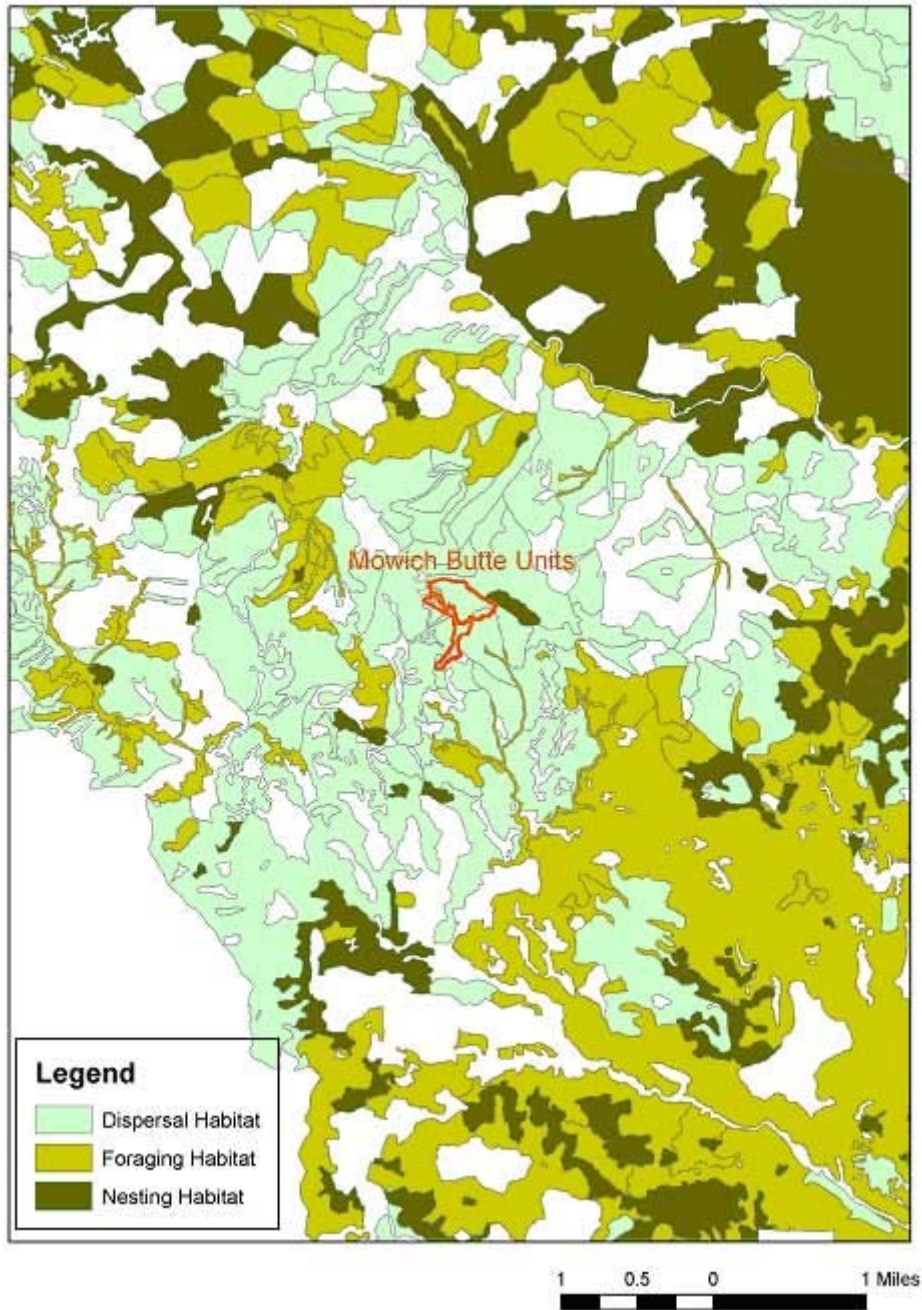


Figure 4. Northern spotted owl habitat in the vicinity of Mowich Huckleberry Thinning project.

