

DECISION NOTICE
And
FINDING OF NO SIGNIFICANT IMPACT

NORTH CLACK INTEGRATED RESOURCE PROJECT

USDA FOREST SERVICE
MT. HOOD NATIONAL FOREST
CLACKAMAS RIVER RANGER DISTRICT
CLACKAMAS COUNTY, OREGON

The North Clack Integrated Resource Project Environmental Assessment (EA) contains a discussion of the setting, ecological processes, resource conditions, the purpose and need for action, the proposed action designed to achieve the purpose and need, project design criteria, alternatives considered, and the effects and benefits of those alternatives.

All section (s.) number references are to sections of the EA unless specified otherwise. The EA is incorporated by reference, summarized below, and can be found at the [Forest's web site](#)¹. Acres and miles are approximate since they are derived from GIS. The Mt. Hood National Forest is referred to as 'the Forest' in this document. The Mt. Hood National Forest Land and Resource Management Plan, as amended, is referred to as the 'Forest Plan' in this document.

Purpose and Need (s. 1.3)

Since this proposal contains a suite of projects that have different purposes and address various needs, this section is organized by project type.

Improving Productivity, Forest Health and Diversity

The desired condition for the matrix component of the landscape is to have live productive forest stands that can provide wood products now and in the future. Another desired condition is to have stands that are healthy with growth rates commensurate with site capability and to have forest stands across the landscape with a mix of ages and densities. Because some stands in the project area are not in the desired state, there is a need for active management to change them. The proposed actions provide forest products while achieving other stand and landscape scale objectives.

Transportation System Management

The desired condition is to have a landscape accessed by an appropriate transportation network that provides for management access and visitor safety while minimizing resource risk and cost. Because some roads and motorized trails in the project area are not in the desired state, there is a need to make changes. A mix of road treatments is proposed including road repair, maintenance, culvert

¹ <http://www.fs.usda.gov/projects/mthood/landmanagement/projects>

replacement, temporary road construction, stormproofing, closure and decommissioning. There is also a need to close/block and rehabilitate unauthorized motorized trail routes.

Aquatic/Riparian Habitat Enhancement

The desired condition for streams, lakes and riparian areas is for them to be fully functional to meet the needs of aquatic and riparian species and to provide clean water. Because some streams and riparian areas are not in the desired state, there is a need for active management to change them. The proposed actions include adding large woody debris to some streams where it is lacking, releasing conifers in riparian areas that are overtopped by alder, and enhancing habitat for beavers.

Decision

I have reviewed the EA and the information contained in the project file. I have also reviewed and considered the public comments submitted on this project. I have determined that there is adequate information to make a reasoned choice among alternatives. **I have decided that I will select Alternative 2, with modifications.** The entire suite of proposed actions are described at Sections 2.2 and 2.3 of the EA.

Forest Service Handbook 1909.15, Chapter 10, provides a process for making incremental changes to alternatives. Ongoing collaboration and interdisciplinary analysis has resulted in modifications compared to what was described at the time of scoping, and what was disclosed in the preliminary environmental assessment. I believe these changes result in a better proposal and a better decision. I find that the changes will result in relatively minor differences in resource benefits and impacts. Most of the changes relate to proposals for individual vegetation treatment units where surveys detected the presence of red tree voles. While I am authorizing only a portion of the originally proposed vegetation treatments, I believe this decision still contributes meaningfully to the purpose and need for the project and ensures the project meets the required habitat conservation measures for red tree voles.

Since some of the incremental changes occurred after the publication of the preliminary assessment, I would like to highlight some background information on red tree voles, the changes that were made and my rationale for making them.

Red Tree Voles

Red tree voles are small mammals that live in tree canopies. They typically live in mature stands but have been found in large legacy trees that are present in fire-originated second-growth forests as well. Red tree vole nests can be difficult or impossible to see from the ground, making their detection difficult without climbing trees.

