DECISION NOTICE
AND
FINDING OF NO SIGNIFICANT IMPACT
FOR

HEHE LSR THIN PROJECT ENVIRONMENTAL ASSESSMENT

USDA Forest Service
Willamette National Forest
Middle Fork Ranger District
46375 Highway 58.
Westfir, OR 97492

The Hehe LSR Thin Project Environmental Assessment (EA) documents the environmental analysis of a proposal to commercial thin 35-60 year old managed plantations in the Fall Creek Late-Successional Reserve #219. The Hehe LSR Thin Project area is defined by the Hehe Creek sub-watershed located in the Fall Creek watershed. This area is located approximately 16 miles northeast of the city of Lowell, Oregon. The legal description of the area is T18S, R2E, Sections 1, 12, 13, 24, 25, T18S, R3E, Sections 1-12, 14-18, 19-22, 27-30, and 34 of the Willamette Meridian, Lane County, Oregon..

The Hehe LSR Thin Project was developed in accordance with direction provided in the 1990 Record of Decision and Final Environmental Impact Statement for the Land and Resource Management Plan for the Willamette National Forest (Forest Plan) as amended by the 1994 Record of Decision for Amendments to Forest Service And Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl and Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl (Northwest Forest Plan), and other appropriate laws and policies.

The Hehe LSR Thin Project is intended to meet the purpose and need to manage stands in the project area to achieve the desired conditions described for the Forest Plan Management Area of Late Successional Reserves. The EA documents the analysis of three action alternatives to meet these needs, along with no-action alternative. I have reviewed the EA, related documents, and public input. My decision is based upon that review, and I have found the analysis to be in full compliance with direction contained in the above documents.

Documents in the Project Record are available for review at the Middle Fork Ranger District Office, 46375 Highway 58, Westfir, OR 97492, phone (541) 782-2283.

Decision and Reasons for the Decision

It is my decision to implement Alternative 3 of the Hehe LSR Thin Project EA. This alternative will commercially thin about 3,762 acres of 35-60 year old second-growth stands to accelerate the development of late-successional forest conditions and habitat structure. Approximately 842 acres will receive a light thinning prescription, about 1,846 acres moderate thinning prescription, and 1,074 acre a heavy thinning prescription. The different thinning prescriptions provide some diversity across the landscape and incorporate elements best described in today's terminology as

"variable density thinning". Units will have portions of the stands in an un-thinned condition, gaps or openings created around dominant trees to release them and promote rapid growth, and variable tree spacing within and between units.

This alternative will use skyline cable yarding systems on about 2,576 acres and helicopter yard about 1,186 acres. These yarding systems will require the construction of about 3.8 miles of temporary roads to access the thinning areas, and the maintenance or reconstruction of about 115 miles of haul route roads. This alternative will store and close about 38 miles of road to passenger vehicles after thinning operations. Alternative 3 was designed to maintain access for fire protection, recreation, and administrative use while implementing the proposed road closures in the Middle Fork District Supplemental Road Analysis. .

The alternative includes a protection strategy designed in consultation with U.S. Fish and Wildlife Service for the spotted owl sites. This alternative will protect known spotted owl activity centers by not thinning within 0.25 miles of the owl activity centers. If the known owl activity centers have greater than 40 percent suitable habitat conditions within 1.2 mile home range, light to moderate thinning is allowed within 0.25 to 0.5 miles of owl sites and the three thinning intensities will be allowed beyond 0.5 miles. For the owl activity centers with less than 40 percent of their 1.2 mile radius home range in suitable habitat, no thinning is allowed within 0.5 miles of the sites, light to moderate thinning from 0.5 to 0.7 miles. All three thinning intensities, light, moderate, or heavy will be allowed beyond the 0.7 miles.

Post thinning fuel treatments were designed to meet recommended levels on about 73% percent of the treatment areas. The alternative will mitigate the post-thinning fuels by yarding tops and machine piling at landings on about 3,660 acres. The alternative will also machine pile and burn about 81 acres within 40 feet of open roads and landings in or adjacent to thinning areas. This alternative also includes 281 acres of prescribed underburning.

Alternative 3 will thin 1,387 acres of the upland slopes of the Riparian Reserves to accelerate development of late-successional forest conditions. The portions of Hehe and Alder Creeks which are listed fish streams will be protected with 170 feet no thin (no cut) buffers prescriptions. Other perennial and fish bearing streams will have 100 feet no thin (no cut) buffers to maintain stream temperatures and water quality.

The alternative includes the creation of snags and down woody debris in the thinned stands, invasive plant surveys and control measures along roads and landing areas, temporary spurs and road closures, instream habitat enhancements on the portions of Hehe, Alder, Tiller, and Fall Creeks, disassembling the Hehe Creek log collection rack, and firewood sale administration.

Alternative 3 proposes activities that meet the purpose and need for action described in Chapter 1 of the EA. The proposal is preferable because it:

- Improves growth and maintains health of stands by reducing the stocking in these second-growth managed plantations which also diversifies species composition and stand structure to accelerate the development of late-successional forest conditions and increase habitat diversity,
- Closes roads to reduce open road density, decreases road maintenance costs, fixes chronic road problems that cause sedimentation into the stream systems, and improves wildlife habitat,

- Addresses the potential for fine fuels levels created from the commercial thinning with fuel reduction treatments. Fuel treatments will reduce the fine fuels to an acceptable range and the thinning will provide long term benefits which help to ensure the control of wildfires by reducing risk, cost and damages to the resources.
- Enhances aquatic and wildlife habitat by adding wood to streams and creating snags and down wood in young forest stands,
- Implements activities which move the current conditions toward the desired conditions as described in the Willamette Forest Plan and meet the Standards and Guidelines for the various forest resources and land allocations.

I have determined that the selected alternative is consistent with the Willamette National Forest Land and Resource Plan, as amended by the Northwest Forest Plan. This finding is based on environmental analyses prepared in accordance to Forest Plan Management Areas and Standards and Guidelines, cited throughout the EA and documents in the Analysis File. This EA provides a listing of how these proposals respond to the direction contained in the Forest Plan.

The selected action does not prevent attainment of the Aquatic Conservation Strategy (ACS) objectives as outlined in the Northwest Forest Plan. The project is consistent with the ACS because it is designed to contribute to maintaining or restoring the project area and watershed conditions over the long-term, with only minor short-term negative effects (EA, page 164). Appendix F of the EA describes how the project responds to each of the nine ACS objectives at the project and watershed level.

Pre-disturbance surveys and management of known sites required by protocol standards that comply with the 2001 Record of Decision for the and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measure Standards and Guidelines as amended by the 2001 and 2003 Annual Species Reviews were completed (EA pages 95-102 and 123-127).

