

**Decline Thin Project
Decision Notice (DN)
and
Finding of No Significant Impact (FONSI)**

USDA Forest Service
Mt. Baker-Snoqualmie National Forest
Darrington Ranger District
Snohomish County, Washington

DECISION

After reviewing the Decline Thin Environmental Assessment (EA), Terrestrial, Aquatic and Plant Biological Evaluations, specialist reports, applicable Forest Plan direction, and public comments for the proposed Decline Thin Project, it is my decision to implement **Alternative D, with the following modification: retain an average of 60 percent canopy closure in Units #1 through #9 as described in Alternative B instead of the 70% described in Alternative D.** This modified Alternative D is hereafter called the "Selected Alternative."

This alternative is described in Chapter 2 of the EA, and compared with the other analyzed alternatives in Table 2 of the EA. Figure 1 (below) is a map of the Selected Alternative. Table 1 is the Management Requirements and Mitigation Measures that are integral parts of the Selected Alternative. This decision will implement forest thinning treatments on approximately 380 acres, generating an estimated 7.2 MMBF of commercial timber in the matrix and the potential for additional volume from the thinning in the 40-year old stands. This decision will also upgrade or reconstruct 16.4 miles of existing forest road, of which 2.3 miles would be put in storage following thinning activities; replace a culvert with a bridge at the Conn Creek crossing on Road 2430; and decommission 2.5 miles of upper Road 2430.

Specifically this decision will implement:

- Commercial thinning of an estimated 214 matrix acres to decrease stand competition and retain growth within the residual forest stands. This activity will retain approximately 130 trees per acre in Units 1-9. This will retain an average 60 percent canopy cover.
- Thinning on approximately 166 acres to reduce stocking levels in 40-year-old stands that are primarily Late Successional Reserve (LSR). This treatment would retain approximately 235 trees per acre across 60 to 80 percent of the area. Approximately 10 to 20 percent of the area would remain in uncut skips and 10 to 20 percent of the area in gaps.
- Thinning on approximately 14 acres of Riparian Reserve (10 acres of the 214 acres of matrix and 7 acres of the 166 acres of LSR) promote development of large tree structure (stands dominated by trees 20 inches and larger in diameter) and stand diversity. This treatment would retain approximately 70 percent canopy cover and approximately 235 trees per acre.

- Logging systems for commercial harvests would be approximately 50 percent of the area by skyline or cable harvest system and 50 percent of the area by ground-based (processor or forwarder) systems.

In addition, the following road management actions will be implemented to respond to concerns over road impacts on stream sedimentation, soil productivity, and peak flows.

- Road maintenance and upgrade on 16.4 miles of existing road as a timber-haul route.
- Culvert to bridge conversion at the Conn Creek crossing of Road 2430.
- Decommissioning of 2.5 miles of Road 2430 with up to 7 culvert removals and 530 feet of sidecast pull back.
- Placing 2.3 miles of roads (Road 2432, and 2430016 and 2430017) into a long term closure status (waterbars, culvert removals, and berm closures) following thinning activity.
- Daylighting (clearing overhanging hardwoods from within 25 feet of the road edge) on 3.5 miles of existing open Road 2430.
- Roads 2430 and 2432 and associated spurs will not be kept open to the public during thinning operations so as to allow for full utilization of existing roads for landing locations which will minimize the need for temporary spur roads in some locations, and will provide for safety of the public.

My decision also includes:

- Implementation of the mitigation measures listed in Table 1 of this Decision Notice, and listed in Table 3 in the EA.
- Implementation of the monitoring plans in Appendix A of this Decision Notice, and Appendix F of the EA.

RATIONALE FOR THE DECISION

I selected Alternative D as modified because it best meets the purpose and need (objectives) for the project as described on pp. 1 to 4 of the EA and best responds to key issues. In particular, the Selected Alternative:

- Thins 214 acres of 70-year-old stands to maintain or promote increased growth and vigor of forest stands while providing commercial wood fiber consistent with the Forest Plan (see EA pp. 45 to 56).
- Retains a 60 percent canopy cover in the matrix areas that would not materially slow vegetation recovery in Dan Creek (see EA pp. 67 to 68), while allowing for the project to better meet the economic viability of the sale (Issue #1, EA p. 8) with additional volume from the thinning (see EA pp. 130 to 132), and meet silvicultural objectives of increased growth of individual trees, reduced density-mortality, and a shift in species composition within the stand to be distributed across the species mix more evenly (see EA p. 51).

- Thins 166 acres of densely stocked 40-year-old stands to promote the development of large tree structure, species diversity, and to maintain a functional, interacting, late-successional and old-growth ecosystem. Alternatives A and B do not include any treatments of the 40-year-old stands (see EA pp. 52 to 56).
- Reduction in stand density supports a retention of a broad range of tree species and moderate stocking that would provide forest stand diversity. This would also provide stand resiliency to shifts in climate or other disturbances such as insects and disease (see EA pp. 51 and 175, and Appendix E, Climate Change Implications).
- Accelerates stand development of LSR acres toward suitable habitat conditions for threatened and endangered species in the short and long term including 130 acres of LSR for northern spotted owl and marbled murrelet. There are no acres of LSR thinned in Alternatives A or B (see EA pp. 90 to 98)
- Moves 14 acres towards desired vegetation characteristics needed to attain Aquatic Conservation Strategy objectives in Riparian Reserves. There are no Riparian Reserve acres thinned with Alternative A, and Alternative B thins 10 acres (see EA pp. 133 to 141).
- Includes 2.5 miles more road decommissioning than Alternatives A, B, or C, resulting in reduced potential for road related erosion and sedimentation (see EA pp. 61 to 64).
- Converts a culvert to a bridge to better meet Forest Plan standard and guidelines (Aquatic Conservation Strategy Objectives No. 2, 3 and 6 in the Record of Decision (ROD) p. B-11) for 100 year event flows, resulting in the reduced potential for road related failure and sediment delivery to fish bearing waters. No culvert conversion would occur with Alternatives A, B, or C (see EA p. 70).
- Treats 2.3 miles of road for long term storage to reduce the potential for road related erosion or sedimentation (see EA pp. 70 to 71).

This decision does not change existing open classified road access on the mainline Road 24, and maintains open travel routes for dispersed recreational opportunities.

A detailed description of The Selected Alternative (Alternative D with 60 percent canopy described in Alternative B) can be found in Chapter 2 of the EA, with a Comparison of the Alternatives by Elements shown in Table 2. Figure 11 in the EA and Figure 1 of this DN display a map of The Selected Alternative.

OTHER ALTERNATIVES CONSIDERED

Three other alternatives were considered in detail – Alternative A (No Action), and Alternatives B and C.

I did not select Alternative A (No Action) because it failed to achieve the project's Purpose and Need, or Forest Plan goals and objectives (Chapter 1 of the EA). Specifically, Alternative A would not: decrease stocking to promote stand growth and development; or manage Riparian Reserves for desired vegetation characteristics; or decrease stocking to promote stand growth in Late Successional Reserves to provide a

functional, interacting, old forest ecosystem; or manage high risk roads with potential to contribute sediment to streams in the area; or provide commercial wood fiber products.

Alternative B was developed to respond to the need to reduce the 70-year-old stands' stocking levels and to provide high economic sale viability. Alternative B defers treatments in the 40-year-old stand to promote growing conditions to develop desired stand characteristics in the Late Successional Reserve. I did not choose Alternative B primarily because of the lack of treatment in the 40-year-old stands to promote late-successional forest conditions. And, given that all action alternatives were economically viable, this issue was addressed in the design of the alternatives. This alternative provided 2.5 miles less road treatment to reduce the potential of high risk roads contributing sediment to streams in the area.

Alternative C was developed to respond to dense stocking conditions in the 40-year-old stands not meeting desired conditions for development of old forest conditions as described in the Forest-wide Late Successional Reserve Assessment (USDA Forest Service, 2001). I did not choose Alternative C primarily because of the additional fuel loading from the proposed cut and leave treatment of the stands, the extra cost of reducing slash quantities along open roads, and relatively lower quantities of commercial wood fiber products from this alternative. This alternative provided 2.5 miles less treatment of high risk roads than the Selected Alternative.