Several documents can be found online with detailed information on this species: the [2001 Survey and Manage](#)² document includes this species on page 49 of the Standards and Guidelines section, the

² https://www.blm.gov/or/plans/surveyandmanage/files/rd-rod_s_and_g-2001-01.pdf

[Survey Protocol](#)³ document explains where and how to survey, and the [Management Recommendations](#)⁴ document has details about the species and how to manage nest sites that are found. The survey and manage program has been involved in numerous lawsuits; this [2014 Memorandum](#)⁵ discusses the results of law suits, including exemptions explaining where the requirements of survey and manage do not apply. There is a draft survey protocol revision that is not online because it has not been approved. Even though it is in draft form, parts of it have been considered to inform additional resurvey work for this project.

Most stands with the highest likelihood of having red tree vole habitat were eliminated from consideration in the early planning phase for the North Clack project. This includes all old-growth stands and all stands considered suitable northern spotted owl habitat. These were excluded from proposed harvest units and therefore have not been surveyed for red tree voles.

For the North Clack project, some stands identified for potential treatment met the red tree vole survey protocol prerequisite, and the Forest contracted surveys that were conducted according to the current survey protocol. Ground-based transect surveys detected potential red tree vole nests in four proposed treatment units. Follow up tree climbing surveys found evidence of active red tree vole presence within these units. After these surveys were validated, approximately 94 acres of harvest units were eliminated as disclosed in the preliminary assessment at section 3.7.4 on page 48.

Since then, a group of concerned citizens with considerable expertise in locating red tree vole nests (NEST, or, Northwest Ecosystem Survey Team), has climbed trees in the project area and found more nests that were not detected in the original survey because they could not be seen from the ground.

Based on this new information, I directed the interdisciplinary team to conduct additional red tree vole surveys that considered the draft survey protocols under development by Forest Service red tree vole specialists. I determined that additional climbing surveys were warranted to better assess the population of red tree voles in the planning area and to ensure appropriate conservation measures are implemented per established management requirements. I would also like to note that it is impractical to climb all trees and that surveys cannot find all individual red tree voles because they live in the tops of tall trees.

After verifying and validating nest sites found by Forest Service contract crews and those found by citizen climbers, the Management Recommendations document was used to create appropriate management areas around the best available habitat. The portions of the management areas that overlapped with proposed harvest units resulted in the deletion of all or portions of units as described below. Maps are attached in an appendix to this decision. A red tree vole report was generated to summarize this process and is incorporated by reference.

³ <https://www.blm.gov/or/plans/surveyandmanage/files/sp-RedTreeVole-v3-0-2012-11.pdf>

⁴ <https://www.blm.gov/or/plans/surveyandmanage/files/mr-rtv-v2-2000-09-att1.pdf>

⁵ <https://www.blm.gov/or/plans/surveyandmanage/files/sm-fs-guidance-20140513.pdf>

Details of Decision

In the following tables, the original Alternative 2 data is included first, followed by the revised data after red tree vole adjustments. For example; 4,214/4,089 indicates that 125 acres were removed from that category due to red tree vole surveys. Where one data item is shown, it indicates no change for that action.

