

**Decision Notice
& Finding of No Significant Impact
Quartzville LSR Thin**

USDA Forest Service
Sweet Home Ranger District, Willamette National Forest
Linn County, Oregon

**T11S, R4E, Sections 10-15, 24, 25, 28, and 33-36; T11S, R5E, Sections 21, 26-31, and 35;
and T12S, R4E, Section 1**

Decision and Reasons for the Decision

Background

The *purpose of this proposal* is to accelerate development of late-successional stand characteristics in young stands within the Quartzville Late Successional Reserve (*LSR #RO213*) and to encourage development of stand conditions within Riparian Reserves, in the LSR, that contribute to a healthy riparian ecosystem and improved habitat connectivity within the LSR.

The action is needed because these 35-45 year old stands of densely-stocked, managed second-growth stands offer little in the way of structural diversity desired in Late-Successional Reserves. These stands were established to produce high yields of timber for commodity production rather than late-successional habitat characteristics described in the NW Forest Plan for LSR's (page *B-1*). For many decades management objectives here were to maximize tree growth to provide a sustained yield of timber commodities over time, while also meeting other multiple use objectives. With the development of the NW Forest Plan in 1994, the objectives for management of these stands changed when they became part of the Quartzville Late-Successional Reserve (LSR). The goal here now is to provide large, contiguous blocks of complex, late-successional forest habitat for species dependent on this type of habitat for their survival.

When the LSR network was designated, the drafters of the *NW Forest Plan* knew there were not enough large intact blocks of late-successional habitat to meet the objectives of the LSR's so they included a variety of seral stages in these management allocations. In young seral stands (*less than 80 years old*) included in the LSR's, they encouraged the use of silvicultural treatments to accelerate the development of habitat conditions for species dependent on late-successional/old growth habitat (*NW Forest Plan, page C-12*). They reasoned that the sooner inclusions of young seral habitat within the LSR became late-successional habitat, the better for the recovery of late-successionally dependent species, especially those in decline like the northern spotted owl. The 35-45 year-old, managed stands proposed for treatment with this project are part of the young seral stage inclusions within the LSR. Recent research indicates that "if the plantations in LSRs are treated with the proper types of thinning and some other management actions, the actions may accelerate the development of some old-growth characteristics by decades. Some benefits in biological diversity could occur within the next two or three decades.

The environmental assessment (EA) documents the analysis of three alternatives to meet this need.

Decision

Based upon my review of all alternatives, I have decided to implement Alternative 2 which prescribes thinning to various stand densities on 828 acres of 35-45 year-old, even-aged managed stands in the *Quartzville LSR* to accelerate development of late-successional stand characteristics in these stands. Occasional, small openings will be scattered among thinned areas in the uplands to simulate gaps that naturally occur in late-successional stands. Some areas in each harvest unit will be left intact.

Prescriptions for Riparian Reserves: None of scattered, small openings will occur within 172 feet of any stream. Portions of Riparian Reserves within proposed harvest units, which are not contributing to primary stream shade or channel bank stability, will be thinned to enhance stand growth and diversity. Variable-width, no-harvest buffers will be maintained in the primary shade zones along all perennial streams to provide the shading necessary to maintain water temperatures and to create filter zones necessary to reduce sediment delivery to streams. The minimum riparian buffer widths will be 25 feet on intermittent streams, 66 feet on perennial non-fish-bearing streams and 100 feet on fish-bearing streams.

These stand treatments will be accomplished using a combination of helicopter, skyline and ground-based yarding systems to harvest a total of 26 units yielding about 8.28 MMBF of timber.

To access the proposed harvest units approximately 100 feet of new, native-surface, temporary spur road will be constructed and approximately 1.4 miles of closed logging spur roads, constructed during the first entry, and will be re-opened. These spur roads will be decommissioned (or put into storage for later use) through closures with berms and the addition of water bars following timber harvest. In addition, three system roads totaling 5.28 miles will require reconstruction to access harvest units because they have previously been closed and water barred. These roads will be decommissioned similarly to the roads above. They will be closed and water barred again following harvest activities. In addition, road maintenance will be done on about 25 miles of existing haul routes.