To facilitate spotted owl dispersal through a given landscape, at least 50 percent of the habitat must be suitable for dispersal. The project would downgrade about 70 acres of spotted owl dispersal habitat to non-habitat due to the wide residual spacing needed to facilitate huckleberry growth. The loss of 70 acres would decrease the amount of habitat available for spotted owl dispersal in the three sub-basins to 72 percent, a reduction of about 1.5 percentage points. Although a small amount of dispersal habitat would be lost, the effects to the ability of spotted owls to disperse through the area would be negligible.

Direct and Indirect Effects: The project would involve activities that would generate noise and smoke adjacent to a small patch of suitable nesting habitat during the nesting season. In order to safely burn the site it may require a spring burn during the early nesting season. While the adjacent nesting habitat has not been surveyed for spotted owls, it is unlikely that spotted owls would nest there. The patch is small and not adjacent to any suitable foraging habitat or near any other nesting habitat patch.

Since the nesting habitat adjacent to the project area is unlikely to be occupied, and since the amount of dispersal habitat in the sub-basins would still be sufficient to facilitate spotted owl dispersal, this project *may affect but is not likely to adversely affect* spotted owls.

Cumulative Effects: The Tee timber sale is located in the East Fork Lewis watershed and Copper Creek watershed west of Mowich Butte, and the stands were also regenerated following the Yacolt Burn. Tee timber sale is planned to be sold in 2007. The Tee sale would thin about 590 acres of dispersal habitat, and 120 acres of foraging habitat. These stands would remain dispersal habitat after treatment. A determination of not likely to adversely affect was made based on the paucity of nesting habitat in the planning area.

Within the entire watershed approximately 13 percent is nesting habitat, 44 percent is foraging habitat, and 19 percent is dispersal habitat. A total of 76 percent of the watershed supports habitat through which spotted owls can disperse. Within the Rock Creek subwatershed, a majority of the land south of the Forest boundary is owned and managed by the State of Washington for a wide range of fish, wildlife, and ecosystem needs. There is a small amount of private land where timber is managed on a relatively short rotation, or has been converted to urban uses.

The Mowich Butte timber sale would be cumulative to other activities that have removed dispersal habitat for relatively long periods of time. These other projects have occurred primarily on private land in the southern end of the watershed. Since the watershed is not deficient in habitat that allows spotted owl dispersal, and since no other projects are planned in the sub-basins surrounding Mowich Butte, the cumulative effect of this proposed timber sale is minimal.

Regional Forester's Sensitive Species and Northwest Forest Plan Survey and Manage Species

Mollusk surveys were conducted in Units A and B during June 2006. Surveys in Unit C were not conducted since it is primarily a roadside unit that contains lesser quality habitat. A total of 10 Malone's jumping slug (*Hemphillia malonei*) sites were found in Units A and B. Most of these sites were associated with old logs that are remaining from the previous stand. Management of this species requires protection of high priority sites, and since there are no other known sites in the watershed, these sites would need to be protected.

Given the fact that this watershed was extensively burned over by stand-replacing fires in the early 1900s, an assumption can be made that these mollusk species are fairly resilient to the effects of disturbance, and are likely able to reoccupy disturbed areas from adjacent undisturbed areas as habitat conditions become suitable. As another example of the apparent resilience of the species, Malone's jumping slug has been found elsewhere on the Mount Adams District at high densities within 40 to 50-year old plantations where the previous stands had been clear-cut and the slash burned. More than 800 Malone's jumping slug sites have been documented on the Mount Adams and Mount St. Helens Districts.