Table 1 - Summary of Vegetation Management Actions

Purpose & Need	Action	Acres	Notes
Improve Forest Health, Growth and Diversity while Providing Forest Products	Variable-density thinning with Skips and Gaps	4,214/4,089	<ul style="list-style-type: none"> 1,964/1,911 acres in Matrix, with two acre gaps and heavy thins for forage enhancement 191 acres in LSR 934/862 acres in Riparian Reserves 88 acres of thinning with a huckleberry enhancement emphasis 985 acres of young-stand thinning and brushing 52 acres of young-stand thinning and brushing and the removal trees in diseased areas followed by planting
Improve Owl Habitat	Create gaps and thin	262/110	<ul style="list-style-type: none"> 60/0 acres cut and leave trees in small gaps to improving owl habitat in Matrix (additional red tree vole surveys were not conducted for this category) 202/110 acres of Matrix thinning with an emphasis of improving owl habitat in the home range
Provide Forest Products and Create Early-Seral Habitat	<ul style="list-style-type: none"> Regeneration Harvest with Reserves Site Preparation and Planting 	371/342	In Matrix, Includes units 76, 82, 94, 96, 107, 120, 131, 132, 133, 152, 165, 170, 182, 184, 191, 195, 201 & 204. All of unit 116 was deleted and portions of units 76, 94, 107 & 132 were deleted.
Enhance Forage	<ul style="list-style-type: none"> Meadow Burn 	2	An unnamed meadow near Road 4612130
Fire Hazard Reduction	<ul style="list-style-type: none"> Burning Fuel Break 	726/697	<ul style="list-style-type: none"> 150 acres of piling and burning of slash along Road 4610 and property lines 205 acres of under burning of thinned stands 371/342 acres of under burning and grapple piling in regeneration harvest units

Table 2 - Summary of Transportation System Management Actions

Purpose & Need	Action	Miles	Notes
Manage the Road System to Allow for Safe Timber Hauling	Maintain and Repair Forest Service System Roads	63	The intensity of work varies based on location and the work recently accomplished by the Forest and other operators.
Provide Access for Vegetation Management	Construct and Reconstruct Temporary Roads	19.5/19.4	<ul style="list-style-type: none"> 14.4 miles of new road construction in locations where no road alignment previously existed. (1.5 mi. of this is needed due to off-highway vehicle (OHV) conversion of system roads to trails) 3.6/3.5 miles of existing road alignment reconstruction on road alignments that were once temporary roads.(0.6 mi. of this is needed due to OHV conversion of system roads to trails) 1.5 miles of existing road alignment reconstruction on road alignments that were once system roads.(1.1 mi. of this was decommissioned by OHV plan)

Purpose & Need	Action	Miles	Notes
Reduce Resource Risks and Maintenance Costs Associated with Forest Service System Roads	Decommission, Close, and Stormproof System Roads	41.2	<ul style="list-style-type: none"> • 7 miles of active and passive decommissioning of roads no longer needed. • 26.2 miles of closure and stormproofing of roads that remain on the System. • 8 miles of stormproofing of system roads not used for haul that remain on the System (4610, 4610180).
Reduce Resource Risks and Maintenance Costs Associated with Forest Service System Roads	Convert Road to Non-Motorized Trail	1.2	4611 Remove culverts, retain a trail tread
Provide Access for Vegetation Management	Return Former System Road Back to the System	1.2	4610115
Reduce Resource Impacts Associated with Unauthorized OHV Routes	Rehabilitate Unauthorized OHV routes	7.1	

Table 3 - Summary of Aquatic/Riparian Management Actions

Purpose & Need	Action	Notes
Restore and enhance streams and aquatic resources.	Woody Debris, Beaver Habitat Enhancement	<ul style="list-style-type: none"> • Add woody debris in three streams. • Restore the riparian area at Tumala Meadows to enhance watershed condition through beaver habitat enhancement (i.e. encourage beaver use, increase water storage, maintain meadow habitat).

Project Design Criteria (PDC) in section 2.2.4 are part of the project and provide important resource protections. No significant impacts were found that would require further mitigation.

The Forest Plan, at page Four-179, provides guidance for adjustment of A9 Key Site Riparian land allocation boundaries based on field verification during project level planning. I have decided to adjust the boundaries to better fit riparian conditions as shown on pages 3-4 in the report titled [North Clack Project Additional Information](#).⁶

Decision Rationale

Red Tree Voles – Regional Forest Service biologists with red tree vole expertise were surprised that nests were found in this area. It was expected that the reoccurrence of large wildfires and past harvest practices would have made the area marginal red tree vole habitat. However, surveys have discovered approximately 54 active and 50 inactive nests out of 250 trees climbed. I believe the changes described above are appropriate for the conservation of the species. I have decided to not change the analysis of effects in the EA because the changes are relatively minor, resulting in a reduction of approximately 5% of the original project acres. Instead, I will summarize here the changes to effects and benefits.