My decision is based on a review of the record that shows a thorough review of relevant scientific information, a consideration of responsible opposing views, and the acknowledgment of incomplete or unavailable information, scientific uncertainty, and risk. The discussion on big game habitat effectiveness (EA, pages 102-107) and coarse woody debris (EA, pages133-137) are two example of where currents models used to evaluate Forest Plan standards and guidelines have been supplemented with additional sources of information (i.e., DecAid) or disclosed about deficiencies in model results (i.e., Wisdom habitat effectiveness).

This decision includes the removal of trees that may blow down during or immediately following prescribed treatments from the effects of the thinning and or mortality from underburning in excess of the coarse woody debris prescription. These trees will be managed and possibly removed according to the prescription developed in Alternative 3.

Mitigating Measures

This decision approves the following mitigating measures described in the EA on pages 31 through 36. A summary of the key mitigating measures are described below::

Where cable yarding is planned, logging systems will be designed to generally yard away from stream channels to minimize soil disturbance in adjacent stream buffers. No yarding corridors are anticipated to cross perennial stream channels in this project, but if any areas are identified

during project implementation, full suspension will be achieved and yarding corridors will not exceed 15 feet wide.

Log suspension requirements and fuel reduction operations are prescribed to minimize soil disturbance within FW-081 and FW-084 (from Forest Plan) limits. In the case where mineral soil is exposed in specific locations beyond the level of maximum allowable disturbance, the site will be waterbarred, seeded, and fertilized immediately following harvest.

The project area has been surveyed to protocol for spotted owls, therefore seasonal restrictions do not apply to activities such as chainsaws use during falling, skyline yarding, and operation of other heavy equipment that are beyond 0.25 mile of known activity centers. Activities within the defined disruption distances of known spotted owls (EA, page 32) are restricted during the critical breeding period (March 1 to July 15).

Yarding with Type I (i.e., heavy) helicopters is not allowed within 0.25 miles of any activity centers of spotted owls during the entire breeding season (March 1 to September 30). If Type I helicopters were used it would trigger a Likely to Adversely Affect (LAA) determination, due to the terms associated with the Biological Opinion. If this were to occur it would require re-consulting with the US Fish and Wildlife Service

Type II-IV helicopters (as well as KMAX helicopters) are not allowed to operate within 120 yards of any activity center during the critical breeding season (March 1 to July 15). No restriction on Type II-IV (and KMAX) during the latter part of the breeding season (July 16 – September 30)

Best Management Practices (BMPs), including placement of sediment barriers, provision of flow bypass, and other applicable measures, will be included in project design as necessary to control off-site movement of sediment.

Any in-stream activity such as culvert replacement or in-stream wood placement occurring within fish bearing and other perennial streams will comply with Oregon Department of Fish and Wildlife (ODFW) seasonal restrictions on in-stream work activities. For the main stem of Fall Creek, in-stream work must occur between July 1 and August 31, and for Fall Creek tributaries, in-stream work must occur from July 1 to October 15 unless otherwise approved by ODFW. For any perennial stream crossing culvert replacement, a specific dewatering plan shall be included with the contract design provisions.

All road reopening, reconstruction and temporary road building will occur during the dry season between June 1 and October 31 to avoid potential surface erosion of exposed soil. All temporary roads shall be winterized if not being used for extended periods of wet weather. To prevent sedimentation to the greatest extent possible, apply rock surfacing on all native surfaced roads to be used in the wet season between November 1 and May 31.

At the completion of harvest activities, reopened roads and new temporary roads shall be water barred, seeded with approved forest mix design and closed to vehicle travel to reduce potential for surface erosion and sedimentation.

Wet weather haul will be monitored by the Timber Sale Administrator and the Hydrologist. When necessary, haul may be suspended during heavy rainfall to prevent breakdown of road surface structure, pumping of fine sediment and potential mobilization of sediment to streams.

Haul will be prohibited on native-surfaced roads during the wet season between November 1 and May 31.

Winter haul will be allowed on roads 1800, 1824, 1825, 1825-217 (mp 0.00-3.17), 1825-218 (mp 0.00-0.64), 1825-219, 1825-240, 1825-242m 1828 (mp 0.00-0.47), 1828-402, 1828-407, 1830 (mp 0.00-4.34), 1832 (mp 0.00-5.38), 1832-396 and 1832-397 between November 1 and May 31.

Erosion prevention and control measures will be implemented during timber sale operation. Areas disturbed by harvest operations and road maintenance or reconstruction will be re-vegetated where needed and completed in a timely manner. Erosion control booms or straw mulch will be installed near road and stream crossings when sediment is generated from winter haul roads.

Water-bars will be installed where needed to minimize runoff on tractor skid trails, landings; modified low-level closed roads, and closed temporary roads.

Terms and Conditions in the Biological Opinion from the National Oceanic and Atmospheric Administration (NOAA) – National Marine Fisheries Service will be implemented where applicable for proposed activities. The project monitoring and reporting requirements will also be completed according to the designated timeframes.

Fuel treatments are prescribed to mitigate the fine fuel loadings created from the commercial thinning. Fuel treatments include yarding tops and branches and grapple piling and burning at landings, grapple piling within 40 feet of most roads left open, hand piling and burning, and underburning. The underburning will occur during spring-like conditions to minimize impacts to the soils, existing coarse woody debris, and mortality to green leave trees. Planned, deliberate ignition of under burning should be kept outside of the designated no-cut buffers.

Native grass seed will be applied to all bare mineral soil left after road decommission or road closure. On laid back side slopes of fill removals, coverage of native slash or weed-free straw will be applied to prevent surface erosion from direct raindrop impact during the first storms after fill removal.

During the bridge abutment repair, a continuous stream flow will be kept around the work site, i.e. no dewatering of the channel. All work must be isolated from any flowing water. Concrete will not be poured if any of the uncured concrete or contaminated wash water could enter the stream.

No yarding of existing coarse woody debris shall occur in these stands. Protecting the existing coarse woody debris ensures adequate nutrient cycling for maintenance of long-term site potential and provides valuable habitat structure for a diversity of species. The majority of the coarse woody debris is remnant debris from the previous harvest entry.

For most of the unit's stand conditions, there is an opportunity to begin creating large woody debris where it is deficit and to meet minimum standards for diameters of pieces and linear feet established in the Northwest Forest Plan (Reference Appendix F for individual unit prescriptions).

Up to about 38 miles of classified roads will be closed by blocking the entrance to the road to reduce the density of open road miles. These roads are blocked primarily to reduce disturbance to big game habitat, to rehabilitate them for long-term storage which minimizes sediment

contribution to streams, and to reduce the cost of maintenance. All temporary roads will be closed and rehabilitated after harvest activities.