Direct and Indirect Effects: Mitigation to protect these sites includes a no-harvest buffer of 120 feet around each site, and ensuring that the area within the buffer is not burned. The buffer is expected to

protect the ten known sites, however, it is possible that there are other undetected sites in the units that would be affected by the project. Since this species is relatively common on the south half of the Forest, and the population appears resilient to habitat disturbance, the Malone's jumping slug population on the Forest would be maintained. Since the known sites would be protected the Forest Plan standards and guidelines would be followed. Since the project may affect undetected sites, the project *may impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species.*

Cumulative Effects: The potential loss of Malone's jumping slug sites in the Mowich Huckleberry Thinning units would be cumulative to other projects that remove suitable habitat. This species is being managed according to the draft management recommendations for the Tee timber sale, and known sites would be protected in the Mowich Huckleberry Thinning units. Since populations are likely to persist on National Forest land, cumulative effects of this project would be minimal.

Gifford Pinchot National Forest Management Indicator Species

Cavity Excavators: Cavity excavators represent species requiring snags and down logs. The Forest Plan contains standards and guidelines for retention of snags and logs. The standards and guidelines are written primarily to address regeneration harvest and don't address commercial thinning in young stands very well. The standards and guidelines state that created or retained snags will be at least 17 inches diameter and 40 feet tall, and that the density of snags would be at least 2.6 per acre.

The web-based Decayed Wood Advisor (DecAid, Mellen et al. 2006), which contains information on abundance of snags and logs in forests of different ages based on data from vegetation plots was designed to be used at the landscape scale, and was originally developed for Forest Plan revisions. As such, it has limited value on a small project such as Mowich Butte timber sale.

The current stand was regenerated in 1929 following one of the burns subsequent to the Yacolt burn. Currently the stand contains some small snags that are overtopped trees. The existing logs in the unit are primarily large soft logs remaining from the previous stand. In addition to these, there are small trees that have died and fallen over. These are generally less than 12 inches diameter.

Direct and Indirect Effects: It is possible that some of the existing soft remnant logs will be disturbed during the thinning and yarding process for this project. Forest Plan standards and guidelines require that existing large down wood be protected to the extent possible, so the overall effects to existing down wood would be minor.

The density of snags would increase following harvest as they are created from reserve trees. Down log density is likely to increase naturally due to effects of minor wind throw, additional logs would be created if needed. The Forest Plan standards and guidelines would be met with this project.

Conservation Measures for snags and down wood have been added as Project Design Features (18 through 20).

Pileated Woodpecker and Pine Marten: Pileated woodpecker and pine marten represent species that require old-growth and mature forest conditions. The Mowich Butte stand does not currently provide these habitat conditions, but it could provide dispersal habitat and cover for individual animals moving within their home ranges. Canopy closure in optimal habitat for pileated woodpecker and pine marten is 75% and 50% respectively. The high canopy closure in the Mowich project area would allow these species to move through the stand.

Due to the effects of the large fires in the early 1900s, the landscape around Mowich Butte does not support large patches of late-successional habitat. There are scattered small patches (<30 acres) nearby, But large blocks are about 1.5 miles away. The percentage of habitat that is in the large tree multi-story structure stage in the three sub-basins surrounding the Mowich Butte units in the Rock Creek subwatershed averages about 1.7 percent. It is about 22 percent in the adjacent sub-basin of the Wind River watershed to the north. The habitat created by the fires is currently single story conifer stands that contain few if any large remnant green trees and few large snags. Logs created by falling snags after the fires are all well-decayed. Due to the effects of the fires, habitat for late-successional species in the vicinity of Mowich Butte is marginal.

Direct and Indirect Effects: The project would have no impacts to any late-successional stands. The short-term effect of the thinning the Mowich Butte stands would be to reduce canopy closure, and slightly increase levels of small snags and logs. Reduction in canopy closure as proposed would likely make the stand unsuitable for use by marten and pileated woodpeckers. Over time as the residual trees grow, the stand may again become suitable, but it is not known whether or nor the stand would be managed in an open condition to benefit huckleberries.

In the long-term, the growth of retained trees will be accelerated and they will reach a large size (20 inches dbh) sooner. The stand would likely become suitable for both these species at something less than optimal since a second conifer layer is not likely to develop, and large snags and logs will be slow to develop.

On a landscape scale, the provisions of the Northwest Forest Plan benefit these species, and the amount of habitat on the Forest will increase over time. The standards and guidelines in the Forest Plan would be met.