⁶ http://www.fs.usda.gov/nfs/11558/www/nepa/105362_FSPLT3_4630706.pdf

- There will be 306 acres of reduced treatment providing the benefits of closed canopies for red tree voles and other species that require similar habitats. Because of the difficulty of finding red tree voles, it is not possible to find every individual. However, I believe the changes made will result in adequate protection for the species in the project area. While the project may impact some undiscovered individuals, it would not likely result in a trend toward federal listing. The additional surveys have also contributed to a better understanding of the habitat requirements of this species and its abundance here.
- There will be approximately 2 million board feet of reduced timber volume outputs. I believe the quantity of timber output that would still occur is a meaningful contribution to the needs of local and regional economies.
- There will be 29 acres of reduced regeneration harvest and the same quantity of reduced forage for deer and elk. I believe the remaining treatments are a sufficient contribution to forage at this time.
- There will be 217 acres of reduced thinning. I have a certain level of discretion, under the Forest Plan, to decide how much active management is appropriate at any given place and time, and where passive management is more appropriate. I believe the adjusted mix of active and passive management is appropriate to meet both silvicultural and wildlife objectives.
- There will be a reduction of 152 acres of treatment designed to accelerate the development of better spotted owl habitat, and a reduction of 72 acres designed to accelerate the development of better riparian conditions. I originally proposed these actions because I believe active management is appropriate, but I also recognize the importance of providing habitat for survey and manage species according to current management direction.
- There will be a very slight reduction (0.1 mile) of temporary road needs due to the changes to harvest units.
- Because of the reduced acres of treatment, there would be a corresponding reduction of impact to some of the resources discussed in section 3 of the EA, such as reduced soil disturbance, improved water quality, and reduced risk of invasive plant spread.

Thinning – The thinning treatments target overcrowded stands to increase their health and vigor, as well as to enhance diameter and height growth (s. 1.3.1.2 & s. 3.1). Thinning has been designed to have variable density with skips and gaps to enhance diversity (s. 1.3.1.3, s. 2.2.1.1, s. 2.2.1.2, & s. 2.2.1.3). Some of the thinning treatments have an objective of enhancing huckleberries while others are designed to enhance the development of spotted owl habitat (s. 3.1). Some of the thinning treatments result in forest product outputs now, while others are intended to enhance younger stands to be more productive and provide forest products in the future (s. 2.2.1.6).

The stands included in this project have been examined and those proposed for thinning have been found to be overstocked. When trees are too closely spaced, they experience a slowing of growth due to competition for sunlight, moisture and nutrients. Suppressed, slow-growing trees have begun to die and have become susceptible to diseases and wind damage.

Based upon computer model simulation described in the Silviculture Specialist Report, the average diameter in thinned stands, after 50 years of growth would be 24.9 inches diameter in plantations and 24.8 inches diameter in fire-origin stands, compared to no action, which would result in diameters of

23.2 and 19 inches respectively. Currently, the average diameters are 14.3 and 14.8 inches respectively. Having larger, healthy trees on the matrix lands suitable for timber production is an important management goal associated with the Northwest Forest Plan's implementation; and, it is also key for land allocations where the objective is to accelerate the development of late-successional stand attributes. As forested stands reach an average diameter of 20 inches or larger, they begin to develop some of the characteristics (e.g., larger tree boles) necessary for late-successional dependent wildlife species.

The silvicultural activities associated with my decision will reduce the competition for nutrients, moisture, and sunlight, and discriminate against the smaller, overtopped, and/or less vigorously growing trees. As a result, the anticipated growth and developmental rate of the larger trees will increase in comparison to no action. I believe that thinning is prudent to maintain health and growth and to achieve many important goals of the Forest Plan.