The ID (interdisciplinary) Team and public comments did not identify other issues that would have led to development of an additional action alternative that would meet the project objectives (Chapter 1 of the EA).

MITIGATION AND MONITORING

My decision also includes the design features and mitigation measures specific to this project to avoid adverse effects on soils, streams, wildlife, cultural sites and for limiting the spread of noxious weeds. In addition, this decision includes monitoring of design features and mitigation measures to evaluate implementation and their effectiveness on canopy cover, stand stocking levels, and increasing species diversity. Descriptions of project elements and mitigation measures are provided in Tables 2 and 3 of the EA, and in this Decision Notice in pages 2 to 3, and in Table 1 (pages 14 to 19) of this DN.

Monitoring plans are included in Appendix A of this DN, and Appendix F of the EA.

Specifically, related to the purpose and need and key issues analyzed in the EA, the ID Team review found the following:

Purpose & Need Element 1: Decrease stocking in dense stocked stands to maintain or promote increased growth, promote horizontal and vertical diversity, and retain health and vigor of the forest stands.

Present Conditions. The health and vigor of trees in these stands are beginning to show evidence of declining vigor and suppression-related mortality due to competition in the densely stocked condition. High stocking levels can result in trees with narrow crown widths, limited live crown ratios, and decreased diameter growth due to competition. These stands are more susceptible to insects and pathogens compared to stands with lower stocking levels. High stocking levels encourage height growth, without sufficient

proportionate diameter increase, leading to instability during windstorms or snow loading (Oliver and Larson 1996). The closed canopy of these stands limits understory vegetation development and limits the structural and species diversity in the stands. The thinning activity in the Selected Alternative was chosen to assist in reducing competition and promoting stand conditions that support maintaining tree growth and stand vigor.

Environmental Effects. The effects of implementing thinning and road treatments proposed with this project would reduce stand stocking on an estimated 380 acres (EA pp. 55, 59 to 60, 64 to 65, 72 to 81, 86 to 89, 93-94, 97, 101, 103, 105, 107 to 108, 113 to 117, 119, 121 to 123), resulting in an increase in stands with stocking levels that promote growth and diversity in both stand structure and species mix across the watershed. Alternative D is the alternative that would provide the most acres of forest stands treated to recommended stocking levels (units of measure, EA p. 3).

Purpose & Need Element 2: Manage Riparian Reserves for desired vegetation characteristics to attain Aquatic Conservation Strategy objectives.

Conditions. The project area includes Riparian Reserves with close spacing (high stocking levels; see EA Appendix D, Silvicultural Information, pp. 166 to 174). Such stand densities result in increased competition between trees, which causes slower growth in tree diameter and volumes (USDA Forest Service 2001, p. 69). [] Development of large woody material for riparian areas is delayed. In this forest type, closely spaced trees also become susceptible to damage from forest insects, diseases, windstorms, and snow breakage (Oliver & Larson 1996). The selected alternative provides an opportunity to increase residual tree growth and promote desired vegetation characteristics as per ROD p.32: “Apply silvicultural practices for Riparian Reserves to control stocking, reestablish and manage stands, and acquire desired vegetation characteristics needed to attain Aquatic Conservation Strategy objectives”

Environmental Effects. Alternative D was selected for the thinning treatment this alternative provides of 10 acres in the 70-year-old and 4 acres in the 40-year-old stands. All riparian thinning would be in the outer portions of the Riparian Reserves and outside of the inner gorge of the drainage features (see Figure C-2 of the DN). This represents less than 3 percent of the Riparian Reserve within the project area. This limited treatment provides areas of abundant recruitment of small diameter snags over time in untreated areas and diversity in the riparian stand structure.

Riparian treatments would favor the retention of dominant and co-dominant trees, with a target of over 70 percent canopy retention and creation of snags and downed wood. Current biomass growth rate would be maintained by capturing growth on fewer stems. The retention of 70 percent canopy would fully meet the desired dispersal conditions for spotted owl dispersal, maintain buffers areas for amphibian re-colonization of treated areas, and retain plant or forest associations that provide diverse habitat and microclimatic conditions with temperature and moisture regimes that favor riparian associated species such as amphibians, mollusks, and bats (Aquatic Conservation Strategy objective No. 9, ROD p. B-11).

The riparian thinning would promote development of western redcedar. This species responds well to release, and the riparian treatments would assist in retaining western redcedar as an important part of the diversity of the residual stand. This would contribute to meeting Aquatic Conservation Strategy objective No. 8 to maintain and restore the distribution, diversity, and complexity of the watershed and landscape. Diverse forest stands with healthy stocking levels are expected to be resilient and able to cope with disease, insects, and climatic changes (see EA Appendix E).

Hardwood components retained within the Riparian Reserve would continue to provide diversity in the short-term. Hardwoods would eventually be surpassed in growth by the conifers, and would become snags as they are shaded out and die. The treatments would open the stand conditions slightly for understory development that could provide additional cover and forage for riparian species of concern, their prey, and Forest Management Indicator Species, such as black-tail deer and bear.

Within treated acres of Riparian Reserves (14 acres), there would be a trade-off of short-term disturbance (10 to 50 years) and loss of a portion of small snags, for long-term (more than 50 years) benefits of structural development and adjustment of species mix. Long-term, over the next 100 years, large trees would mature, die, and become large pieces of down wood. As the large wood decays, these pieces provide a buffered environment from drying climatic conditions and moist environments favored by some amphibians and mollusks. In steep inner gorges, these large trees help dissipate the scouring energy from peak flows of storm events.

The Selected Alternative would fully meet the intent of this purpose and need element described on page 4 of the EA with canopy retention of 70 to 100 percent canopy cover, and the reduction of stand stocking to promote desired forest stand conditions of restoration of species composition and structural diversity. The Selected Alternative would have 14 acres of Riparian Reserve treated versus 10 acres in Alternative B, resulting in a slight increase in forest stands with amount (percent) of stand represented by a diversity of species. Species richness and reduced stocking density would promote stand resiliency to shifts in climate or disturbances such as insect and disease (see EA pp. 51 to 56, and 116 to 117).

Purpose & Need Element 3: Manage Late Successional Reserves to maintain a functional, interacting, late-successional and old-growth forest ecosystem.

Present Conditions. The project area includes Late Successional Reserves with high stocking levels (see EA Appendix D, Silvicultural Information, pp. 166 to 174). As with Riparian Reserves, the project proposal provides an opportunity to control stocking and promote desired vegetation characteristics. Thinning these stands can have the same benefit as in Riparian Reserves, opening up the forest canopy, thereby increasing diversity of plants and animals, and hastening transition to a forest with mature characteristics. The ROD (p. C-12) lists thinning in existing even-age stands and prescribed burning as examples of silvicultural treatments that may be considered beneficial to LSRs.

Environmental Effects. The project would have a positive effect on large tree structure for an estimated 130 acres of LSR with thinning to promote stocking levels designed to

favor retention of existing large trees and to promote growth of additional large tree component (EA pp. 53 to 54). The project would have a positive effect on the development of tree structure and diversity as described above in the Riparian Reserve purpose and need element, conditions and environmental effects paragraphs (see EA pp. 51 to 56, and 90 to 98).

Purpose & Need Element 4: Provide commercial wood fiber products consistent with the Forest Land Management Plan, as amended in 1994 by the Northwest Forest Plan.

Present Conditions. The stands within the project area are prime forestland. The Forest Plan, as amended, includes a Forest-wide goal to “maintain prime forestlands in timber production” (USDA 1990, pp. 4-5).

Environmental Effects: The Selected Alternative would produce an estimated 7.2 mmbf of commercial timber by thinning in the matrix and provides for potential additional volume from the thinning in the 40-year old stands. The timber sale offering would be economically viable, although due to the culvert to bridge replacement and other resource benefits, it would be the least likely of the three action alternatives to remain viable in case of large decreases in wood market value. Of the 927 acre project area, the alternative would thin 241 acres of 70-year old stands in Matrix, and 166 acres of 40-year old stands in LSR and 14-acres in Riparian Reserves.