Decision Rationale

I have selected Alternative 2 based on the results and findings in the environmental analysis, a review of the supporting appendices, public comments and responses to those comments and a review of the Forest Plan.

When compared to the other alternatives, this alternative will achieve desired stand characteristics in the LSR on more acres than Alternative 3 and more quickly than Alternative 1. The supply of this type of habitat is limited and takes a long time to develop, so the amount and speed of habitat improvement are important considerations for dependent species.

Between alternatives there is virtually no difference in the amount of shade affected adjacent to streams because primary shade zones are kept intact except for some yarding corridors in the action alternatives. Given that stream shade is protected, Alternative 2 does the most to encourage development of improved habitat conditions in the secondary shade zones in the Riparian Reserves. Thinning here will encourage the development of travel and dispersal corridors which will contribute to improved connectivity within the LSR, perhaps decades sooner than with passive management here.

Finally, the cost/benefit ratio for Alternative 2 is slightly higher than Alternative 3.

This alternative meets requirements under the amended Willamette Forest Plan and was prepared in accordance with Forest Plan standards and guidelines. The environmental assessment also follows guidance in the Quartzville Watershed Analysis, the NW Forest Plan Temperature TMDL Implementation Strategies (September 2005), the Willamette Forest Road Analysis (as amended in 2003), the Wild and Scenic Rivers Act, 1968, the National Environmental Policy Act (1969), the National Forest Management Act (1976), and other applicable laws, regulations and policies cited throughout the document and appendices.

Other Alternatives Considered

In addition to the selected alternative, I considered three other alternatives. A description of these alternatives can be found in the EA on pages 34-57 and comparison of these alternatives can be found in the EA on pages 58.

Alternative 1 No Action

Under the No Action alternative, current management plans will continue to guide management of the project area.

This alternative will eventually achieve the desired stand characteristics, without accelerating their development. In this alternative no silvicultural stand treatments will be done in young, even-aged stands within the Quartzville LSR. These previously-managed stands will be allowed to mature over time, on their own.

This alternative was not selected because it passively addresses stand objectives and will likely take much longer, perhaps decades longer, to achieve desired stand characteristics than active treatments will. There is also some risk with passive management in these dense plantations. Disturbance events that will likely occur here can either put these plantations on a “path that leads to complexity” or can begin to unravel the stands depending on a variety of factors.

Not actively treating these stands results in a tradeoff between the time it takes to develop late-successional habitat in the LSR and the potential effect of extending the recovery time for species that use this habitat, which is currently in short supply in the Pacific Northwest. According to forest ecologist Jerry Franklin, the structure of young, managed stands differs appreciably from young, natural stands that developed following wildfire; so young managed stands are “likely to develop on different and, perhaps slower trajectories than those followed by existing late-successional forests...”

Alternative 3

An option for accelerating the development of desired stand characteristics on these young, managed stands is achieved with similar treatments to the proposed action, but on fewer acres because harvest will be more limited in the Riparian Reserves contained within proposed harvest units.

Riparian Prescriptions for another option: As with the Proposed Action, none of the small, scattered openings will occur in the first site tree (*172 feet*) from any stream. Instead of the variable-width, no-harvest buffers used in the Proposed Action, this alternative will utilize ‘one-standard-tree-height’ (*172 foot*) width, no-harvest buffers on all perennial streams to provide shading to maintain water temperatures

and to create filter zones necessary to reduce sediment delivery to stream. Variable-width, no-harvest buffers of at least 25 feet will be used on intermittent streams. These buffers will include trees contributing to stream bank stability. Outside of no-harvest buffers, thinning will be done to enhance stand growth and diversity. This Riparian Reserve thinning, in proposed harvest units will occur in the following locations:

- In the portion of the Riparian Reserves along intermittent streams (*which do not flow water most of the year but do show channel scour*) which is outside of the no-harvest buffer area to the outer edge of the Riparian Reserve (*172 feet from the stream*).
- In the portion of the Riparian Reserves along fish-bearing streams which is outside of the 172-foot no-harvest buffer to the outer edge of the Riparian Reserve (*344 feet from the stream*). The exceptions are that no harvest will occur within 344 feet of McQuade Creek and the thinning area on Canal Creek will be outside of the 132-foot no-harvest buffer to the outer edge of the Riparian Reserve (*344 feet from the stream*).
- No thinning will occur in the Riparian Reserves on non-fish-bearing perennial streams.

Road access to harvest units is treated similarly to the proposed action in all respects except that this alternative will reopen 0.46 fewer miles of closed logging spur roads (constructed during the first entry), will not construct 100 feet of native-surface temporary spur road, and will not open up one closed, system road. This is because roads are not planned in no-harvest buffers and the stream buffers are wider in this alternative than in the Proposed Action. In the Proposed Action, buffers only include the primary shade zone. In this alternative they are one site tree (172 feet) wide and may include both primary and secondary shade zones. There are also some variations in yarding methods between the two action alternatives because of availability of road access and unit configurations resulting from elimination of harvest in portions of Riparian Reserves.

This alternative was not selected because one of the objectives of the project was to encourage development of stand conditions within Riparian Reserves, in the LSR, that contribute to a healthy riparian ecosystem and improved habitat connectivity within the LSR. This alternative does not meet this purpose as well as Alternative 2 does.

Public Involvement

As described in the background, the need for this action arose in 2003. A proposal to thin to accelerate attainment of late-successional characteristics in dense, even-aged, managed stands in the Quartzville LSR was listed in the Schedule of Proposed Actions starting in August 2003. The purpose of the SOPA is to provide an early and informal notice of proposed projects on the Forest. This is done so that the public is aware of upcoming activities, can indicate their interest in specific projects, and become involved early in the environmental analysis process. The Willamette National Forest also sends its quarterly mailer "Forest Focus" containing the SOPA to over 100 individuals, groups and/or industry representatives. The SOPA is also available on the Forest website.

Agencies and individuals who have expressed interest in this project, and similar projects on the Sweet Home District in the past, were provided opportunities to comment on the proposed Quartzville LSR Thin project during scoping, which began in February, 2004. To begin the scoping process a letter dated February 9, 2004 was mailed to over 90 people, agencies and organizations. This letter contained detailed information about the project proposal and preliminary issues.

In response to the scoping efforts, a comment letter was received from Oregon Natural Resources Council dated December 8, 2003. In their letter, they also referred to a previous comment letter dated February, 16, 2000. They were generally supportive of thinning in young stands provided that there is no road construction and no yarding corridors or other activities impacting water quality or aquatic habitat. They also were opposed to new or temporary roads in Roadless areas, including uninventoried roadless areas.

Government-to-government consultation regarding this project was conducted with the Confederated Tribes of Grand Ronde Community on March 10, 2005 and with the Confederated Tribes of Siletz Indians on March 16, 2005. No comments were received regarding this project at either one of these meetings. In addition, during the scoping of issues and concerns, as part of the public participation process, letters were mailed to tribal governments on February 9, 2004. No issues were raised regarding the proposed project as a result of that mailing.

Formal consultation with the U.S. Fish and Wildlife Service, on this project, was completed and a Biological Opinion received (*USDI March 2005 and February 2003*). Their determination was that this project may affect but is not likely to adversely affect spotted owls.

Consultation with US Fish and Wildlife Service for fisheries was not required since no bull trout habitat exists in the analysis area. In addition, consultation with NOAA Fisheries was not necessary due to a "no effect" determination for listed anadromous fish species.