Openings associated with proposed activities such as landings, burn piles, and road closure will be seeded with approved forage seed mix and fertilized to create forage for deer and elk..

Require cleaning of all timber harvest equipment, culvert replacement machinery, and road maintenance equipment prior to entering the work area, especially those that will be working off-road to minimize the spread of invasive weeds. Other measures such as using weed-free aggregate material, re-vegetating disturbed soil areas with native species, cleaning up rock quarries and helicopter landings prior to use, and monitoring for new localized populations will be implemented with this project..

Air quality will be maintained by adhering to the Oregon Smoke Management Plan and additional monitoring of low level winds to insure that burning occurs when the risk of smoke intrusions into designated areas and Class I airsheds is low. Various fuel treatments methods such as yarding tops, grapple piling along roads, and hand piling and burning, and underburning during spring-like conditions will be used. The slash piles will be covered and dry when burned which reduces the amount of smoke produced.

Safety concerns will be mitigated by advisory signing (Truck Traffic Ahead), and temporary road closures when falling or yarding activities adjacent to roads could create unsafe conditions, as will occur per standard timber sale contract clauses.

Monitoring will occur at many points in time during the implementation process of the project including during sale layout and preparation, sale administration, and contract inspections. The project will also be included in the list of sales with the potential to be sampled by Forest, Provincial, and Regional monitoring teams.

Significant Issues

The following issues were identified as the significant issues for the project area based on the scoping, public comments received and interdisciplinary team discussions. The significant issues are used to guide development of alternatives and tracked through the analysis process.

Road Management

The current road system was built to access timber and other forest resources. Timber sale revenues paid for the majority of past construction and road maintenance. However, timber harvest has declined with the current emphasis on ecosystem management. The Northwest Forest Plan has designated this area as Late-Successional Reserve (LSR). An extensive road system is in conflict of the LSR objectives. The road network creates contrasting edges of forest habitat, fragments connecting habitat, creates barriers to species movement, and provides access and opportunities for human's to extract natural resources. The change in forest management has seriously reduced operating budgets and the ability to maintain an extensive road system. A consequence is that most roads are no longer annually inspected for maintenance requirements and deficiencies are not corrected, which could result in extensive resource damage. Some roads may need to be removed from the system, others closed until future access is needed, and many managed at the lowest maintenance level that still protects resources values.

Interior Habitat

Various plant and animal species benefit from maintaining connectivity of late-successional forest stands and large continuous blocks of interior forest habitat. This connectivity facilitates movement, dispersal and migration of many forest species. Intensive management activity (road building and clearcut harvesting) has occurred in this project area over the past 40-50 years. This activity has created a fragmented forest landscape with significantly reduced interior habitat. These conditions are unfavorable to those species that rely on interior forest habitat for a portion or all of their life history. Stand density reduction in managed stands close to late-successional forest habitat may alter interior habitat conditions.

Spotted Owl

The Northern spotted owl is well documented within the Fall Creek LSR and within the Hehe project area. Assessment of current habitat conditions indicate that foraging habitat conditions for owls can be improved through density management activities. Focusing treatments adjacent to some activity centers based on occupancy and reproductive rates may benefit owls by improving habitat and foraging condition around these sites.

Fire and Fuels

The proposed action will commercially thin about 3,800 acres. Implementing the proposed thinning along with the coarse woody debris strategies from the LSRA could create an accumulation of fine fuels (0-3 inch) that exceeds fuel loading recommended levels and could increase fire risk, cost to suppress fires, resource damage by wildfires, and risk to firefighters safety.

Several winter storms over the past years have caused considerable snow damage and blowdown that have contributed to the buildup of fuels within these plantations. Fuel prescriptions to reduce both management activity-created fuels and blowdown fuels have been difficult and costly to implement under certain thinning prescriptions. The cumulative fuel loading from these events are potentially in excess of fuel loading standards and guidelines.

Several other issues were identified but were found not to be significant for the purposes of this project. Generally, non-significant issues are mitigated by standards and guidelines provided for in the Forest Plans, addressed through resource prescriptions, or decided upon by laws and regulations. These issues included vegetation management, water quality, fisheries, soil erosion and detrimental soil conditions, big game habitat, , Threatened, Endangered, and Sensitive Species, Survey and Manage Species, economic efficiency, and invasive plants. The potential impacts of the alternatives on these issues and the environmental factors were analyzed in Chapter 3 of the EA.

Other Alternatives Considered

In addition to the selected alternative, I considered two other action alternatives (2 and 4), and the no-action alternative (1). A comparison of how these alternatives respond to the significant issue and other evaluation criteria can be found in the EA on pages 37-41.

Alternative 1 (No Action)

Alternative 1 was the no action alternative where the proposed project does not take place. No further activities would have taken place to manage the stands by thinning. The no action

alternative provided a benchmark, or a point of reference for describing the environmental effects between the two action alternatives.

I did not choose Alternative 1 because it fails to meet the purpose and need. No information surfaced during the analysis to justify not proceeding with treatments of these stands.

Alternative 2

Alternative 2 would have thinned the least amount of acres of second growth plantations among the alternatives. The alternative would have commercial thinned about 3,186 acres of second-growth stands. Approximately 650 acres would have received a light thinning, about 1,573 acres moderate thinning, and 963 acre a heavy thinning. The proposed yarding systems would have required the new construction of about 3.9 miles of temporary roads to access the thinning areas, and the maintenance and reconstruction of about 102 miles of haul route roads

This alternative would have closed about 4.4 miles of road after thinning operations. This alternative would have implemented only some of the proposed road closures in the Middle Fork District Supplemental Road Analysis. Alternative 2 was designed to provide a high level of public access to the area by keeping most of the roads open. Road closures would have been low cost and low intensity designs to allow for re-opening of any of the roads in the short term.

The alternative included the most protection (or least disturbance) around spotted owl sites. This alternative would have protected known spotted owl activity centers with greater than 40 percent suitable habitat conditions within 1.2 mile home range by not thinning with 0.25 of owl sites. Light to moderate thinning is allowed within 0.25 to 0.7 miles of owl sites. If the owl sites are resident single owls and suitable habitat conditions are less than 40 percent within 1.2 mile radius home range, then no thinning is allowed within 0.7 miles of the sites. All three thinning intensities, light, moderate, or heavy would have been allowed beyond the 0.7 miles.

Post thinning fuel treatments were designed to meet recommended levels on about 50 percent of the treatment areas. The alternative would have mitigated the post-thinning fuels by yarding tops and machine piling at landings on about 1,996 acres. The alternative would have also machine piled and burned about 190 acres within 40 feet of open roads and landings in or adjacent to thinning areas.