FOREST PLAN CONSISTENCY

I have reviewed the Environmental Assessment (EA) for the project including the environmental effects and Forest Plan Consistency sections for each affected resource (EA Chapter 3). I find modified Alternative D, the Selected Alternative, to be consistent with the goals, objectives, standards and guidelines of the Land and Resource Management Plan for the Mt. Baker-Snoqualmie National Forest (Forest Plan), as amended (see EA pp. 9 and 10 for major amendments). The action will not alter the multiple-use goals and objectives for long-term land and resource management. My decision is consistent with current direction contained in the January 2001 Record of Decision that amended the standards and guidelines for Survey and Manage plant and animal species (including protection of buffer species and other mitigation measures), as modified or amended as of March 21, 2004. The last modification was the December 2003 Interagency Annual Species Review. (This 2001 ROD was reinstated by a U.S. District Court order on January 9, 2006.) Under all action Alternatives, there would be “No Impact” to Sensitive or Survey and Manage species (EA p. 122). Implementation of my decision will not contribute to a trend toward Federal listing or cause a loss of viability of these species (EA pp.122 and 123).

Survey and Manage Fauna: there is only one mollusk that is listed for pre-disturbance surveys on the north half of the Mt. Baker-Snoqualmie National Forest--the Puget Oregonian snail. Surveys were completed, and no survey and manage mollusk species were found. With implementation of my decision, variable density thinning will provide a range of canopy closure, and improve the potential for more light to reach the understory and increase understory vegetation that could provide cover and forage. Implementation of my decision will retain mesic conditions within the Riparian Reserves and retain down wood to provide cover for amphibians and mollusks. Bats

will utilize openings within and above the thinned stands for foraging, while roosting sites will remain limited by lack of large diameter trees within the stand with suitable bark characteristics or snags (EA pp. 118 and 119).

Tier 1 Key Watershed (EA p. 11): The Sauk River is a Tier 1 Key watershed, designated for its direct contribution to conservation of at-risk anadromous salmonids, bull trout, and resident fish species, and for its high potential for restoration. The Sauk River Watershed Analysis was completed in 1996 (USDA Forest Service 1996) (EA p. 17). Forest Plan, as amended, standards and guidelines for Tier 1 Key Watershed call for a reduction of existing system and non-system road mileage in Key Watersheds. By decommissioning Road 2430, the Selected Alternative will result in a reduction of 2.5 miles of system road within the Sauk River watershed.

Key Watersheds are the highest priority for watershed restoration. Reconstruction of existing roads will improve road drainage and stabilize unstable sections of roads. This will reduce the risk of road mass failure and reduce the amount of surface erosion by draining water off the road more frequently. Reconstruction will also increase the capacity of culverts to prevent plugging and the erosion that occurs as a result. Overall, less sediment will be delivered to streams. Reconstruction will include the conversion of a culvert to a bridge at Conn Creek to better meet 100 year flows. After the sale is completed, placing portions of Roads 2430 and 2432 in Maintenance Level 1 storage will reduce hydrologic concerns, including erosion associated with these roads (EA pp. 67 to 83).

Riparian Reserves (EA p. 16): My decision will be consistent with Riparian Reserve standards and guidelines. The Selected Alternative will treat 14 acres of the stands within Riparian Reserves, a very small percentage of riparian area within the project area. The Selected Alternative minimizes the amount of temporary road (0.9 miles) and landings within Riparian Reserve. As with Key Watersheds, above, reconstruction of existing roads will improve road drainage and stabilize unstable sections of roads, reducing the risk of road failure and surface erosion. Capacity of culverts will be increased, reducing the risk of culverts plugging and contributing sediment to streams. There will be some sediment generated in the first two years of the project from system road reconstruction and temporary road construction. However, after the sale is completed, decommissioning portions of Road 2430, 2430016, and 2430017 and placing Roads 2432 and 243014 in Maintenance Level 1 storage will in the long-term reduce hydrologic concerns, including erosion associated with these roads (Riparian Reserves standards and guidelines s RF-2, 3, 4, and 5) (EA pp. 67 to 83).

During system road reconstruction and temporary road construction, erosion control methods, consistent with Best Management Practices (BMPs), will be used to prevent silt-laden water from entering a stream. For all temporary roads where surface water has the potential to enter drainage, the road will be treated for energy dissipation prior to closure. Construction activities in or adjacent to perennial streams will be conducted during summer low-flow season. Design, construction, and maintenance procedures to limit sediment delivery to streams from the road surface will be applied. Road drainage will be routed away from channels and potentially unstable hill slopes. Where necessary, water bars will be used to route water away from streams to allow removal

of fine sediment and other contaminants. Reconstruction activities will avoid sidecasting of loose material. Culvert installation or replacement will accommodate at least the 100-year flood, including associated bedload and debris. Large woody material removed from an existing culvert inlet will be put back into the stream channel downstream of the culvert unless doing so would cause habitat degradation (Riparian Reserves Standards & Guidelines RF-2, 3, 4, and 5) (EA pp. 33 and 35).

To protect stream bank integrity and aquatic resources, the Selected Alternative will require directional felling and yarding of trees away from streams unless full suspension of trees can be achieved over both banks during yarding. No landings will be located within Riparian Reserves. Trees accidentally felled into a wetted channel will be left in place, and no other instream logs will be removed. Haul along all roads will be inspected by a Forest Service officer during rainy periods and restricted as necessary to minimize the potential for downstream sedimentation (Riparian Reserve Standards & Guidelines RF-2 and 5) (EA p. 34).

Matrix (EA pp. 16 and 17): The Decline Thin project area currently meets expected values for second growth stands of 40 to 70 years of age, and exceeds expectations for large down wood in portions of the stand where there are concentrations of large woody material as a consequence of past timber harvest. My decision, Alternative D modified, will meet Matrix land allocation objectives of retention of the large diameter down wood, and the recruitment of future large wood down logs and especially concentrations of larger rotten logs will be left undisturbed on-site to retain their habitat values (EA p. 38).

Snags and green trees will be designated for retention to meet green tree and snag retention requirements. Small clumps of hardwoods will remain un-thinned in portions of the project (as determined through the Silvicultural Prescription marking guidelines) to provide for diversity of species, and future snag recruitment (EA p 38). The Selected Alternative's level of snag retention will meet the Mt. Baker-Snoqualmie National Forest standards for snag and wildlife leave trees. It will also contribute to meeting the 30 to 50% tolerance level for cavity nesting species within the analysis area and the 80% tolerance level on the landscape (fifth-field watershed) scale as described in the DecAID analysis process for species associated with snags and down wood. The thinned units will contribute to meeting conditions described as snag densities in the 30% to 50% tolerance level as they progress over time through mid-seral to late seral stages.

ISSUES ADDRESSED BY ALTERNATIVE D

Issue 1: Economic Viability.

The Decline Thin project may turn out to be not economical for a purchaser to harvest.

Present Conditions. There is a concern that the proposed timber harvest would result in a deficit timber sale. "Deficit sales" are defined as sales where the "average indicated advertised rate" is less than the "average base rate." As a result, depending on actual market conditions at the time of sale, the sale may not receive viable bids, and the sale may not be sold. The market value for timber fluctuates seasonally and yearly. Financial analysis of the proposed project provides an estimate of timber sale viability. The financial analysis estimated bid rate of the timber sale based on log values, logging

costs, and contractual requirements. An estimated bid rate that is less than the minimum advertised rate for a timber sale would indicate a deficit sale (using today's costs and values). In a changing market, price scenarios vary, and small changes in wood product values may turn a deficit sale into a positive one, or vice versa.

Environmental Effects. The timber sale offered under modified Alternative D, with 60 per cent canopy cover, will result in 7.2 mmbf of timber produced from the 70-year-old matrix stands, with potential additional volume from the 40-year-old stand thinning. This would be an economically viable alternative. Alternative D had the lowest expected bid rate of the alternatives, indicating that it is the least likely of the three alternatives to remain viable in the event of large decreases in the market value of wood products. Alternative D also had the lowest PNV and benefit: cost ratios of the three alternatives, indicating that it would provide the fewest financial benefits for each dollar spent.