Elk and Deer Winter Range: The standards and guidelines in the Forest Plan that address elk and deer address winter range and special features such as mineral licks and calving/fawning areas. The project area is not within winter range for these animals, nor is it known to be a calving/fawning area.

In general, elk and deer on the Forest are expected to decline with the reduction in regeneration harvest and the associated decline in forage. According to the Rock Creek Watershed Analysis only 23 percent of the National Forest system lands are in the grass/forb/seedling/sapling/pole structure stage that would be expected to provide the majority of the available forage. Elk and deer would benefit if more forage was produced in the watershed.

Huckleberry shrubs and vine maple provide forage for deer in the Mowich Butte units, but the overstory canopy is shading out these species, causing a reduction in annual growth.

Direct and Indirect Effects: Reducing canopy cover and burning to manage for huckleberries will also benefit elk and deer by increasing forage production on the 70 acres. Since the 41 Road would be closed again after the project, there would be no increase in road density, and the site would remain relatively undisturbed by people except during huckleberry picking season.

The proposed project would have a minor beneficial effect for elk and deer due to an increase in forage on 70 acres in the watershed.

Wood Duck and Goldeneye Duck: Wood ducks represent species that require mature and old-growth deciduous riparian habitat. Goldeneye duck represent species that require mature and old-growth coniferous riparian habitat. The pond/wetlands in the western part of the unit may provide habitat for

these species during wet years only. During most years the wetland does not contain enough standing water to provide nesting habitat. In addition, the area around the wetland was cut over during the last timber harvest, and there are no large trees in the area that could provide nesting structures.

The project Wildlife Biologist has determined that there is no habitat for either of these species in the project area, and they would not be affected.

Neotropical Migratory Birds

The Mowich Butte stand is classified as mid-successional, and would provide habitat for birds species found in mature/young stands. This structure stage is the most common structure stage found in the Rock Creek subwatershed. Fifty-eight percent of the watershed is in this structure stage. There are no species associated with this habitat type from the Partners in Flight report that are thought to be declining. Early-seral habitat currently makes up about 30 percent of the watershed.

The Mowich Butte unit contains deciduous understory shrubs, primarily huckleberry and vine maple. The presence of these deciduous species adds habitat diversity and probably increases the bird species diversity over what would occur in a pure conifer stand.

Direct and Indirect Effects: The proposed thinning would open the stand enough to encourage increased growth of understory deciduous shrubs, and the stand may be opened enough to attract early-seral bird species. This would help to increase species richness at the watershed scale.

The proposed action would treat habitat that is not limited in the watershed, and improve conditions in the short-term by adding complexity and structural diversity. It would create habitat that is more uncommon in the watershed. For these reasons, the project would not result in significant effects to neotropical migrant bird populations, and would have long-term beneficial effects.

Aquatic Resources Summary

Threatened or Endangered Fish Species

The Mount Adams Ranger District has a total of seven fish species that are either Endangered, Threatened, or Sensitive. Only two species potentially occur within the project area.

Lower Columbia River Steelhead (*Oncorhynchus mykiss*), which is listed as Threatened are not present at the immediate site of the project area but are present downstream in Layout Creek up to river mile 2.7 and the mainstem of Trout Creek. Road-related actions along Road 4300 that are associated with the project would occur in the headwaters of Layout Creek and side tributaries of Trout Creek. These actions *may affect and are likely to adversely affect* Lower Columbia River steelhead and Designated Critical Habitat for Lower Columbia River steelhead. To the south of the project area, Washington Department of Fish and Wildlife's (WDFW) fish distribution data shows distribution of Lower Columbia River Steelhead up to river mile 0.9 on Rock Creek in the unnamed Columbia River Frontal 5th field watershed. This is significantly far from the planning area, by at least 8 miles.

The current distribution of Chinook salmon (*Oncorhynchus tshawytscha*) does not include Trout Creek or Rock Creek and is therefore, sufficiently outside the project area such that there would be no effect to this species from project activities.