Under the Programmatic agreement the Forest Heritage Specialist has project review authority, and certifies that the project complies with Section 106 of the National Historic Preservation Act. That certification of the project as "No Historic Properties Affected" was completed on November 15, 2005.

Using the comments from the public and other agencies, the interdisciplinary team identified issues regarding the effects of the proposed action. The main issue of concern included Riparian Reserve management not only to address Aquatic Conservation Strategy Objectives but also to address travel and dispersal corridors for many terrestrial animals and plants, and to provide for greater connectivity within

and between LSR's. The young, even-aged, managed stands within the Riparian Reserves do not currently meet the desired stand characteristics for this allocation (*USDA and USDA 1994, B-11 and B-31*) but accelerating development of desired stand characteristics here is potentially in conflict with the need to retain shade on Quartzville Creek and its tributaries. Quartzville Creek is on the State of Oregon Department of Environmental Quality's 303(d) list of water-quality impaired water bodies because temperatures exceed state water quality standards during a portion of the summer months. Retaining shade in the Riparian Reserves is important to meet water quality temperature standards.

Other issues include: (1) high road densities and their potential impacts on habitat usability; (2) harvest-related activities, especially road construction within an inventoried Roadless area; (3) potential impacts of stand treatments on special habitats and (4) protection of Outstandingly Remarkable Values within the Quartzville Creek corridor so as not to compromise its eligibility for designation as a Wild and Scenic River (see EA pages 38-40). To address these concerns, the Forest Service created the alternatives described above.

A legal notice appeared in the Eugene Register-Guard (the newspaper of record) on April 10, 2006 advertising the 30-day public review of the draft environmental assessment; two comment letters were received from the public. The comments received during both the initial scoping and the 30-day review focused on the following interests:

- Harvesting within the LSR, given they were set aside for endangered species.
- Harvesting in a unit located inside the Middle Santiam Inventoried Roadless Area
- Retaining snags and down wood in a manner that more closely mimics natural disturbances
- Harvesting in natural stands
- Introducing more variability in thinning and gaps in the variable density thinning prescriptions
- Thinning more heavily to avoid another entry in 20-30 years.
- Retaining native hardwoods and trees with forked and broken tops, leaning trees, etc.
- Not removing trees that are capable of spanning streams from Riparian Reserves
- Retaining slash on site for nutrient recycling and unburned slash piles for wildlife
- Retaining trees with visible nests regardless of species
- Avoiding log-haul during the wet season

All correspondence and full text of the letters are available in the analysis file for Quartzville LSR Thin at the Sweet Home Ranger District office.

I reviewed all the public comments received during the 30-day review period for the EA and considered them in making this decision. A written response to the comments has been prepared and added to the project file for the South Pyramid project. A summary of the comments and responses follows:

- 1) Unit 3 appears to be in an inventoried Roadless area. This unit should be dropped or the FS should figure out a way to do non-commercial restoration (e.g. felling and snag creation) so as to leave the area eligible for wilderness.
 - *This unit is located in an inventoried Roadless area (EA, pages 24-25). Understanding the public concerns here, although the intent of the suggestion is good, it may not be wise to fell trees and/or create snags out of the trees that would have been removed in thinning. This is because this unit is adjacent to a well-traveled road and leaving that much dead material on the unit may increase the potential fire risk that could jeopardize adjacent lands in this Roadless Area.*
- 2) We appreciate that this project will attempt to attain variable density stands, but this project envisions a fairly narrow range of variability. More variability both within and between stands would be desirable. Small pockets of heavier thinning might be appropriate.
 - *Small pockets of heavier thinning were not proposed for this project because all harvest units fall with a Critical Habitat Unit for northern spotted owls where a minimum of 40% canopy closure must be retained to meet the 50-11-40 rule here. No thinning was proposed to take stands below 40% canopy closure (EA, page 76).*
- 3) The FS should have considered another alternative that would thin more heavily in order to avoid the need for another thinning entry in 20-30 years and disclose the trade-offs between short-term and long-term habitat values, understory development, dead wood habitat loss due to capturing so much mortality at once, etc. I am not sure what approach ONRC would prefer because we have not seen the analysis, but it seems that with these young fast-growing stands, heavier thinning might be appropriate in some cases in order to increase overall variability and avoid the need for repeated entries.
 - *As explained in the section of the EA entitled 'Alternatives Not Considered in Detail,' a prescription that would have thinned more heavily was not considered in detail because (a) A landscape populated by stands with minimum numbers of trees leaves little room for mortality from natural events such as strong winds, fire or insect/disease infestation, (2) The analysis area falls within a Critical Habitat Unit (CHU) where a minimum of 40% canopy closure must be maintained for owl dispersal. Thinning to 30-50 trees per acre would not meet this criteria, and (3) Given that Quartzville Creek is 303(d) listed stream for temperatures, the IDT determined that heavy thinning would not address this issue.*
- 4) "Gaps" should not be small clearcuts, but rather small pockets of very heavy thinning and snag creation.
 - *Gaps are not intended to be small clearcuts in this proposal. Gaps will be accomplished using a Dominant Tree Release prescription, one large tree is left and trees within 1/8 to 1/4 acre around the tree are cut with the exception of western white pine, western redcedar, Pacific yew, all hardwoods except alder, and any trees less than 6 inches in diameter, which are retained. Leaving a large tree in the center, various minor species*

and all trees less than 6 inches in diameter will not produce small clearcuts as suggested by this comment.

Finding of No Significant Impact

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

1. My finding of no significant environmental effects is not biased by the beneficial effects of the action.
2. There will be no significant effects on public health and safety, because all slash treatments are designed to comply with the Oregon Visibility State Implementation Plan and the Oregon Smoke Management Plan which meet Clean Air Act standards. Mitigation measures and Best Management Practices utilized in Riparian Reserve prescriptions will minimize effects to Water Quality. Hazard trees that pose a threat to human safety during logging operations and along the haul routes will be removed to meet Oregon Occupational Health and Safety standards (see EA pages 95, 147-152, 163-164).
3. There will be no significant effects on unique characteristics of the area because historic or cultural resources were avoided, buffered, or otherwise protected from the disturbing effects of harvest operations and yet-to-be discovered sites uncovered during project implementation will result in suspension of operations until appropriately addressed by the district archaeologist (EA pages 72 and 182-184). No park lands or prime farmlands occur in the analysis area (EA page 188). Wetlands will be appropriately buffered from disturbance activities (EA, pages 46 and 70-71). Quartzville Creek is a potential candidate for Wild and Scenic River status. This project will not compromise the creek's "free flowing" nature or degrade identified Outstandingly Remarkable Values that helped determine its eligibility (see EA pages 40 and 176-181).
4. The effects on the quality of the human environment are not likely to be highly controversial. This project is based on the best available scientific information and site-specific data. The methodologies used to estimate the effects disclosed in the Environmental Consequences section of the environmental assessment are widely used in similar environmental analyses and have been reviewed by the research and academic communities. I am not aware of any credible, peer-reviewed scientific questioning of the methods used in this analysis, nor its results. The Sweet Home Ranger District has experience with the types of activities to be implemented. The effects analysis shows the effects are not uncertain, and do not involve unique or unknown risk (see EA pages 81-189).