Modified Alternative D has harvest volumes similar to Alternative B in Units 1 through 9. Units 10 and 11 have the potential to add some additional volume that is not reflected in Alternative B. This additional volume may assist in covering KV costs associated with the non-commercial treatments of Units 12 and 13. Road costs in the selected alternative are similar to Alternative C with the addition of decommissioning of the upper portion of Road 2430 and the replacement of the Conn Creek culvert with a bridge.

Alternative D met the units of measure described on page 8 of the EA for being a viable sale, but had moderate risks of not generating viable bids. This was due to Alternative D including expensive road decommissioning work, the costs of a culvert to bridge conversion at Conn Creek, and younger-aged stand thinning. These items are not essential, but are desirable elements to meeting watershed processes and late-successional forest stand conditions. The Selected Alternative, modified Alternative D, has the potential for additional timber volume removal in the shift from 70 percent canopy cover to 60 percent canopy cover in the 70-year-old stands. There is also the potential addition of volume in the 40-year-old stand thinning. This additional volume, estimated at 1-2 mmbf, has a high cost for thinning due to equipment needed along with the small diameter material to be removed. The thinning removal will assist in covering the costs of desired stand thinning and potential KV work of road decommissioning.

Issue 2: Watershed Processes – Peak Flows and Sediment Yield.

Thinning and road building activities may affect soil erosion and water quality and quantity in the project area and downstream.

Present Conditions. The Selected Alternative would conduct thinning on 241 acres of 70 year-old stands, and additional acres of 40-year old stands. It would reconstruct 16.4 miles of existing road, and construct 0.9 mile of temporary road.

Particularly in areas susceptible to rain-on-snow events, the above activities can influence the timing and quantity of flows, soil erosion, and the rate and quantity of

sedimentation to aquatic habitats. Reconstruction of roads and associated drainage features, especially those that currently pose a risk to aquatic resources, can also help restore natural drainage patterns and benefit aquatic and riparian conditions. Decommissioning of roads with continuing hydrologic risk can have long-term benefits to watershed conditions.

Environmental Effects. Vegetation canopy retention in the 40 and 70-year old stands at 60 percent and above would minimize the effect on rain-on-snow processes. The percent of forest stands in the subwatershed in young age classes (immature canopy cover attributed to stands less than 25 years of age) would drop below 12 percent of forest acres by 2020. No appreciable increase in rain-on-snow peak flows would occur in the small drainages in the project area or Dan Creek by implementing this alternative because the vegetation would continue to recover, just at a slower rate. At the 5th field watershed scale, the vegetation disturbance level, or maturity of canopy cover, in the lower Sauk River watershed would not measurably change from the no action alternative. There would be no appreciable delay in hydrologic canopy recovery with this alternative.

Decommissioning of Roads 2430016, 2430017, and 2.5 mile of Road 2430 would lessen the effects of the road network on interception and re-routing of surface flow, but not measurably so. Treatment of Roads 2430016 and 2430017 after the sale would correct surface water drainage that is causing erosion along the road and downslope in at least one location. Decommissioning would reduce the overall risk of mass wasting from these two short spur roads (one-half mile total length).

There would be no measurable effect to water quality. Retaining 70 percent canopy closure in the older stands (compared to 60 percent in Alternative B) and Riparian Reserves, and 60 to 70 percent in the young stands would maintain shade levels, provide for adequate filtering by vegetation near streams, maintain a continuous root network to protect stream banks, and maintain a source of woody debris for the channels.

Within the Dan Creek subwatershed, erosion from the project area would increase by 1.8 percent (see EA, Table 10, p. 71). At the Lower Sauk River watershed scale, the erosion increase would not be detectable at 0.3 percent. The decommissioning activity could create a short-term increase in erosion when the ground is first disturbed. Erosion control BMPs would minimize that potential. Only small amounts of sediment would enter streams as a direct result, and the sites would revegetate within a year. (See mitigations measures in Table 1 of this decision notice.)

The Selected Alternative would meet the issue units of measure (p. 9 of the EA) with the greatest amount of road miles upgraded, 16.4 miles vs. 13.7 miles for Alternatives B and C. The Selected Alternative would also decommission the most miles with 2.8 miles decommissioned vs. 0.4 in Alternative C. This alternative meets the issue units of measures with the mitigations for impacts of soil disturbance, vegetation disturbance, and changes in sediment (see EA pp. 66 to 83).

PUBLIC INVOLVEMENT

In June 2005, the Forest Service mailed letters to Tribes and then to persons on District mailing lists, requesting comments on the proposed Decline Thin Project. In July of 2005, District staff organized two field trips to the Decline Thin Project area. Members from Pilchuck Audubon, North Cascades Conservation Council, as well as local citizens attended this field review. Later, additional scoping with Tribes and interested public took place in 2007. On March 13, 2007, the Darrington Ranger District hosted an open house to discuss this and other projects with more than 50 people in attendance. The Forest Service received a total of 12 written responses to the 2005 and 2007 scoping efforts. (Refer to Appendix A of the Decline EA for consideration of issues). The ID Team has considered comments received in response to the 2005 and 2007 scoping letters, the two field trips, and comments received during the 2007 District open house. Responses to comments are included in the Project Record.

Copies of the EA have been mailed to those who have participated in the scoping process or who had requested a copy of the EA, including individuals, groups, and Tribal councils. On August 30, 2007, a legal notice of the availability of the EA was published in the Seattle-Post Intelligencer, initiating the 30-day pre-decisional comment period. The Forest Service sent a post card to those on the project's mailing list advising the public of availability of the EA on the Forest Web site and by request.

TRIBAL CONSULTATION

In June 2005 and in February 2007, letters describing the proposed action and requesting comments and concerns were sent to the Tribal Chairpersons of the Sauk-Suiattle, Upper Skagit, Samish, Stillaguamish, Swinomish, and the Tulalip Tribes. There was participation by the Sauk-Suiattle Tribe in the District open house, and comments were received from representatives of the Sauk-Suiattle (Skagit River System Cooperative) on fisheries and sediment issues.