Designated Critical Habitat

Recent designated critical habitat on the Gifford Pinchot National Forest includes the stream channels in each designated reach, and a lateral extent as defined by the ordinary high water line (Sept. 2, 2005; 70 FR 52629). The primary constituent elements essential for conservation of listed ESUs are those sites and habitat components that support one or more fish life stages, including freshwater spawning sites, freshwater rearing sites, and freshwater migration corridors. Trout Creek in the Wind River 5th field watershed on Gifford Pinchot National Forest contains designated critical habitat for Lower Columbia River steelhead.

The Mowich Huckleberry Thinning project in the Wind River and unnamed Columbia Frontal watersheds is located in the headwaters and not adjacent to fish-bearing streams. Implementing the Mowich Huckleberry Thinning project will not degrade any indicators for fish at the 6th or 5th field watershed scale. Associated road maintenance activities will improve road conditions at the 6th field scale, however indicators will remain within background levels.

Summary of Effects to Aquatic Resources

The following is a summary of effects to the environmental baseline for the project area. The majority of work is focused in the Trout Creek subwatershed of the Wind River watershed. No aquatic impacts are expected from the proposed action in the Rock Creek subwatershed of the unnamed Columbia Frontal watershed. The complete aquatic resource analysis can be found in the Fisheries Biological Evaluation in the project record.

Road Related Activities: Road density and location would be unaffected by this project over the long term. There would be construction of approximately 0.5 miles of temporary road and re-opening of 1.0 miles of previously closed road, but these roads would be eliminated at the end of the project by scarification, waterbarring and revegetation. Temporary roads would not cross any surface stream or aquatic feature. Road maintenance activities may lead to improved fish passage and recruitment of properly sized substrate. Culvert related work may lead to first flush of fine sediments but is expected to dissipate to background levels once in fish-bearing streams.

Thinning Inside and Outside Riparian Reserves: Over the short term, thinning would be expected to reduce the effectiveness of the forest canopy at intercepting snow and at moderating microclimates within the stands. Evapotranspiration rates would also decrease at the stand level in response to the reduction in tree density. The degree of these effects is unknown, but is not considered to be strong enough to cause a change in peak flows. Over time, the forest canopy would re-coalesce as crowns of remaining trees increase in size. As canopy closure increases and as tree growth increases, the interception, microclimate and this project does not concentrate disturbance in any portion of the watershed.

Riparian Reserves of intermittent streams will be affected by riparian thinning proposed in this project. The effects will be focused on the outer portion of the Reserves where thinning has been proposed. Untreated buffers along all intermittent streams will protect the immediate area along streams from direct impacts to channel functions or instream habitat, water temperature, sediment filtering, nutrient and detritus inputs, protection of soils and ground cover, and microclimate. Connectivity and habitat protection within these core areas of the Reserves will be maintained. Thinning will open treat (outer) portions of the Riparian Reserves to increased sunlight, and increased variability in air temperature, relative humidity and winds. This effect will slowly decrease as individual tree canopies respond to the thinning and grow into the space created in the thinned forest canopy.

As the forest canopy in Riparian Reserves begins to re-coalesce following thinning treatments the sunlight and microclimate within the Reserves would begin to recover to pre-treatment levels. This is estimated to occur over a period of 5 to 10 years (pers comm. Bruce Holmson, March 17, 2006). Over time, the thinning conducted in Riparian Reserves should produce larger trees sooner than they may otherwise have developed. Over the course of 50 years, thinned stands would be expected to have grown an additional 1 to 2 inches in diameter as compared to trees in untreated stands (pers comm. Bruce Holmson March 17, 2006). The thinning treatments within riparian stands are also expected to increase structural and species diversity within these stands.

Thinning activities will have a negative effect in the short term on the condition of treated Riparian Reserves due to the opening of the forest canopy. Over the long term, growth rates are expected to increase in Riparian Reserves, and the structural and species diversity and resultant habitat quality would be positively affected. The scale and intensity of project activities within Riparian Reserves is small enough that there would be no change to the condition rating for any indicator in the environmental baseline. The overall effect to this indicator is a neutral effect.