5. The Sweet Home Ranger District has considerable experience with the types of activities proposed by this project. Variable-density thinning and related activities, similar to that proposed by the selected alternative, have occurred on more than 2,000 acres on the district since about 1995. Samplings of these projects have been monitored and have been shown to meet the amended Forest Plan standards and guidelines. In addition the analysis in this document shows the effects of this project are not uncertain, and do not involve unique or unknown risk (see EA pages 81-189).
6. The action is not likely to establish a precedent for future actions with significant effects, because the thinning proposed is a common land management practice and the effects of this project are within the standards and guidelines outlined in the amended Willamette Forest Plan (see EA pages 81-189).
7. The cumulative impacts are not significant (see EA pages 87, 93, 96, 97, 98, 100,105-107, 117, 121, 125, 128, 139, 147, 152, 161, 164, 169, 173-174, 180-181, and 184).
8. The action will have no significant adverse effect on districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places, because an appropriate inventory was conducted for properties which may be eligible for inclusion in the National Register of Historic Places and appropriate avoidance measures taken so no effects to these resources are expected (see EA, pages 182-184 and 190). The action will also not cause loss or destruction of significant scientific, cultural, or historical resources (see same references).
9. The action will not adversely affect any endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species act of 1973. The biological evaluation in Appendices D, H and L address the effects of the project on endangered and threatened species and their habitat. Formal consultation with US Fish and Wildlife Service as required under Section 7 of the Endangered Species Act was completed for northern spotted owls. Terms and conditions in the Biological Opinion are being adhered to in this project (EA pages 82-87, 190, Appendix H).

Consultation with US Fish and Wildlife Service for fisheries was not required since no bull trout habitat exists in the analysis area. In addition, consultation with NOAA Fisheries was not required because this undertaking will have no effect on anadromous fish. (see EA pages 101-107 and 190).

10. The action will not violate Federal, State, and local laws or requirements for the protection of the environment. Applicable laws and regulations were considered in the EA (see EA pages 15-25 and 186-188). The action is consistent with the amended Willamette Land and Resource Management Plan.

Findings Required by Other Laws and Regulations

This decision to utilize variable density thinning on 828 acres of young, even-aged, managed stands within the Quartzville LSR in order to accelerate attainment of late-successional stand characteristics there is consistent with the intent of the amended forest plan's long term goals and objectives. The project was designed in conformance with land and resource management plan standards and incorporates appropriate land and resource management plan guidelines for Late-Successional Reserves (NW Forest Plan, pages C-9 to C-21).

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.

Administrative Review or Appeal Opportunities

This decision is subject to appeal pursuant to Forest Service Regulations at 36 CFR 215. Any appeal of this decision must be in writing and fully consistent with the requirements as described in 36 CFR 215.14. An appeal may be mailed to Dallas Emch, Forest Supervisor, 211 E. 7th Avenue, Eugene Oregon 97440. Appeals may also be filed electronically at: appeals-pacificnorthwest-willamette@fs.fed.us. Electronic appeals must be submitted as part of the actual e-mail message or as an attachment in Microsoft Word (.doc), rich text (.rtf), or portable document format (.pdf) only. E-mails submitted other than to the above address will be rejected. It is the responsibility of the appellant to confirm receipt of appeals submitted by electronic mail. Appeals may be delivered to the Forest Service office at the street address listed above Monday – Friday (other than legal holidays), between 8:00 am and 4:30 pm. Appeals may be faxed to 541-225-6222, Attn. Dallas Emch. The appeal must be postmarked or received by the Appeal Deciding Officer (Forest Supervisor) within 45 days of the date the legal notice of this Decision is published in the Register Guard, Eugene Oregon. For further information regarding these appeal procedures contact Environmental Coordinator, Neal Forrester at 541-225-6436.

If this project is appealed, the Responsible Official (District Ranger) offers to meet with appellants to attempt to informally resolve the appeal.

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.

Contact

For additional information concerning this decision or the Forest Service appeal process, contact Anita Leach, Planner, Sweet Home Ranger District, 3225 Highway 20, Sweet Home, OR 97386, phone (541) 367-9218.

/s/ Mike Rassbach

May 26, 2006

MIKE RASSBACH

Date

District Ranger

Sweet Home Ranger District

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Figure 1. Map Title