Figure 1. Map of Selected Alternative

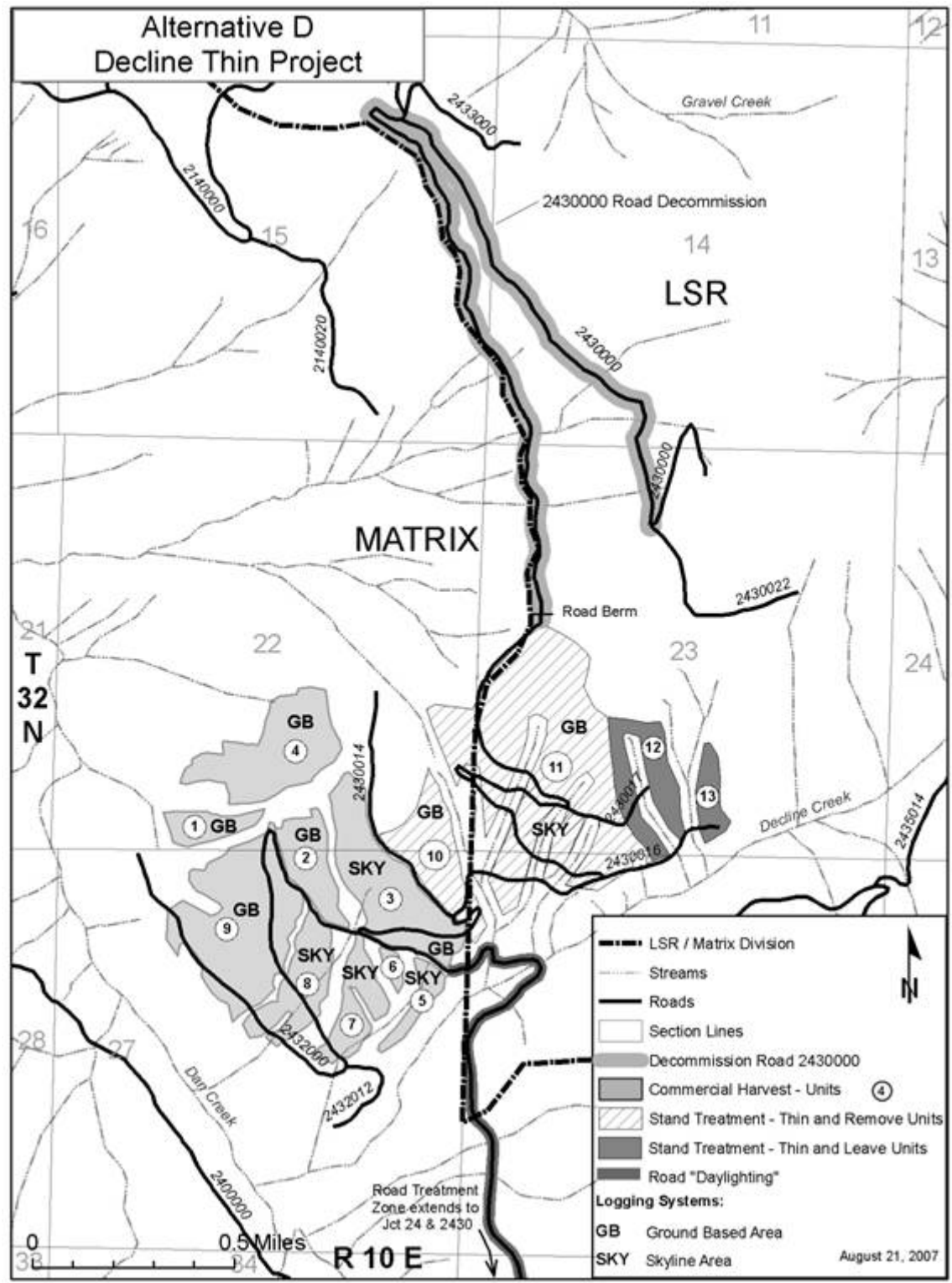


Table 1 – Mitigation Measures and Project Design Features

Mitigation Measure or Project Design Feature	Objective	Effectiveness and Basis	Forest Plan Standard & Guideline	Enforcement
Soil & Water				
Reduce erosion and sediment transport using: straw bales, silt fencing, filter fabric, temporary sediment ponds, check dams of pea gravel-filled burlap bags or other material, and/or immediate mulching of exposed areas	Prevent silt-laden water from entering streams	MODERATE (Brown 2002)	BMPs: R-9 (USDA Forest Service 1988)	Timber sale contract, Sale Administrator
When decommissioning temporary roads where runoff has potential to enter surface waters, apply treatments including: water-barring, pulling culverts, scarifying to depth of 12 inches, mulch with weed-free mulch, and/or seeding with approved seed mix. Erosion control measures must be in place prior to normal heavy rainfall period.	Increase dissipation of water energy from roads prior to closure; reduce or eliminate erosion; improve water filtration	MODERATE: (Luce 1997) Burroughs (1989) (Erosion and Sediment Delivery Following Removal of Forest Roads. Earth Surface Processes and Landforms, Brown 2001)	ROD S&G RF-2, RF-3, RF-5; BMPs R-3, R-12, R-23, T-13; and Fish Biological Assessment Forest Plan S&Gs Water Resources and Riparian Reserves #3	Timber sale contract, Sale Administrator
Use existing skid trails and landings to the extent practicable	Minimize soil disturbance and compaction from skid trails in the project area	HIGH (Avoids additional compaction from equipment)	BMPs: T-11 (USDA Forest Service 1988)	Timber sale contract, Administrator
Ground-based yarding would be performed with low ground pressure equipment. Travel on slash to minimize soil disturbance.	Protect soil resources, minimize soil compaction and displacement.	MODERATE (Experience elsewhere on the Forest)	ROD p. C-44	Timber sale contract, Sale Administrator
Directionally fall away from streams unless full suspension of trees can be achieved over both banks during yarding.	Protect stream bank integrity and aquatic resources	HIGH (Avoidance)	Forest Plan S&Gs Water Resources and Riparian Reserves #s 2, 5, 8; BMPs T8, T11, T12	Timber sale contract, Sale Administrator

Mitigation Measure or Project Design Feature	Objective	Effectiveness and Basis	Forest Plan Standard & Guideline	Enforcement
Do not locate any landings within Riparian Reserves.	Protect stream bank integrity and aquatic resources	HIGH (Avoidance)	Forest Plan S&Gs Water Resources and Riparian Reserves #s 2, 5, 8; BMPs T10; ROD S&G: RF-2	Timber sale contract, Sale Administrator
Do not remove instream logs. Leave in place trees accidentally felled or dropped into a wetted channel.	Protect stream bank integrity and aquatic resources	HIGH (Avoids damage that would occur if trees were removed)	Forest Plan S&Gs Water Resources and Riparian Reserves #s 2, 7, 8	Timber sale contract, Sale Administrator
Pull back approach fill to an angle of natural repose when removing culverts.	Protect stream bank integrity and aquatic resources	MODERATE (MBS Forest roads experience)	N/A	Road treatment contract; Contract Administrator
Do not yard logs through stream channels.	Protect stream resources	HIGH (Fact; MBS Forest roads experience)	ROD RF-2, BMPs T-8, 11 and 12; Forest Plan S&Gs Water Resources and Riparian Reserves #2	Timber sale contract
Haul along all roads restricted during rainy periods as necessary to minimize the potential for downstream sedimentation. Road 2430 is of particular concern for delivering sediment to Conn and Decline Creeks	Disconnect road drainage from stream channels	MODERATE (Sale Administrator has used for many years on, numerous sales with good results)	ROD RF-5, 7, BMPs R-3, 20; T-5 and 13	Timber sale contract
Curtail harvest operations when soils are excessively wet (when rutting and other damage are occurring as determined by the Sale Administrator) unless a thick mat of slash can be maintained to run equipment over.	Avoid rutting and compaction damage to susceptible wet soils	MODERATE (Avoid activity when impact would occur)	Forest Plan S&Gs Soils; #s 1, 2, 3	Timber sale contract sale administrator

Mitigation Measure or Project Design Feature	Objective	Effectiveness and Basis	Forest Plan Standard & Guideline	Enforcement
<p>Minimize roads in Riparian Reserves. The location, design, and reconstruction of necessary crossings should minimize disruption to natural hydrologic paths and adverse effects to aquatic resources. Avoid sidecasting of loose material. Accommodate at least the 100-year flood, and associated bedload and debris.</p>	<p>Maintain surface hydrology and Riparian Reserve function and integrity</p>	<p>HIGH (Avoidance)</p>	<p>ROD S&G RF-2, RF-4; BMPs T-8, T-10, T-11, R-1, R-6, R-11, R-12, R-14; Forest Plan S&Gs Water Resources and Riparian Reserves #6</p>	<p>Timber sale contract, Sale Administrator</p>
<p>Place large woody material removed from an existing culvert inlet into the stream channel downstream of the culvert unless doing so would cause habitat degradation</p>	<p>Maintain routing of large wood in channel network</p>	<p>LOW (Experience shows wood is often broken during removal and placement is often difficult)</p>	<p>ACS Obj. 6</p>	<p>Road maintenance or timber sale contract, and administration</p>
<p>For temporary roads identified to remain in place over the winter, use drainage features (culverts and/or water bars) that would accommodate a 100-year flood</p>	<p>Prevent erosion and/or mass wasting and road damage</p>	<p>MODERATE (Relatively new requirement, but based on permanent road requirements)</p>	<p>ROD S&G RF-4</p>	<p>Sale Administrator</p>
<p>Conduct construction activities in or adjacent to perennial streams during summer low-flow season</p>	<p>Limit sediment delivery to streams from the road surface</p>	<p>LOW</p>	<p>BMPs R-12; Forest Plan S&Gs Water Resources and Riparian Reserves #2</p>	<p>Timber sale contract, Sale Administrator</p>
<p>When constructing or decommissioning roads or landings: Outslope the roadway surface unless outsloping would increase sediment delivery to streams or where outsloping is infeasible Route road drainage away from channels and potentially unstable hill slopes. Crown landings and staging areas to prevent concentrated runoff. Where necessary, install water bars to route water away from streams to allow removal of fine sediment and other contaminants before discharge to the stream</p>	<p>Limit water accumulation and/or concentration, erosion, sediment delivery to protect streams' water quality</p>	<p>MODERATE (Years of use by agency)</p>	<p>ROD S&G RF-5; BMPs R-1, R-3, R-4, R-5, R-7, R-8, R-9, R-11, R-12, R-14; BA</p>	<p>Timber sale contract, Sale Administrator</p>