Regeneration Harvest - One desired condition for this area is to have forest stands across the landscape with a mix of ages and densities (s. 1.3.1.3). This includes early-seral habitat that would provide for dependent species including forage for deer and elk. A primary purpose of this project is to sustainably provide forest products now and in the future (s. 1.3.1.1).

My decision will break up a relatively uniform landscape with regeneration harvests that will initiate new young stands, enhance forage, and provide forest products. In recent years, early-seral habitats have declined across the project area. Deer and elk are management indicator species that require a mix of habitat types including early-seral habitats that provide forage.

While other projects such as thinning, that includes gaps and heavy thins, a two-acre meadow burning and underburning of some thinned stands will also provide some incidental forage as a temporary byproduct, the regeneration harvest will provide quality forage for deer and elk.

Changes in forest management direction and practices over time have resulted in practices that favor the development of late-successional features over large areas of the forest. For example, large areas are designated critical habitat for spotted owl, late-successional reserves, riparian reserves and wilderness. With the reduction in regeneration timber harvest on the Forest in the past two decades and continued tree growth, cover habitats are common but early-seral habitats are becoming scarce. Once tree canopy closes in young stands, forage and other early-seral attributes are lost.

One of the purposes of the project is to add some early-seral habitat to the landscape and to enhance forage opportunities. While the project addresses some of the need for early-seral habitat it does not attempt to provide all of the early-seral habitat needed across the landscape. Management direction provided by the Forest Plan as amended, identified the need to create a sustainable level of forage through regeneration harvest in old stands. While regeneration harvest in older stands is not proposed in this area at this time, there are opportunities to provide forage in mid-aged stands (s. 2.2.1.4 & 3.7.3).

Some of the regeneration harvest is proposed in areas that contain palatable brush species that are being shaded out by conifers. The areas were also selected to space them out from the 36 Pit Fire

(which created some forage), from the LaDee Off-Highway Vehicle area (because of the noise), and from private lands (where there have been recent clearcuts). I believe this action is an appropriate step in our attempt to reverse the decline in forage and early-seral habitats in this watershed, and is consistent with the goals of the C1 – Timber Emphasis land allocation.

Wood Products – My decision will provide forest products consistent with the Northwest Forest Plan's goal of maintaining the stability of local and regional economies now and in the future (s. 1.3.1.3, s. 3.1 & s. 3.9).

As a result of implementing the silvicultural prescriptions, the project will provide timber and will support jobs important to local communities. It will also result in vigorously growing stands that would be capable of providing future forest products. If I opted to take no action, there would be no wood products provided and it would result in stands with reduced growth and productivity. I believe this action is a prudent step toward sustainable forest management.

Fire Hazard Reduction – There is an opportunity to reduce hazardous fuels to minimize resource impacts from fire, and to provide for enhanced safety for the public and for fire-suppression forces (s. 1.3.1.4). The desired condition is to have a landscape of primarily live trees with relatively low fire hazard. The project area has had a history of repeated fires and there is a concern that fires could start within, and spread out from adjacent wilderness areas. There is also an adjacent wildland-urban interface that is a concern.

In most thinning units, slash will be left on-site to provide ground cover and for long-term nutrient cycling. The project also includes some fuel treatments that would break up the continuity of fuels at the landscape scale (s. 2.2.1.6). The project includes some grapple piling and underburning of activity fuels and the creation of fuel breaks along a portion of Road 4610 and along the Forest boundary. I believe these actions are prudent to sustain a healthy and productive forest while providing for safety.

Transportation System Management – In the past decades, appropriated road maintenance funds have declined dramatically. Given that reality, I feel it is important to use the opportunity afforded by timber removal projects to use the value of the timber to fund road maintenance and repairs. There is also the opportunity to reduce road maintenance costs by decommissioning and closing roads (s. 1.3.2.1 & s. 2.2.2.3). The temporary roads constructed and the existing road alignments that are reconstructed will be rehabilitated after use. I have determined that the use and treatments of the roads is prudent and warranted to achieve resource objectives.