Alternative 2 would have thinned about 1,138 acres of upland slopes of the Riparian Reserves. Hehe and Alder Creeks would have had 200 feet no thin (no cut) buffers to provide additional protection to listed fish streams. The alternative included the creation of snags and down woody debris in the thinned stands, invasive plant surveys and control measures along roads and landing areas, decommissioning of roads, instream habitat enhancements on the portions of Hehe, Alder, Tiller, and Fall Creeks, disassemble the Hehe Creek log collection rack.

I did not select Alternative 2 because it did not manage the road system toward the desired conditions for Late-Successional Reserves (LSR) nor implement recommendations from the Middle Fork District Supplemental Road Analysis. It also moved fewer acres toward the desired conditions for the LSR.

Alternative 4

Alternative 4 would have thinned the highest number of acres of second growth plantations among the alternatives. This alternative would have commercial thinned about 4,179 acres of

35-60 year old stands. Approximately 990 acres would have received a light thinning, about 1,676 acres moderate thinning, and 1,513 acre a heavy thinning.

This alternative would have closed about 38 miles of road to passenger vehicles after thinning operations. About 12.6 miles of road would have been decommissioned. This alternative included the reconstruction of the end of Road #1831 to access helicopter landing sites and subsequent decommissioning of the road after thinning operations. Road closures were designed for the long term. The alternative was designed to implement the proposed road closures from the Middle Fork District Supplemental Road Analysis.

This alternative would have yarded about 2,926 acres with skyline and 1,253 acres with helicopters. The proposed yarding systems would have required the new construction of about 4.8 miles of temporary roads to access the thinning areas, and the maintenance and reconstruction of about 127.5 miles of haul route roads.

The alternative includes the least amount of protection for the spotted owl sites among the action alternatives. This alternative would have protected known spotted owl activity centers by not thinning within 0.25 miles of the sites. If the known owl activity centers have greater than 40 percent suitable habitat conditions within 1.2 mile home range, light to moderate thinning would have been allowed within 0.25 to 0.5 miles of owl sites. All three thinning intensities would have been allowed beyond 0.5 miles. For the one owl activity center with less than 40 percent of their 1.2 mile radius home range in suitable habitat, no thinning is allowed within 0.5 miles of the sites. All three thinning intensities, light, moderate, or heavy would have be allow beyond the 0.5 miles.

Post thinning fuel treatments were designed to meet recommended levels on 98% percent of the treatment areas. The alternative would have mitigated the post-thinning fuels by yarding tops and machine piling at landings on about 4,101 acres. The alternative would have also machine piled and burned about 141 acres within 40 feet of open roads and landings in or adjacent to thinning areas. This alternative also included about 362 acres of prescribed underburning and about 1,196 acres of supplemental hand piling and burning.

Alternative 4 would have thinned about 1,597 acres of Riparian Reserves. The no thin (no cut) portion of the Riparian Reserves had been decreased to approximately 60 feet away for the perennial and fish bearing streams and to about 25 feet on intermittent streams with side slopes less than 30 percent.

The alternative includes the creation of snags and down woody debris in the thinned stands, invasive plant surveys and control measures along roads and landing areas, decommissioning of roads, instream habitat enhancements on the portions of Hehe, Alder, Tiller, and Fall Creeks, disassemble the Hehe Creek log collection rack, and firewood administration.

I did not select Alternative 4 because of the additional cost of implementing the fuel treatments. The cost of the proposed fuel treatments did not provide enough benefits in the reduction in the short-term risk of fire to warrant the extra cost.

The Hehe LSR Thin interdisciplinary (ID) team also considered one other management alternative that ultimately was not analyzed in detail (EA page 30).

Thinning without Timber Removal – An alternative was considered that would have not remove the timber from the thinning. Leaving such a large quantity of cut trees on the ground would have pose an unacceptable risk of wildfire and Douglas–fir bark beetle infestation and

thus would have be ineffective at protecting late-successional and old-growth ecosystems, and fostering development of late-successional characteristics in young stands. Applying such a prescription across the landscape without timber removal would have result in young stands in the very high risk fuel models for more than 40 years.

Public Involvement and Scoping

The public involvement process and planning for this project started with a scoping meeting in June of 2003. A Forest Service interdisciplinary team of resource specialists and Middle Fork Ranger District management staff defined the proposed actions elements, identified preliminary issues and project opportunities, identified potentially interested and affected people, and assigned members to the interdisciplinary team. The results of the scoping meeting were used to guide the public involvement process, establish analysis criteria and explore possible alternatives and their probable effects.

The scoping record with the description of the proposed action and additional project area information was sent out on December 18, 2003 to the project's mailing list of 44 individuals, interest groups, and organizations, elected officials, tribal representatives, and other federal and state agencies. The cover letter explained the purpose and need for the project, provided a map of the project area, and solicited comments on the proposed action.

The Hehe LSR Thin Project has been included in the Annual Program of Work Review with the Conferated Tribes of the Grand Ronde and Siletz since 2002. No comments have been received specific to the Hehe LSR Thin Project.

The Hehe LSR Thin Project was listed in the Willamette National Forest's Schedule of Proposed Action (SOPA) starting in the Fall Quarter of 2003. The SOPA is mailed out to a Forest mailing list of people interested in the management activities of the Forest. The SOPA provides one of the means of keeping the public informed of the progress of individual projects. The SOPA is also made available to the public on the Willamette Forest website.

One written comment letter was received as a result of these notifications. A copy of the letter can be found in the Public Involvement section of the Analysis File. The one letter was from Oregon Wild (formerly Oregon Natural Resource Council). Comments included such topics as: construction of new roads, decommission of roads, roadless and Wilderness areas, avoiding harvest and mining in late-seral forest, impacts to old-growth related species, survey of special status species, water quality, Aquatic Conservations Strategy objectives,, and the range of alternatives.

The interdisciplinary team reviewed the comments and incorporated the concerns into the issues where applicable. Information related to these concerns was either addressed in the discussion of the issues and environmental consequences or can be found throughout the different section of the EA, Analysis File or Decision Notice.

The following state and federal agencies were contacted or consulted with during the course of this project: Oregon Department of Fish and Wildlife (ODFW), US Fish and Wildlife Service (USFWS), and National Oceanic and Atmospheric Administration (NOAA) – National Marine Fisheries Service (NMFS). The USFWS and NOAA-NMFS provided Biological Opinions concluding the project would not jeopardize the continued existence of listed species nor would the project adversely modify designated critical habitats.