Mitigation Measure or Project Design Feature	Objective	Effectiveness and Basis	Forest Plan Standard & Guideline	Enforcement
<p>When heavy equipment is present: Make a hazardous spill plan and clean-up materials available on-site Conduct any machinery maintenance involving potential contaminants (fuel, oil, hydraulic fluid, etc.) at an approved site or outside the Riparian Reserve Prior to starting work each day, check all machinery for leaks and make all necessary repairs</p>	<p>Prevent and minimize effects to water quality</p>	<p>MODERATE (Implementation of spill plans are an industry standard)</p>	<p>BMPs T-21, W-4; BA</p>	<p>Timber sale contract, Sale Administrator</p>
<p>Install waterbars or other structures (including scattered woody material) on temporary roads and skid trails at a spacing and number determined by the Forest Service Require all drainage treatment and controls to be in place by the end of normal operating season</p>	<p>Control water discharge from temporary roads and skid trails, and disperse water on the hill slope</p>	<p>HIGH (Water bars are an industry standard and have been shown to be effective on closed roads and skid trails)</p>	<p>BMPs T-16, T-18, T-19, R-1, R-2, and R-9</p>	<p>Timber sale contract, Sale Administrator</p>
<p>Alternatives B, C, and D: In units where Riparian thinning would occur, establish location of unit boundaries adjacent to perennial and intermittent channels and drainage features based on location of inner gorge, slope break into a stream channel or drainage feature, location of mesic plant communities, and location of species characteristic of wetlands</p>	<p>Maintain water and aquatic conditions in Riparian Reserves</p>	<p>HIGH (10+ years District thinning experience)</p>	<p>BMPs T-6, 7, 8, 12</p>	<p>Timber sale contract, Sale Administrator</p>
Fisheries				
<p>Perform work in or near streams that may generate sediment to those streams only during the WDFW in-water window</p>	<p>Minimize sedimentation to fish-bearing waters</p>	<p>HIGH (Logic)</p>	<p>BMP: R-3 (USDA Forest Service 1988) MOU between FS and WDFW for hydraulic projects (2005)</p>	<p>Contracting Officer, COR, and engineer preparing contract for roadwork</p>

Mitigation Measure or Project Design Feature	Objective	Effectiveness and Basis	Forest Plan Standard & Guideline	Enforcement
When replacing culverts associated with wetlands, such as the culvert on Road 24 at MP 7.885, place new structure at elevation high enough to not drain wetland habitat upstream, even if fish passage is not improved	Maintain wetland habitat in this project area. Maintain a fish-bearing wetland in upper Dan Creek where upstream passage is blocked, while retaining wetland features already used by fish	HIGH (Logic)	Considers RF-6 (FS and BLM 1994), but recognizes overall greater benefit to fish	Contracting Officer, COR, and engineer preparing contract for roadwork
Wildlife				
Restrict to between April 1 and August 5 project activities adjacent to suitable murrelet nesting habitat that generate noise above background ambient levels. Between August 6 and September 15, activities should occur between two hours after sunrise and two hours before sunset (Units #1, #4, and #9 below Road 2432)	Eliminate sources of disturbance during the critical breeding period	HIGH (MBS Forest experience, references in Biological Opinion [USDI USFWS 2002])	Biological Assessment (USDA USFS 2002) Biological Opinion (USDI USFWS 2002)	Timber sale contract, Sale Administrator
Suspend thinning activities in the spring when sap flow begins	Minimize harvest impacts to residual trees during sap flow. Avoid additional disturbances to adjacent stands during critical breeding period of spotted owl and marbled murrelet	HIGH (USDI USFWS 2002)	Forest Plan (USDA USFS 1990) p.4–245 Commercial Thin harvest protection	Timber sale contract; Sale Administrator
Leave on-site specified down logs and especially concentrations of larger rotten undisturbed logs if possible	Retain down woody material diversity and habitat values	HIGH (9 previous thinning sales on the District)	Forest Plan ROD p. C-40	Timber sale contract; Sale Administrator
Retain small clumps (1–2 acres) of hardwoods un-thinned in some stands (as determined through marking guides)	Provide for a diversity of species and provide for future snag recruitment of intermediate age class of snags for cavity nesters while stand matures and conifer snag component develops	HIGH (10 + years of thinning on District)	Forest Plan ROD p. C-41	Timber sale contract; Sale Administrator
Vegetation And Plants				

Mitigation Measure or Project Design Feature	Objective	Effectiveness and Basis	Forest Plan Standard & Guideline	Enforcement
For known infestations of noxious weeds, schedule appropriate weed treatments including R6-approved herbicides, using KV funds until all plants are gone.	Eradicate known infestations	HIGH (USDA Forest Service 2005)	Forest Plan S&G #16, USDA Forest Service 2005	District Botanist
Actions conducted or authorized by written permit by the Forest Service that would operate outside the limits of the road prism require the cleaning of all heavy equipment prior to entering National Forest System Lands.	Prevent introduction of weeds	MODERATE (USDA Forest Service 2005)	Forest Plan S&G #2, USDA Forest Service 2005	Timber sale contract; Sale Administrator
All gravel, fill, sand, and rock must be from weed-free sources.	Prevent introduction of weeds	MODERATE (USDA Forest Service 2005)	Forest Plan S&G #7, USDA Forest Service 2005	Timber sale contract; Sale Administrator, District Botanist
Use weed free straw and mulch for all projects conducted or authorized by the Forest Service on NFS lands.	Prevent introduction of weeds	HIGH (USDA Forest Service 2005)	Forest Plan S&G #3, USDA Forest Service 2005	Timber sale contract; Sale Administrator
If weeds are present in the project area, all equipment and gear must be cleaned before leaving the area to avoid spreading the infestation further.	Prevent weed spread	HIGH (Logic)	Forest Plan Best Management Practices, USDA Forest Service 2005a	Timber sale contract; Sale Administrator
Seed all exposed soil with the approved seed mix followed by one to two inches of weed free mulch or straw	Prevent introduction and spread of weeds	HIGH (USDA Forest Service 2005)	Forest Plan Best Management Practices, USDA Forest Service 2005a	Timber sale contract; Sale Administrator
For Alternatives C and D—all sites with known noxious weeds should be areas where “skips” are placed to maintain canopy cover over shade intolerant weeds	Prevent weed spread	MODERATE (Experience)	Forest Plan Best Management Practices, USDA Forest Service 2005a	Timber sale contract
<i>Heritage Resources</i>				

Mitigation Measure or Project Design Feature	Objective	Effectiveness and Basis	Forest Plan Standard & Guideline	Enforcement
Specify requirements for railroad grade segment 14C: fall trees parallel to or away from the grade; do not cross the grade with equipment; do not yard logs across the grade; do not use the grade for transportation; designate the grade as the yarding system boundary in units 7 and 8 between the skyline system and the ground-based system	Protect the features of railroad grade segment 14C	MODERATE (Experience)	Forest Plan, Archaeology Protection, p. 4-99	Timber sale contract; Sale Administrator
If a previously unidentified resource is discovered during project implementation, or if an identified resource is affected in an unanticipated way, the Heritage Specialist would be notified and the Forest would fulfill its responsibilities in accordance with the Programmatic Agreement	Protect the features of railroad grade segment 14C of the Sauk River Lumber Company Historic District.	MODERATE (Experience)	Forest Plan, Archaeology Protection, p. 4-99	Timber sale contract; Sale Administrator
The following note shall be added to the sale area map: The excavation, removal, or damage of historic resources (cable, metal, lumber, etc.) is prohibited	Protect the cultural resources associated with the Sauk River Lumber Company Historic District	MODERATE (Experience)	Forest Plan, Archaeology Protection, p. 4-99	Timber sale contract; Sale Administrator

*All other applicable Forest Plan Standards and Guidelines relating to this project have been met, and the analysis and justification is documented in the Project Record

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

I have evaluated the effects of the project relative to the definition of significance established by the Council on Environmental Quality (CEQ) Regulations in 40 CFR 1508.27. I have reviewed and considered the Environmental Assessment for the Decline Thin Project (2007), which is incorporated by reference herein. Based on the above, I have determined that the Selected Alternative (Alternative D modified) will not have a significant effect on the human environment. For this reason, no environmental impact statement (EIS) will be prepared. My rationale for the FONSI follows, organized by subsection of the 40 CFR 1508.27 definition of significance.