Aquatic and Riparian Habitat Enhancement – My decision will add woody debris to streams and enhance beaver habitat. This is important work to move these habitats toward desired conditions (s. 1.3.3 & s. 2.2.3). Several streams do not contain much large woody debris due to past logging and large fires. Large woody debris is important in streams because it creates pools, enhances deposition of spawning gravels, and adds structural complexity. Pool habitat is a critical component of healthy stream habitat for fish. The project includes selecting some streamside trees to be felled, pushed, or pulled over and some logs will be brought in with helicopters and placed into streams for habitat enhancement.

Management Direction (s. 1.2) – The project has been designed to meet the goals and objectives of the Forest Plan as amended by the Northwest Forest Plan and other amendments. The project would occur on riparian reserves, late-successional reserves and matrix land allocations. While each land allocation has different goals and objectives, I find that the various proposed actions are appropriate tools to use to move the area toward desired conditions. Further discussion of consistency with standards and guidelines can be found below.

Public Involvement (s. 1.4)

For this project, a collaborative process with the Clackamas Stewardship Partners began in 2016; a process that built on years of collaboration. Through this public collaborative process, the Forest Service participated in several meetings and field trips on this project.

A scoping process to request public input for this project was conducted. A letter describing the proposed project and requesting comments was sent out on April 10, 2018. The Forest publishes a schedule of proposed actions (SOPA) quarterly. The project first appeared in 2016 and numerous issues since. Public field trips were conducted in 2016 and 2017 to visit the project area and discuss the purpose and need and resource concerns. The legal notice for the 30-day comment period for this project was published in The Oregonian on March 15, 2019. The legal notice for a 45-day objection period for this project was published in The Oregonian on August 17, 2019.

I received a wide range of comments. The original letters are included in the analysis file. I documented consideration of the comments received in a separate document titled, “[Results of Public Involvement for North Clack Integrated Resource Project](#)⁷.” I chose to document what I felt to be the key comments received under the headings: Temporary Roads, System Road Management, Regeneration Harvest, Climate Change, Snags and Legacy Trees, Riparian Management, Fire Hazard, and Red Tree Vole.

I considered the comments and suggestions received, and after making some incremental changes and adding some clarification on some topics, I feel that Alternative 2 provides the best mix of resource outputs, restorations and protections.

- **Temporary roads** are those roads that are built by timber contractors to access log landings and to facilitate efficient logging operations. After use, they are rehabilitated and closed (s. 2.2.2.2). Some commenters suggested that temporary road construction be minimized, or eliminated altogether. Some pointed out that the proposed mileage is more than in previous projects on the Forest (s. 1.4.1.1).

I did consider the option of not building temporary roads but decided that it did not warrant a fully developed alternative (s. 2.1.1.1). That option would result in a very large portion of the landscape remaining unmanageable due to the infeasibility of logging with helicopters on such a large scale. Another factor influencing my decision, is that I examined the effects disclosed in the EA for temporary roads and found them to be minimal (s. 2.1.1.1, s. 2.2.2.2, s. 2.2.2.4, s. 3.3.1.3, s. 3.3.3.3,

⁷ https://www.fs.usda.gov/nfs/11558/www/nepa/105362_FSPLT3_4839749.pdf

& s. 3.6). The new temporary roads have been carefully located to minimize resource impacts, they will be rehabilitated after use, and are in appropriate locations to serve the long-term transportation needs of this portion of the landscape allocated to timber emphasis in the Forest Plan.

The alternative of logging with helicopters instead of constructing or reconstructing temporary roads was considered but not selected because it would not likely be viable and would not likely achieve the purpose and need on a large portion of the landscape.