On July 2, 2007, the Hehe LSR Thin EA was made available to the public and other agencies for a 30-day public review and comment period pursuant to 36 CFR 215, by legal notice in The Register Guard, Eugene, Oregon, the newspaper of record for the Willamette National Forest. A letter was also sent to people who have participated in the environmental analysis process notifying them of the 30-day public review and comment period. Two letters were received as a result of the mailing and newspaper legal notice. My decision was made considering comments in both letters.

Jacob Groves, of the American Forest Resource Council, expressed concerns with the way the alternatives were developed, with the analysis of proposed fuel treatment and the associated costs, and with the seasonal and wildlife restriction which limit the operating seasons.

Responses:

- *The alternatives were developed based on the significant issues identified for the project. Those significant issues are listed in the EA pages 11-13 along with an explanation of how the alternatives provided a range of treatments or prescriptions designed to reduce the conflicts or concerns related to the resource issues.*
- *The discussion of the impacts of thinning on fuel loading and the effects on fire risk is presented in the EA pages 69-80. This section documents presents fuel model typing, existing and predicted fuel loadings, resulting fire behavior (fire spread and intensity) predictions and assessed levels of risk. The cost of the treatments was not presented in the EA, but is estimated in the Fire and Fuels Analysis Report. The Responsible Official has reviewed these costs and has taken them into consideration in making a decision. The selected alternative was designed to minimize cost while meeting the habitat objectives for the LSR.*
- *The seasonal and wildlife operating restrictions were taken in consideration with this project. The project area was surveyed to protocol for spotted owls (EA, page 61) which limits wildlife restrictions for noise producing activities (EA, pages 31 and 66). Helicopter yarding is only restricted depending on the type and size of helicopters and the flight paths within a certain distance of spotted activity centers. These restrictions are required to meets the term and conditions of the Biological Opinion from USFWS to meet the ESA. Wet weather haul opportunities were also considered to allow a proportion of the sale areas to be accessible during fall, winter, and spring months which extends the operating season. Approximately 40% of the total 115 miles of haul roads would be accessible for wet weather haul.*

Doug Heiken, of Oregon Wild, had concerns about the effects of thinning on snag recruitment, the differences between alternatives and the amount of time it takes to develop late-successional attributes, encourages the creation and use of gaps to increase within-stand variability, and questioned wet weather hauling and its potential for impacts to soil and water resources.

Responses:

- *The EA, pages 133-137 discusses the effects of thinning on coarse woody debris. Further information and analysis on coarse woody debris is contained in the Wildlife Specialist Report and Silvicultural Prescription located in the Project Analysis File. The loss or disturbance of snags and down wood is inevitable as a result of safety and logging feasibility issues as disclosed in the EA. Mitigation measures are identified to address*

this loss or disturbance (EA, page 35). Implementing the post-harvest snag creation prescription of 1-5 large snags/ac is expected to mitigate the loss of some snags and maintain values over time. Smaller snag values would likely decrease and stabilize around the 50% tolerance level when averaged throughout the project area.

- *The EA, pages 85-88 discusses the effects of thinning and the attainment of late-successional forest characteristics. We choose to concentrate the analysis on the live components of late-successional forest characteristics because it more difficult to develop the diameter or size of material and species composition of the live structural component. The natural production of large snags and down logs is difficult to model, in part because large snags and down logs are more likely to be created by density-interdependent mortality (e.g., lightning, root rot, fire) than density-dependent mortality (e.g. tree competition). Tree growth models can effectively model density-dependent mortality, which tends to kill the smaller trees in the stand and thus creates only smaller snags and down wood. Therefore, we have assumed that within the 100 year modeling period, sufficient snags and down logs will be present in the currently young stands only if they are created by active management. Given that the snags and down wood debris creation prescriptions were based on the levels of snags and logs in existing late-successional forest (LSRA and DecAid), this assumption should be generally as accurate as a more sophisticated modeling approach. We will review the analysis process of the Curran-Junetta project on the Umpqua NF and incorporate the appropriate techniques in future projects.*
- *The creation of gaps is one of the integral elements of variable density thinning that will be implemented. The Silvicultural Prescription (page 28) in the Project Analysis File describes the specifics for gap creation. The gap creation is referred to as dominant tree release (DTR). Two dominant trees will be released every 5 acres (or clumps of 2-3 trees). These dominant trees will be the largest diameter Douglas-fir trees (or possibly in combination with other species). The trees should have features such as: wolfy branch patterns, large diameter branches along the length of the bole, or healthy, full crowns with a high crown ratio. The trees will be released by cutting all conifer trees > 7 inches DBH with in a 60 foot radius (around the dominant tree or clump).*
- *Winter haul is considered to allow a proportion of the sale areas to be accessible during the fall, winter, and spring months to extend the operating season. Mitigating measures (EA, pages 32-33) will ensure that potential impacts to the soil and water resources will be minimized. The wet weather hauling was included in the Biological Opinion from the Fisheries Division of NMFS and meets the ESA requirements.*

The Middle Fork interdisciplinary team response to comments addressing the site specific actions and adequacy of analysis in the EA is documented in the Hehe LSR Thin EA Project Record. Responses to comments are available upon request by contacting the Middle Fork Ranger District office.

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 effects 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 findings on the following:

Context:

"The significance of an action must be analyzed in several contexts such as society as a whole, the affected region, the affected interests, and the locality.....in the case of site-specific actions (such as this one), significance would usually depend on the effects at the locale rather than the world as a whole".

The Hehe LSR Thin Project implements direction set forth in the Willamette National Forest Plan as amended by the Northwest Forest Plan. The Willamette National Forest is one of nineteen National Forests in the Pacific Northwest Region. The selected alternative of the Hehe LSR Thin Project will affect about 0.2 % (3,762 out 1,700,000 acres) of the Willamette National Forest. This proposal to commercial thin equates to less than one given fiscal years probable sale quantity to be sold by Willamette National Forest. The selected alternative will affect about 3 % (3,762 out of 123,538 acres) of the Fall Creek watershed. Timber harvest has been occurring in the Fall Creek watershed for the past 70 years. Over that period of time an average of about 5,035 acres per decade of regeneration harvest has occurred. In the context of past management actions, this amount of commercial thinning is not a significant amount and will have a negligible effect upon the watershed's functions and values, the Forest's timber inventories, and the county's economy.

This proposal to commercial thin 35-60 year old managed plantations affects about 18% (3,762 out 20,900 acres) of the Hehe LSR Thin project area which is defined by the Hehe Creek sub-watershed. The selected alternative improves growth and maintains health of stands and accelerates the development of late-successional forest conditions. The impacts of the project, while noticeable, are relatively minor, compared to the impacts of the past harvest practices. Therefore, the effects of the selected alternative on the resources and species within the project area or at scales larger than the project area are not significant as disclosed in Chapter 3 of the EA.