(1) *Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial [40 CFR 1508.27(b) (1)].*

The proposed project context (society as a whole, affected region, affected interests, and locality) was reviewed, and the intensity (severity) of the negative impacts as a result of implementing Decline Thin Project is minor. The only short term negative impacts for a long-term benefit are the potential for temporary increases in sediment associated with harvest and road actions (including road decommissioning), short-term effects on wildlife habitat due to harvest activities, and short term spread of noxious weeds. Adverse effects of sediment delivery would be minimized due to application of soil and water project design features and mitigation measures (Table 3, pp. 33 to 38 and pp. 66 to 89 of the EA). Impacts to wildlife will be minimized through application of timing restrictions and other wildlife project design features described on page 38 of the EA, and long-term benefits to threatened and endangered species, important MIS species, and other wildlife are anticipated (EA pp. 90 to 122).

The project will provide long-term improvements in the health and resiliency of the forest vegetation across the landscape by:

- Reducing stand stocking to maintain or promote increased growth and vigor of forest stands while providing commercial wood fiber consistent with the Forest Plan.
- Reducing stocking levels in densely stocked stands to promote the development of large tree structure, species diversity, and to maintain a functional, interacting, late-successional and old-growth ecosystem, while retaining coarse woody debris and snags in the desired conditions described in wildlife section of Chapter 3 of the EA.
- Moving LSR acres toward suitable habitat conditions for threatened and endangered species in the short and long term including 130 acres of LSR for northern spotted owl and marbled murrelet.
- Moving 14 acres towards desired vegetation characteristics needed to attain Aquatic Conservation Strategy objectives in the Riparian Reserve.

The project will provide long-term improvements in the hydrologic conditions by:

- 2.5 miles more road decommissioning on the upper Road 2430

- Converting a culvert to bridge over Conn Creek to better meet standard and guidelines for 100 year event flows, resulting in the reduced potential for road related failure and sediment delivery to fish bearing waters
- Treating 2.3 miles of road for long term storage to reduce the potential for road related erosion or sedimentation
- Thinning to accelerate tree growth and improve tree species composition.

(2) *The degree to which the proposed action affects public health or safety* [40 CFR 1508.27(b) (2)].

Public health will be protected by keeping emissions expected from prescribed burning to a level below the National Ambient Air Quality Standards. Smoke may be noticeable particularly during the morning hours, but the effects will be short-term and within the Clean Air Act standards (EA pp. 1-9 to 10, Project Record) [These pages don't address Air.].

(3) *Unique characteristics of the geographic area such as the proximity to historical or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas* [40 CFR 1508.27(b) (3)].

A cultural resource inventory and report was completed and submitted to the State Historic Preservation Officer (SHPO) for review and response. The SHPO concurred with a "No Adverse Effect" determination (p. 126 of the EA), and mitigation measures are included for protection of cultural resources (Table 3, p. 40, and EA p. 126). There are no parklands, wild and scenic rivers, prime farmlands, or ecologically critical areas within the project area (EA p. 142).

(4) *The degree to which the effects on the quality of the human environment are likely to be highly controversial* [40 CFR 1508.27(b) (4)].

The degree to which the effects on the quality of the human environment are likely to be highly controversial is considered low. Common issues of controversy over effects on past Mt. Baker-Snoqualmie NF vegetation management projects include impacts on the large tree component and associated wildlife habitat, impacts on peak flows, and road management actions that change public access or have negative impacts on water quality and aquatic habitat.

The project is designed to maintain and promote stand vigor and diversity and associated wildlife habitat across the area. No existing large tree component stands will be harvested, and all proposed thinning is designed to facilitate development of future large tree structural conditions.

Impacts on peak flows have been analyzed and a variety of project design features incorporated in residual canopy cover, and mitigation measures are included to protect and maintain soil productivity (Table 1, above; Table 3 in the EA pp. 33-37). In addition, road upgrade, decommissioning and temporary road reclamation activities will reduce risk of sediment delivery to streams (EA pp. 70 to 83).

The Selected Alternative will not change existing mainline road access for the public. The Selected Alternative will store 2.3 miles of road and decommission 2.5 miles of closed road. Decommissioning, road storage, and road improvements will result in long term improvements in water quality and aquatic habitat, and better align the actively managed road system with budgets (EA pp. 62 to 65, and Appendix D, Cumulative Effects).

(5) *The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks [40 CFR 1508.27(b) (5)].*

This decision will not have effects that are highly uncertain or involve unknown risks. Activities included in this decision have been implemented numerous times in the Forest on similar terrain and forest conditions. This type of project has become a routine project for the Mt. Baker-Snoqualmie National Forest. While any action carries some degree of risk, the proposed action was designed and the analysis summarized in the EA was carefully completed to minimize unique or unknown risks. In addition, the Mt. Baker-Snoqualmie National Forest implementation procedures for timber sales, including sale preparation, administration (standard timber sale contract), and prescribed burn plans will ensure that the effects will be similar to those predicted in the EA. The effects on the human environment of implementing the Decline Thin Project are not expected to be highly uncertain or involve unique or unknown risks (Chapter 3 of the EA).

Project design features and mitigation measures have been developed to ensure adverse effects to the human environment are reduced or eliminated (Table 1, above; Chapter 2 and Table 3 of the EA), and monitoring has been included to evaluate the implementation and effectiveness of key project design features.

(6) *The degree to which the action may establish precedent for future actions with significant effects or represents a decision in principle about a future consideration [40 CFR 1508.27(b) (6)].*

There are no foreseeable timber sale plans for this project activity area within the next 5 to 10 years. At the end of that time period, the Forest Service could choose to use additional silvicultural treatments to keep conditions in the younger aged stands (40 years) moving toward the desired conditions of old forest characteristics. There is also the possibility of meeting Forest Plan objectives for timber management with future regeneration harvest within the 70-year-old stands in the Matrix, and also the possibility of no action. In any case, this project does not establish binding precedent.

(7) *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts [40 CFR 1508.27(b) (7)].*

For an action to contribute to cumulative effects there has to be some kind of additive or interactive effect. The cumulative effects of the alternatives and the past, present, and foreseeable future actions are disclosed in Chapter 3 of the EA, in conjunction with Appendix C of the EA. The EA discloses there will be no significant cumulative impacts by implementing the Decline Thin Project, including foreseeable future actions (Chapter 3, Environmental Effects, under each resource section, and Appendix C of the EA).

(8) *The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources [40 CFR 1508.27(b)(8)].*

Cultural surveys of the project area were conducted with review by the Forest Archeologist; five resources were recorded. Sites will be protected from project activities through project design to avoid sites, and through mitigations (EA Table 3, page 40). The State Historic Preservation Office has concurred with the Archeologist's "no adverse effect" determination (Project Record). If new sites are found during project implementation, they will be protected through mitigation (id).

(9) *The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973 [40 CFR 1508.27(b) (9)].*

Informal Section 7 consultation on the Decline Thin Project was completed in August of 2007 with U.S. Fish and Wildlife Service staff concurrence on the following effects determinations. All action alternatives would result in "no effect" to lynx, northern spotted owl, gray wolf, and bald eagles (delisted – August 2007), and would result in "no effect" to critical habitats designated for the recovery of the spotted owl and marbled murrelet.

All action alternatives would result in a "not likely to adversely affect" risk assessment for two species federally listed as threatened or endangered: marbled murrelet and grizzly bear. With the proposed Decline Thin Project, there exists a potential for additions to grizzly bear core habitat that may be beneficial in the long term. There also exists a potential for noise disturbance to murrelets in one of the thinning units adjacent to old-growth forest (suitable nesting habitat). This potential disturbance has been consulted with U.S. Fish and Wildlife Service for conservation measures to minimize the potential impacts. (See wildlife mitigation and effectiveness in Chapter 2.)