Magnuson-Stevens Fishery Conservation & Management Act

The Sustainable Fisheries Act of 1996 (Public Law 104-267) amended the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) to require federal agencies to consult with NOAA Fisheries on activities that may adversely affect “Essential Fish Habitat” (EFH). Essential Fish Habitat is defined in the Act as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” Essential Fish Habitat includes all freshwater streams accessible to anadromous fish, marine waters, and intertidal habitats. Essential Fish Habitat excludes areas upstream of certain impassable artificial barriers and long-standing naturally impassable barriers.

The Proposed Action will have *no effect* on EFH inside or outside of the analysis area because the project area is limited to the headwaters of Trout Creek and Rock Creek where Chinook salmon do not have access. Chinook are present at least 8 miles downstream of the Project Area boundary in Rock Creek.

Botany Biological Evaluation Summary

Threatened, Endangered, or Proposed Plant Species

Howellia aquatilis is the only federally listed plant species suspected to occur on the Gifford Pinchot National Forest. There is no habitat for this species within the project area.

Sensitive Species

Corydalis aquae-gelidae, *Tetraphis geniculata*, and *Platismatia lacunose* are known within the vicinity of the project area. The project area was surveyed for Sensitive species in September. No Sensitive species were found.

A number of Sensitive species (1 lichen and 13 fungi) are considered “survey impractical”; therefore it is not known whether they are present at the site (see pre-field documentation for complete list of species not considered “survey impractical”). For analysis purposes, it is assumed that these species are present in the project area.

Direct and Indirect Effects: Because the project scope and area is small (70 acres) in the context of similar habitat located adjacent to the project area, that impacts to the species that might occur as a

result of the project have the *potential to impact individuals and habitat, but project actions are not likely to contribute to a trend towards federal listing, or cause a loss of population or species viability* for these Sensitive species.

Survey and Manage Species

The Survey and Manage mitigation measure originated from 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, amended in 2001) and was modified in 2004 to remove the requirement to conduct pre-disturbance surveys. As part of a subsequent and ongoing lawsuit (*Northwest Ecosystem Alliance, et al. v. Mark E. Rey, et al.*) the Bureau of Land Management and the Forest Service have been ordered by Judge Pechman¹ to follow the 2001 ROD, incorporating any amendments or modifications that were in effect as of March 21, 2004, including consideration of the 296 Survey and Manage species that were in place as of the 2003 Annual Species Review decision in December 2003. In accordance with this direction, surveys were conducted in September 2006. No Survey and Manage plant species were found.

Noxious Weed and Invasive Non-Native Species

Forest Service Manual direction requires that Noxious Weed Risk Assessments be prepared for all projects involving ground-disturbing activities. For projects that have a moderate to high risk of introducing or spreading noxious weeds, recent Forest Service policy requires that decision documents must identify noxious weed control measures that will be undertaken during project implementation (FSM 2081.03, 11/29/95). In addition, the *Pacific Northwest Region Invasive Plant Program Record of Decision for Preventing and Managing Invasive Plants* (USDA 2005) provides invasive plant prevention and treatment/restoration standards and direction on all National Forest Lands within the Pacific Northwest Region.

Direct and Indirect Effects: Based on the presence of these species within the project area and the potential for spread from heavy equipment operations or Forest Service vehicular traffic the risk ranking for weeds is High. Project design criteria have been added to the project to manage and prevent the spread of invasive weeds (21 through 24). Refer to the Botanical Resource Report for this project for specific requirements.

Aquatic Conservation Strategy.