Intensity:

1) Impacts may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on the balance the effects will be beneficial.

The effects of the proposed actions will be both beneficial and adverse, as documented in Chapter 3 of the EA, pages 43 to 187, but not significantly so. The proposed road maintenance and road closures could increase (though by a small amount) the likelihood of sediment entry into the stream channel system while also providing the opportunity to provide maintenance of roads to assure they will not become future sources of sedimentation (EA, pages 46-58, and 146-154). The action would cause short-term adverse effects on interior habitat and spotted owls while in the long term having a beneficial effect on development of habitat conditions (EA, pages 58-60, and 64-68). Post thinning fine fuel loading could affect fire behavior by temporarily increasing fire intensities and rate of spread. Fuel treatments would mitigate this effect by reducing fine fuel loadings. Thinning and fuel treatments creates long term beneficial effects by breaking up the continuity of the fuels and reduces the future fire intensity and resource impacts (EA, page 72-81). The commercial thinning would create quality forage for big game habitat and reduce open road density to improve habitat conditions (EA, page 103-107). Some loss or disturbance of coarse woody debris habitat is expected from the harvest activities which would be mitigated with the replacement of created snags and down wood (EA, page 136-137). Many other species (i.e.

fisher, various salamander species, shrews, red tree voles, cavity excavators, martens, and neo-tropical migrant land birds) would also be affected by short term habitat disturbance with the corresponding long term beneficial effects of the development of late-successional forest conditions (EA, pages 112-123). The action would have some short-term adverse impacts to water quality and fish habitat from sedimentation as a result of the road maintenance, road closures, and yarding operations (EA, pages 146-156, and166-169). . Other contrasting adverse and beneficial impacts are the soil disturbance that creates conditions which are susceptible to spread of invasive weeds and the proposed control treatments to mitigate the spread of invasive weeds (EA, page 91-95). The analysis shows there would be some socio-economic benefit from the revenues produced from the sale of timber to the local communities (EA, page 178-179), and the proposal provides the opportunity to fund other sale area improvements and resource restoration activities (EA page 187).

2) The degree to which the proposed action affects public health or safety.

The log truck traffic may affect the safety of recreationists along Road 1800, recreationists in the Fall Creek corridor, and landowners and the general public. The increased log truck haul traffic creates a danger and noise disturbance to landowners and general public driving the roads in the area. Public safety has been addressed by mitigating measures requiring signing and traffic flaggers on all logging operations (EA, pages 36, and 174-177).

Air quality will not be significantly affected because any fuels reduction burning treatments will be carried out in compliance with the State of Oregon's Smoke Management Plan, (EA, pages 171-173). Water quality will not be significantly affected because beneficial uses of the streams will be fully protected in a manner consistent with the Aquatic Conservation Strategy outlined in the Northwest Forest Plan (EA, page 164).

The project will not result in any adverse human health and/or environmental effects that disproportionately impact minorities and low income populations as defined in Executive Order #12898 (EA pages 183-184).

3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

There are no historic or cultural resources, park lands, or prime farmlands, within, adjacent to, or affected by the project.

A cultural resource survey has been completed on all proposed treatment units. Several areas containing these resources have been identified. The action avoids or excludes these areas from any management activities, mitigates the effects by protecting the sites with down logs, and/or minimizes the sites disturbance with yarding log suspension requirements. The proposal will have no adverse effects to cultural resources (EA, pages 181-182). The surveys were conducted according to an inventory plan approved by the Oregon State Historic Preservation Office (SHPO). This inventory is consistent with an agreement between the USDA Forest Service R6/PNW, Oregon SHPO, and the advisory council on historic preservation. A provision will be included in the timber sale contract to provide for protection of this resource in the event that new material is discovered during ground disturbing activities.

Several special habitats consisting of hardwood inclusions, scattered small wetlands and drier non-forested openings are located in the project area. Unique natural features such as these are designated as special habitats in the project area are excluded from any physical disturbance. Therefore, no adverse direct, indirect, or cumulative effects on naturally occurring special habitats are anticipated as a result of implementation.

The vegetation and topography of this area are typical of the Middle Fork Ranger District and no known ecologically critical areas occur. Due to the above reasons and conditions, there will be no significant impact to the human environment in regard to these unique geographic characteristics.

4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.

The Hehe LSR Thin analysis is based upon the best available scientific information and site-specific data. Models and methods used to estimate the effects presented in Chapter 3 of the EA are widely used in similar 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 of its results.

Some members of the public are philosophically opposed to commercial harvest on federally managed forestlands. This opposition is expressed by questioning the accuracy or procedural correctness of various analyses. To these people, the results of any environmental analysis documenting the effects of timber harvest or commercial thinning are not viewed as credible, therefore these management actions are perceived to be controversial.

I find that there is no known controversy surrounding the scientific basis for the estimation of effects of the proposed commercial thinning and road maintenance presented in the Hehe LSR Thin Project EA.

5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

We have considerable experience with the types of activities to be implemented with this decision. The effects analysis shows the effects are not uncertain, and do not involve unique or unknown risk. Similar types of timber harvest activities, fuel treatments, road work, and other connected actions have been occurred previously on the Willamette and on other National Forests. No impacts to the human environment that are highly uncertain or involve unique or unknown risk have been identified in Chapter 3 of this analysis (EA, pages 43-188).

6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

Given the long history of timber management in this area and the current Forest Plan management areas, the selected actions will not establish a precedent for future actions.

The Forest Plan is the vehicle that makes decisions in principle about future considerations. Future projects to implement the Forest Plan direction will be analyzed in separate NEPA planning processes. Decisions based upon the Hehe LSR Thin Project analysis will not directly affect how such future decisions may be made.

7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

The analyses presented in Chapter 3 of the EA constitute an evaluation of cumulative impacts of the Hehe LSR Thin proposed actions. The discussions include effects of past, present, future foreseeable actions in addition to those of the selected alternative on road management (EA, page 56), interior habitat (EA, page 60), spotted owls (EA page 67-68), fuel loadings (Pages 78-80), vegetation (pages 88-89), invasive plants (EA pages 94-95) threatened, endangered, and sensitive species (EA, pages 101-102, 109-122, Biological Evaluations in Analysis File), Survey and Manage species (EA, pages 124-127), land birds including neotropical migratory birds (EA, pages 132-133), coarse woody debris (EA, pages 136-137), soil (Ea page 142), water quality (EA pages 153-155), fisheries (EA pages 168-170), air quality (EA, pages 172-173), Recreation (EA pages 176-177), and economics (EA, page 179). All these effects are within the levels anticipated by the Willamette National Forest and the Northwest Forest Plans. Appendix B of the EA provides a complete listing of past, present, and foreseeable activities in the watershed. The Fall Creek Watershed Analysis (WA) is incorporated by reference (EA, page 8). This WA presents a comprehensive analysis of the watershed conditions that provides a contextual basis of cumulative effects. No significant direct, indirect, or cumulative impacts to soil, wildlife, fuel loadings, air, water, fisheries, vegetation, recreation, and public safety or other components of the human environment are anticipated.

8) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in the National Register of Historic Places or may cause loss or destruction of significant cultural or historical resources.

An appropriate review has been conducted by this undertaking, and no significant property (s), which may be eligible for inclusion in the National Register Historic Places, were found to be present in the project area.

This document meets the requirements of Section 106 and 110 of the National Historic Preservation Act.

Cultural resources have been surveyed (as mentioned in Item 3). The proposal will have no adverse effects to cultural resources (EA, page 181).

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.

The Hehe LSR Thin Biological Evaluations (BE) and Biological Assessments (BA) address the effects upon endangered and threatened species and their habitat. The summary of the effects to threatened northern spotted owl is found in the EA (pages 64-69). The entire project area is located within the USF&WS designated Critical Habitat Unit (CHU) OR-18. The action would involve short-term degrading and downgrading of dispersal habitat and a small amount of suitable habitat for spotted owl. The effects determination for the heavy thinning in an LSR and designated critical habitat that downgrades dispersal habitat is a “may affect, likely to adversely affect” northern spotted owls (EA, page 65). Light/moderate thinning that degrades dispersal habitat is a may affect, not likely to adversely affect northern spotted owls. The commercial thinning operations would create a potential noise disturbance to owls during the nesting season that is mitigated with a seasonal restriction. The effects

determination for noise disturbance is a may affect, not likely to adversely affect northern spotted owls. Formal consultation with USF&WS as required by Section 7 of the Endangered Species Act was completed. The USF&WS letter concurred with these findings and the Biological Opinion concluded the project would not jeopardize the continued existence of spotted owls nor would the project adversely modify spotted owl critical habitats. .

Fall Creek provides habitat for spring chinook salmon, an ESA-listed fish species. The finding of the Biological Assessment (BA) for the selected alternative is a "likely to adversely affect" spring chinook salmon (EA page 166-170). Formal consultation with the NOAA-NMFS was completed and the Biological Opinion concluded that the project would not likely jeopardize the continued existence of spring chinook salmon or result in the destruction or adverse modification of designated critical habitat for spring chinook salmon.

Term and Conditions from both Biological Opinions have been incorporated into project design and mitigation measures.

10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

As mentioned in the EA on page 6, this project is in compliance with all Federal and State laws relating to environmental protection. A summary of how this project and the design of alternatives comply with the federal and state laws can be found in Appendix A of the EA. The proposed action meets State air and water quality standards and complies with all regulations in the National Historic Preservation Act, National Environmental Policy Act, Endangered Species Act, National Forest Management Act, Clean Air Act, and Clean Water Act.

This finding is based on how the Hehe LSR Thin Project environmental assessment was prepared in accordance to Forest Plan Management Areas and Standards and Guidelines, State air quality standards (EA, page 171), water quality and beneficial uses (EA, page 157-143) Threatened, Endangered, and Sensitive species (EA, pages 69, 96), National Forest Management Act requirements for suitability for timber growth (Silvicultural Prescription, page 24 in Analysis File), and with various recent Executive Orders (EA, pages 182-185 and Appendix A).

Finding Required by Other Laws and Regulations

This decision to implement Alternative 3 is consistent with the intent of the Forest Plan's long term goal and objectives listed on pages IV-2 to IV-44. The project was designed in conformance with the Land and Resource Management Plan Standards and Guidelines and incorporates appropriate guidelines for Management Areas 15 and 16A, where activities will occur implementing this decision (EA, page 6).

This decision is consistent with all applicable Acts and Regulations such as the National Forest Management Act (NFMA) of 1976, National Environmental Policy Act (NEPA) of 1969, Endangered Species Act (ESA) of 1973, Clean Water Act (CWA) of 1972 and section 319 of the 1987 CWA, Civil Rights Act (CR) of 1964, Title VI and Environmental Justice (EJ) Executive Orders 11988 and 11990, The Preservation of Antiquities Act of June 1906 and the National

Historic Preservation Act of October 1966, Executive Order 12962 on Recreational Fishing, and Executive Order 13186 on Neotropical Migratory Birds (EA, Chapter 3 and Appendix A).

In addition, the August 1, 2005, and January 9, 2006, U.S. District Court orders in the Northwest Ecosystems Alliance et al. v. Rey et al (NEA), Civ. No.04-844, WD Wash, set aside the 2004 Record of Decision (ROD) to Remove or Modify the Survey and Manage Mitigating Measures Standards and Guidelines. The Court re-instated the January 2001 ROD for Amendments to the Survey and Manage, Protection Buffer, and other Mitigating Measures Standards and Guidelines, as amended by the 2001 and 2003 Annual Species Reviews. On October 11, 2006, the U.S. District Court modified its order amending paragraph three of the January 9, 2006 injunction. This most recent order directs:

"Defendants shall not authorize, allow, or permit to continue any logging or other ground-disturbing activities on projects to which the 2004 ROD applied unless such activities are in compliance with the 2001 ROD (as the 2001 ROD was amended or modified as of March 21, 2004), except that this order will not apply to:

1. Thinning projects in stands younger than 80 years old;
2. Replacing culverts on roads that are in use and part of the road system, and removing culverts if the road is temporary or to be decommissioned;
3. Riparian and stream improvement projects where the riparian work is riparian planting, obtaining material for placing in-stream, and road or trail decommissioning; and where the stream improvement work is the placement large wood, channel and floodplain reconstruction, or removal of channel diversions; and
4. The portions of project involving hazardous fuel treatments where prescribed fire is applied. Any portion of a hazardous fuel treatment project involving commercial logging will remain subject to the survey and management requirements except for thinning of stands younger than 80 years old under subparagraph a. of this paragraph."

All of the commercial thinning units in the Hehe LSR Thin Project are younger than 80 years old (EA, page 81-90) and meet exception #1.

I am also aware of the November 6, 2006, Ninth Circuit Court opinion in Klamath-Siskiyou Wildlands Center et al. v. Boody et al., (Klamath) No. 06-35214 (CV 03-3124, District of Oregon) held that the 2001 and 2003 Annual Species Reviews (ASRs) regarding the red tree vole are invalid under the Federal Land Policy and Management Act and National Environmental Policy Act as to the two Bureau of Land Management sale at issue in that case.