The fish species and special habitats of management interest in the Dan Creek subwatershed are shown in the Project Record. For federally listed fish and special habitats, the Selected Alternative would cause "no effect" to federally listed Chinook, steelhead, or bull trout; "no effect" to designated Chinook or bull trout critical habitat; and this alternative "would not adversely affect" essential fish habitats for Chinook, coho, or pink salmon.

For other fish species with special status (FS Sensitive and MBS management indicator species), there would be “no impact” to coho, sockeye, coastal cutthroat, Salish sucker, pink, or chum salmon, or rainbow trout.

The Biological Assessment prepared for consultation with FWS and the Biological Evaluation assessing impacts to the Regional Forester’s Sensitive Species can be found in District files and the Project Record at the Darrington Ranger District office.

(10) *Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment [40 CFR 1508.27(b) (10).*

The project is designed to meet all applicable Federal, State, and local laws (Chapter 3 of the EA, Clean Water Act, Federal Consistency, page 67).

NFMA CONSISTENCY FINDINGS

I find this decision to be consistent with the requirements of the National Forest Management Act (USC 1604(g)(3)(E)) and its implementing regulations (36 CFR 219). Specifically:

This act establishes guidelines for National Forest management. This project is consistent with these guidelines for management prescriptions that involve manipulation of tree cover (36 CFR 219.27 (b)) as follows:

1) *The prescription should be best suited to the multiple-use goals established for the area with potential environmental, biological, cultural resource, aesthetic, engineering, and economic impacts, as stated in the regional guides and Forest Plans (36 CFR 219.27 (b) (1)).*

My decision includes activities that were designed to be consistent with the Forest Plan for all resource areas analyzed in the EA (EA Chapter 3, Forest Plan Consistency subsections for resource sections: Forest vegetation, Fire & Fuels, Air Quality, Access & Travel Management, Hydrology and Soil, Fisheries, Botany, Recreation, Heritage, Roadless Areas, and Economics).

2) *The prescription should not be chosen primarily because it will give the greatest dollar return or the greatest output of timber, although these factors shall be considered (36 CFR 219.27 (b) (3)).*

The harvest systems utilized in the Selected Alternative were not selected primarily because they will give the greatest dollar return or the greatest unit output of timber but for other reasons (EA pp. 130 and 133, and Reasons for the Decision, above).

3) *The prescription should be chosen after considering potential effects on residual trees and adjacent stands (36 CFR 219.27 (b) (4)).*

My decision includes silvicultural prescriptions designed to benefit residual trees by accelerate the development in young Late Successional Reserve forest (LSR), improve species composition and structural diversity in Riparian Reserves, and improve stand conditions and productivity of Matrix forest (EA, pp. 6-7). The project is not designed nor expected to have any measurable negative effect to adjacent stands.

4) *The prescription should avoid permanent impairment of site productivity and ensure conservation of soil and water resources (36 CFR 219.27 (b) (5)).*

Soil, slope, and other watershed conditions will not be irreversibly damaged. Streams, streambanks, shorelines, lakes, wetlands, and other bodies of water are protected from detrimental changes in water temperatures, blockages of water courses, and deposits of sediment where harvests are likely to seriously and adversely affect water conditions or fish habitat (EA pp. 66 to 81, and 83 to 89).

5) *The prescription should provide the desired effects on water quantity and quality, wildlife and fish habitat, regeneration of desired tree species, forage production, recreation uses, aesthetic values, and other resource yields (36 CFR 219.27 (b) (6)).*

My decision is consistent with the standards and guidelines in the Mt. Baker-Snoqualmie National Forest Plan, as amended, and therefore will result in the desired effects on the resources described above. The Environmental Analysis discloses those effects specifically anticipated for hydrology and soils (EA, Chapter 3, pp. 66-81); for fisheries (pp. 83-89); and for wildlife (pp. 90-122); etc.

6) *The prescription should be practical in terms of transportation and harvesting requirements and total cost of preparation, logging and administration (36 CFR 219.27 (b) (7)).*

Experienced Forest and District specialists designed the project, and all activities are considered to be feasible. The expected mid rate of \$23.79 (average market) exceeds the expected base rate of \$10.58. Thus, a timber sale implementing the Selected Alternative (Alternative D modified) would be a viable commercial offering to the market. The difference is smaller than under the other alternatives because of the culvert to bridge conversion and other costs.

7) *No timber harvest, other than salvage sales or sales to protect other multiple use values shall occur on lands not suited for timber production (36 CFR 219.27 (c) (1)).*

My decision includes harvest on lands identified as suitable for timber management (Vegetation Specialist Report).

8) *Regeneration stocking is required within 5 years from final timber harvest on suited lands for silvicultural practices that, by definition, necessitate regeneration to achieve timber growth and yield objectives (36 CFR 219.27 (c) (3)).*

The project is a commercial thin. No clearcutting or other regeneration harvest will occur. The forest lands to be thinned will remain adequately stocked after the thinning (EA pp. 45 to 56, and Appendix D).

9) *Clearcutting will be used as a cutting method where it is determined to be the optimum method. Seed tree and shelterwood silvicultural prescriptions, which are designed to regenerate an even-aged stand of timber, will be used where determined to be the appropriate methods to meet the objectives and requirements in the Forest Plan (16 USC 1604 (g)(3)(F)(i)).*

Clearcutting, seed tree cutting, shelterwood cutting, and other cuts designed to regenerate an even-aged stand of timber are not prescribed for this project (EA p. 20 and Appendix D).

FINDINGS REQUIRED BY OTHER LAWS AND REGULATIONS

My decision is consistent with all applicable laws and regulations (Chapter 2 pages 15 to 17, Chapter 3, applicable laws and regulations in each resource section, and other effects pages 129-142 of the EA). It also meets Forest Plan direction and applicable standards and guidelines (Chapter 2, pages 14 to 15 and Chapter 3 Forest Plan Consistency in each resource section).

ADMINISTRATIVE APPEAL

This decision is subject to administrative appeal pursuant to 36 CFR Part 215, only by those individuals and organizations who provided comments or otherwise expressed interest during the 30-day comment period on the EA. The appeal must meet the requirements at 36 CFR 215.14.

The appeal must be filed with the Appeal Deciding Officer, Regional Forester, Pacific Northwest Region. Appeals filed by regular mail or express delivery must be sent to:

Appeal Deciding Officer, Attn: 1570 Appeals, 333 S.W. First Avenue, P.O. Box 3623, Portland, Oregon, 97208-3623.

They may be faxed to (503) 808-2255, sent electronically to appeals-pacificnorthwest-regional-office@fs.fed.us, or hand delivered to the above address between 7:45 AM and 4:30 PM, Monday through Friday except legal holidays.

Appeals, including attachments, must be filed within 45 days after the publication date of this notice in *The Seattle Post-Intelligencer*, the newspaper of record, Seattle, Washington. The publication date in the newspaper of record 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.

Electronic appeals must be submitted in a rich text format (.rtf), or Microsoft Word (.doc) format, or as an email message. E-mailed appeals must include the project name in the subject line. 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.

It is the responsibility of each individual and organization to ensure their appeals is received in a timely manner. For electronically mailed appeals, the sender should normally receive an automated electronic acknowledgement from the agency as confirmation of receipt. If the sender does not receive such an automated acknowledgement, it is the sender's responsibility to ensure timely receipt by other means.

PROJECT IMPLEMENTATION

Implementation of project activities is expected to begin in 2007.

Implementation of this project decision cannot begin until the 15th business days after the disposition of any appeal, depending on the nature of that resolution. If no appeal is filed, implementation of the decision may begin on, but not before, the 5th business days after the close of the appeal period.

CONTACTS

For further information, contact Peter Forbes, District Ranger; or Phyllis Reed, ID Team Leader, at the Darrington Ranger District, 1405 Emens Street, Darrington, WA 98241 (360) 436-1155.

Y. ROBERT IWAMOTO	Date
Forest Supervisor	

ATTACHMENTS

Appendix A - Monitoring Summary Sheets

Appendix B - Public Comment and Responses from 30 Day Comment Period

Appendix C - Errata Sheet

Figure C-1 - Proposed Temporary Roads and Landings

Figure C-2 - Potential Thinning along Riparian Reserve Buffers