- Some commenters suggested that more **System Roads** should be decommissioned while others suggested few if any roads should be decommissioned to provide access (s. 1.4.1.1). The project includes changes to roads based on the Forest-wide roads analysis that was refined by site-specific information in a project level analysis (s. 1.3.2, s. 2.2.2.3, s. 3.2). Only those roads that were found to not likely be needed for future management were proposed for decommissioning to move the project area toward a minimum road system.

I believe my team has conducted a sufficient project-level analysis of the transportation system and that the resulting network of both open and closed system roads is the minimum necessary to manage the land. I have considered this road network in terms of the resource risks that each remaining road poses, the current and future need for road access, and the minimization of road maintenance costs. The timber harvest elements of the project will provide substantial value to pay for road repairs and maintenance conducted by timber operators to supplement appropriated funding levels.

I considered the comments received about the transportation system, and believe the road repairs, maintenance, closures and decommissioning are appropriate to provide safe access to the forest while minimizing resource impacts and cost. I examined the effects disclosed in the EA and found them to be minimal while the benefits are substantial (s. 3.2, s. 3.3.3, & s. 3.7.3).

- Comments were received about the proposal to use the **regeneration harvest method**. Some commenters state that there is sufficient forage in other areas and they urged deleting regeneration harvest because they feel it is controversial. Some suggest that the stands are mature and well on their way to becoming old growth and should be left alone. Others suggested that the proposal does not include enough regeneration harvest. They questioned how the proposed quantity was determined, and why it couldn't be more, given the C1 – Timber Emphasis land allocation.
 - **Consideration of opposition to regeneration harvest** - Commenters have some valid reasons to be concerned about clearcutting old growth. That practice has fragmented mature forests and impacted some species that depend on contiguous stands of mature forest including the northern spotted owl which is now a threatened species. I recognize these situations and the controversy surrounding them, and I have directed my staff to pursue a vegetation management path that focusses on younger stands for forage creation. Regeneration harvest is proposed in carefully chosen locations to address the landscape-wide concern of declining forage and early-seral habitats without impacting old-growth stands.

Even though some commenters stated opposition to regeneration harvest, I believe the analysis shows that the proposal is a prudent action to achieve Forest Plan goals for forage and to gain a diversity of stand ages across the landscape. I have considered these comments and I feel that the impacts and benefits of avoiding regeneration harvest are documented in the sections of the EA that discuss not taking action (s. 3.7.3.1), and are discussed further in section 2.1.2.1.

I find that the environmental impact of regeneration harvest has been adequately analyzed and disclosed in Chapter 3; and that the effects are not significant. Section 3.7.3 discusses the impacts and benefits to deer and elk.

- **Consideration of increased regeneration harvest** – Since the project area contains a large percentage of the C1 – Timber Emphasis land allocation, it is understandable that some would want to know how we developed the proposed action and why we did not propose even more regeneration harvest. The EA has an in-depth discussion at section 2.1.2.2.

Because landscape diversity was part of the purpose and need (a mix of ages and densities at section 1.3.1.3), I directed the interdisciplinary team to reassess the treatments to determine whether additional opportunities existed to create early-seral conditions through regeneration harvest. Since surveys are required for some actions and not for others, the option of developing new regeneration units across the landscape was considered but not fully developed because of the delay that would be required to accomplish needed surveys. Instead, the team developed an additional alternative that would change some of the proposed thinning units to regeneration harvest where Forest Plan standards and guidelines would be met and where surveys were already conducted.

Alternative 2 was developed to respond to comments (s. 2.1.2.2 & s. 2.3). I am selecting it because I feel that it provides a good mix of regeneration harvests on an appropriate landscape. The Forest Plan suggests that a sustainable level of forage and a mix of vegetation types are needed over time (page Four-71); “A consistent acreage quantity of early-successional plant communities created by timber harvest activities should be encouraged in all decades.” The development of regeneration harvest proposals is discussed at sections 1.4.1.2 and 2.1.2.

- Comments were received about **climate change** and the desire to see a quantitative carbon analysis. Some feel that it is best to keep all trees in the forest for maximum on-site carbon sequestration.