On March 30, 2007, District Court, Western District of Washington adopted in part the Magistrate Judge's adverse report and recommendation in *Pacific Coast Federation of Fisheries's Associations v. National Marine Fisheries Service*, No. 04-1299-RSM (W.D. Wa.) [Amendment of Aquatic Conservation Strategy (ACS), Northwest Forest Plan]. This ruling set aside the amendment of the ACS that was adopted in March 2004. The effect of which is to ensure that projects are designed so that they do not retard or prevent attainment of Aquatic Conservation Strategy Objectives (ASCOS) at the project scale, as per the 1994 Record of Decision (USDA 1994, p. B-9 through B-11). The ASCOs are addressed in the analysis of this project as follows:

1. *Maintain and restore the distribution, diversity, and complexity of watershed and landscape scale features to ensure protection of the aquatic systems to which species, populations and communities are uniquely adapted.* Project design criteria have been developed to ensure that watershed and landscape scale features are not diminished by this action. This project is intended

¹ in Order Number 04-844P, Order On Plaintiffs; Motion For Injunctive Relief, U.S. District Court Western District of Washington.

to restore habitat conditions at a small scale that are conducive to huckleberries and associated species. These conditions once existed across the broader landscape.

2. *Maintain and restore temporal connectivity within and between watersheds...* Temporary road construction will follow routes that will not cross streams or impair the natural drainage network. Riparian Reserves have been designated and within them, a no-cut buffer will preserve intact refugia. Fish passage may be improved through road maintenance activities (Fisheries Biological Evaluation, p. 24)
3. *Maintain and restore the physical integrity of the aquatic system, including shorelines, banks, and bottom conditions.* The application of no-cut buffers and directional felling of trees away from streams (Design Criterion 16) protect the stream channels from damage.
4. *Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems...* Design Criteria 3, 4, 6, 7, 8, 10, 11, 12, 13, 15, 16, and 31 are specified to maintain water quality.
5. *Maintain and restore the sediment regime under which ecosystems evolved.* The Design Criteria cited in ACSO 4 are primarily designed to address the potential for sediment delivery to streams from this action. The probability of sediment from thinning and yarding activities in Riparian Reserves reaching fish bearing streams is very low (Fisheries Biological Evaluation, p. 20). As implemented, this action would maintain the sediment regime. Road maintenance activities would cause a flush of sediment that would quickly dissipate to normal levels. Any introduction of sediment associated with road or thinning activities would be within the range of natural variability (Fisheries Biological Evaluation, pp. 23 – 24).
6. *Maintain and restore in-stream flows ...* This action would have little or no effect to in-stream flows (Fisheries Biological Evaluation, p. 26).
7. *Maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands.* There are no floodplains, wetlands, or meadows in the vicinity of the project or that would be affected by project activities.
8. *Maintain and restore the species composition and structural diversity of plant communities in riparian areas and wetlands...* Thinning activities will have a negative effect in the short term on the condition of treated Riparian Reserves due to the opening of the forest canopy. Over the long term, growth rates are expected to increase in Riparian Reserves, and the structural and species diversity and resultant habitat quality would be positively affected. There will be no direct or indirect affect to wetlands.
9. *Maintain and restore habitat to support well-distributed populations of native plant, invertebrate, and vertebrate riparian-dependent species.* Thinning within Riparian Reserves is designed to improve terrestrial species habitat over time by stimulating growth response and encouraging variability in species structure and composition. Habitat for known sites of Sensitive species (Malone's jumping slug) will be protected by no-cut buffers.

CATEGORICAL EXCLUSION

Based on the resource assessment and the results of public scoping, this proposal falls within a category of actions listed in the Forest Service NEPA Handbook (FSH) that are excluded from documentation in an environmental assessment or environmental impact statement and there are no extraordinary circumstances that would preclude use of the category. (FSH 1909.15, Chapter 30, Section 31.2, Category 13: “Harvest of live trees not to exceed 70 acres, requiring no more than ½ mile of temporary road construction”).

DECISION

I have considered the purpose and need, the project design criteria, the effects analysis, and public comments and I have decided to approve the Mowich Huckleberry Thinning project, including the specific actions and the Project Design Features described above.