It is my determination that all of the commercial thinning units in the Hehe LSR Thin Project (less than 80 years old) meet the Survey and Manage requirements applicable to them based on the circumstances described above.

Administrative Review and Appeal Rights

This decision is subject to appeal pursuant to 36 CFR 215. Only individuals or organizations that submitted comments during the comment period may appeal. Notice of Appeal must meet the requirements of 36 CFR 215.14. Appeals can be submitted in several forms, but must be received by the Appeal Deciding Officer, Forest Supervisor within 45 days from the date of publication of this notice in the *Register-Guard*, Eugene OR. Appeals may be:

1) Mailed to: Appeal Deciding Officer, Forest Supervisor; ATTN: APPEALS, P.O. Box 10607; Eugene, OR 97440;
2) E-mailed to: appeals-pacificnorthwest-willamette@fs.fed.us. Please put APPEAL and **name of project** in the subject line;
3) Delivered to: Willamette National Forest, Supervisors Office at 211 E. 7th Ave, Eugene, OR between the hours of 8 am and 4:30 pm, M-F; or
4) Faxed to: Willamette National Forest, Supervisors Office, ATTN: APPEALS at (541) 225-6222.

Implementation

This decision to commercial thin is scheduled to start implementation in the late summer or fall of 2008.

Volumes, acreages, and mileages discussed in project documents are approximations based upon preliminary project design. Minor adjustments may be made to unit boundaries and unit acreages during sale layout. The Interdisciplinary Team which did the Hehe LSR Thin analysis will review any major differences between the specifications in the EA and the final layout to determine if the environmental effects or resulting environmental conditions will be different than those disclosed in the EA. If so, the procedures described in FSH 1909.15, section 18.4, Reconsideration of Decisions Based upon an EA, will be followed.

If no appeal is filed, the USDA Forest Service may implement the Hehe LSR Thin Project five days after the close of the forty-five day appeal period, which starts on the date the legal notice announcing the decision appears in the *Register-Guard*, Eugene, Oregon. If an appeal is filed, implementation of this decision will occur 15 days following the date of the appeal disposition.

For further information concerning the Hehe LSR Thin project contact Gary Marsh, Resource Planner at the Middle Fork Ranger District office; telephone number (503) 782-5233 during normal business hours.

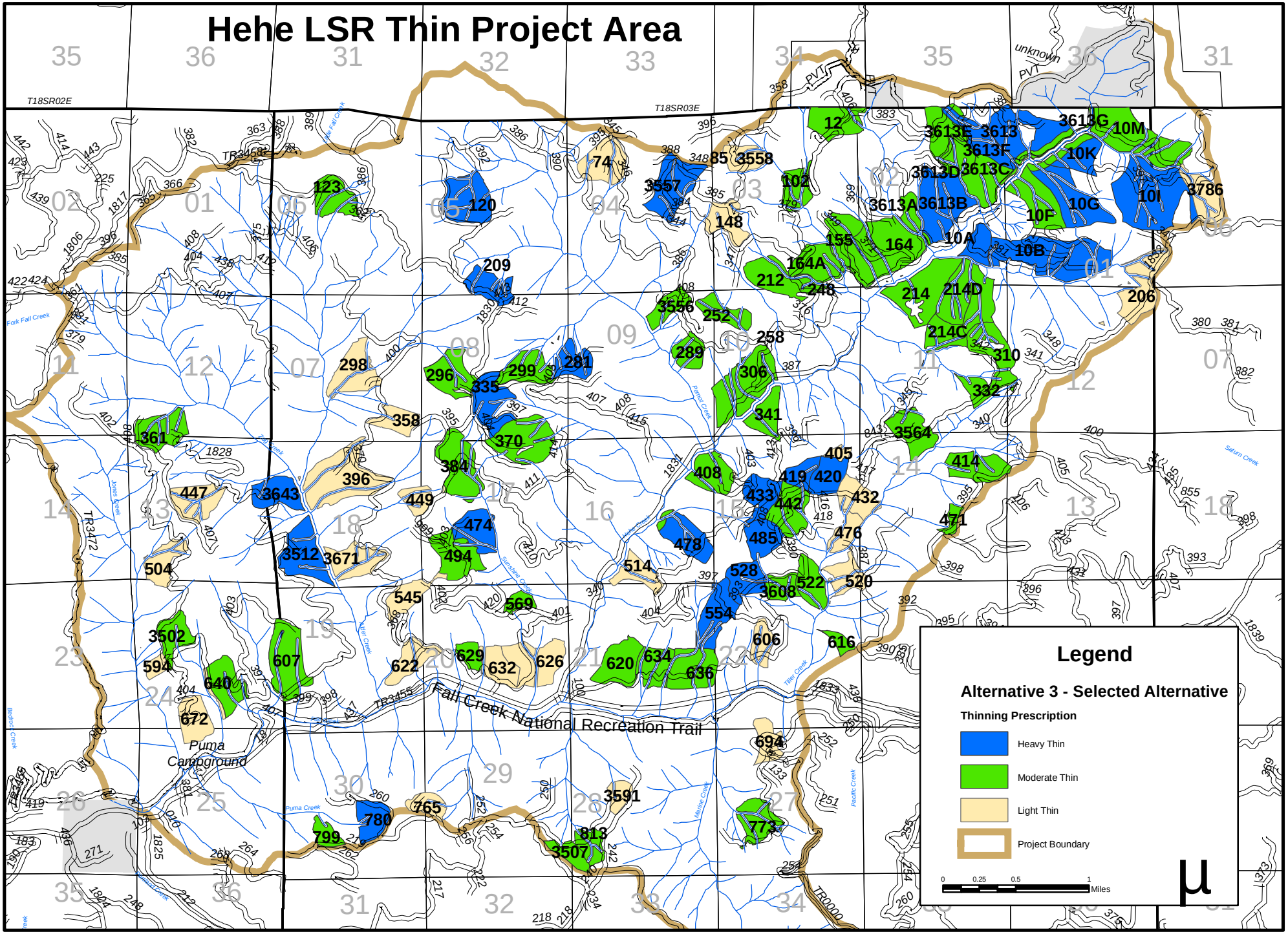
Approved by:

/s/ *ChipWeber* *10/31/2007*

Chip Weber
District Ranger
Middle Fork Ranger District
Willamette National Forest

Date

Map of Selected Alternative


Hehe LSR Thin Project Area
T18SR02E
T18SR03E
Fall Creek National Recreation Trail
Puma Campground
Legend
Alternative 3 - Selected Alternative
Thinning Prescription
Heavy Thin
Moderate Thin
Light Thin
Project Boundary
0 0.25 0.5 1
Miles