Categorical exclusion is appropriate to this proposed action because there no significant issues were identified that would result in the development of alternatives to the proposed action. Additionally, there are no extraordinary circumstances potentially having effects which may significantly affect the human environment. Specifically, I considered and determined that the potential for adverse effects on the following resource conditions do not preclude the proposed action from implementation.

Federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species: This project may affect, but is not likely to adversely affect northern spotted owls. The US Fish and Wildlife Service concurred with this determination (letter dated February 2, 2007). Road maintenance activities associated with the pre and post haul on Road 4300 of this project may effect, likely to adversely affect Lower Columbia River steelhead trout and designated critical habitat for steelhead. These actions fall within the *Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for USDA Forest Service Programmatic Activities, Gifford Pinchot National Forest Columbia River Gorge National Scenic Area, Washington* (July 26, 2004). This project would have no effect on other listed wildlife, fish, or plant species or designated critical habitat. I find that the nature of the action (thinning) is such that there is no potential for significant adverse effect to federally listed wildlife, fish, or plant species or designated critical habitat, or on species or critical habitat proposed for listing.

Floodplains, wetlands, or municipal watersheds: This project is not located within a floodplain or a municipal watershed. There are no wetlands in the vicinity of the project area. Through these actions I find that there is no potential for significant effects to wetlands.

Congressionally designated areas, inventoried roadless areas, research natural areas: There are no such areas in or affected by the Mowich Huckleberry Thinning project. I find that there is no potential for significant effects to these areas.

American Indian and Alaska Native religious or cultural sites: There are no known religious or cultural sites within the project area. Scoping was conducted with the Cowlitz Tribe and the Yakima Nation. Comments were received from the Yakama Tribe in general support of the project. I find that there would be no effect to culturally significant areas from actions associated with the Mowich Huckleberry Thinning project.

Archaeological sites, or historic properties or areas: There are no known sites within the project area.

FINDINGS REQUIRED BY LAW AND POLICY

I find that this decision is consistent with the National Forest Management Act. The project was designed in conformance with forest plan standards and guidelines for the *Gifford Pinchot National Forest Land and Resource Management Plan* as amended by the Northwest Forest Plan. I find that there will be no irreversible or irretrievable commitment of resources from implementation of this project.

I find that this action is consistent with the Endangered Species Act of 1973. For Threatened and Endangered terrestrial species, this action **may affect, but is not likely to adversely affect** northern spotted owls. The US Fish and Wildlife Service concurred with this determination (letter dated February 2, 2007). For Threatened and Endangered aquatic species, it is determined that this project **may effect and is likely to adversely affect** Lower Columbia River steelhead and designated critical habitat for steelhead, therefore formal consultation with NOAA Fisheries is required and has been conducted (Federal Analysis of Effects Determination Form, signed by NOAA 3/21/2007). This project **may impact individuals or habitat/not likely contribute to a trend towards Federal listing or loss of viability to individual or species** for 14 plant species that are listed on the R6 Regional Forester's Sensitive species list ("survey impractical"). No consultation is required.

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 EFH 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 BMP's in conformance with provisions of the CWA, Federal guidance and management direction.

I find that this action will not prevent attainment of Northwest Forest Plan Aquatic Conservation Strategy Objectives (ACSOs) at the project scale. This action is designed to restore conditions that correspond to the natural disturbance regime that leads to increased huckleberry production. All activities are designed to result in effects that are within the range of natural variability. Road maintenance may result in effects to water quality and sediment delivery but these effects are of short duration and are designed to correct existing fish passage and lead to improved fish habitat conditions in the long term. Thinning within Riparian Reserves will also result in short term effects that will lead to longer term structural and species diversity and habitat quality. Thus I find that this action is consistent with the Aquatic Conservation Strategy.

There are no impacts to resources of cultural or historical significance therefore I find that this action is consistent with the National Historic Preservation Act.

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

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

FAX (360) 891-5045

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 INFORMATION

For additional information concerning this decision or the Forest Service appeal process, contact:

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/s/ Nancy Ryke

5/7/2007

NANCY RYKE
District Ranger

Date

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