I have decided that a quantitative carbon analysis is not appropriate at the project scale. Carbon sequestration is only one of the many important values and uses of the Forest. Increasing or maximizing on-site carbon sequestration is likely very compatible with many Forest land allocations such as wilderness, but I do not find it to be a key objective for the treatment areas proposed in this project. I have reviewed the science and I believe there are far too many disagreements regarding the assumptions and unknowns about the factors that would go into a quantitative analysis that would render the results speculative. I have reviewed the analysis of effects and benefits at s. 3.13, and I have decided that making stands more resilient to the future climate is important and appropriate.

- Comments were received about **snags and legacy trees** and the desire to maximize protection for these elements.

The analysis in the Wildlife Biological Evaluation and Specialist Report shows that no action would result in the most snags, but it also shows that the project would result in a sufficient quantity over time to meet the needs of snag dependent species. In the future, if thinned stands are too healthy for trees to die on their own, snags can be created manually. I have considered the science that was cited by some commenters as well as other literature. I believe that the effects to these stand elements were sufficiently analyzed and documented in the specialist report.

- Comments were received about **riparian management**; some supporting passive management while other support active management.

The analyses in the Water Quality and Fisheries Specialist Reports (s. 3.3 & s. 3.4) show that the proposed actions are appropriate for riparian reserves. Streamside protection buffers are sufficient to provide shade and wood recruitment, while the dry upland portions of riparian reserves would have active management to accelerate late-successional characteristics. High priority streams would have in-stream structures created from logs brought in from off-site or felled from adjacent stands. The analysis found no change in stream temperature and a net reduction of sediment from the proposed actions.

I have considered the science that was cited by some commenters as well as other literature. I believe that the effects to project area streams were sufficiently analyzed and that the project would meet riparian reserve standards and guidelines and is consistent with the Aquatic Conservation Strategy Objectives because it would lead to improved conditions in the long term (s. 3.4.7).

- Comments were received about **fire hazard** and fuel treatments. Some commenters suggest that there is no fire hazard or that fires are natural and should be allowed to burn. Some commenters suggest that timber harvest operations will make the area more hazardous and more likely to burn. Some have questioned the need for fuel breaks. Some science citations were provided.

The proposed vegetation management treatments and fuel treatments will result in a landscape with discontinuous fuel conditions and areas where fire-suppression forces can take appropriate action to contain fires. The Forest Plan requires a suppression response in this landscape.

I have considered the science that was cited by some commenters as well as other literature. I believe that the vegetation management actions including fuel reduction treatments and fuel breaks are appropriate, and that the effects and benefits were sufficiently analyzed (s. 3.12).

- Comments were received that **included site-specific recommendations**. I have considered many general comments and concerns, some of which I have discussed above. The administrative record also contains evidence of this consideration in a document titled "Results of Public Involvement for North Clack Integrated Resource Project." Some comments and concerns were raised again during

the objection period, and documentation exists in the administrative record related to objection resolution.

However, some commenters that included site-specific recommendations did not feel that they received an adequate response to those issues. I would like to address that here. It is [agency policy](#)⁸ to consider comments, yet there is no requirement for environmental assessments to respond to comments. While I have considered site-specific recommendations, I have decided that item-by-item responses to site-specific concerns are not warranted for this type of project-level environmental assessment. I understand that some commenters would like a detailed dialogue on each point, but I have chosen instead to demonstrate how I considered them. Here are some examples of site-specific recommendations and how they were considered:

- **Red tree vole nests** were discovered by a citizen group and recommendations were made on how they would create buffers. After verification of citizen provided information, the team wildlife biologist identified the best habitat according to Survey and Manage Standards and Guidelines, and the Red Tree Vole Management Recommendations, as informed by the court ruling known as the Pechman exemption.

During an objection disposition meeting, additional discussion and information sharing occurred related to red tree voles. Since then, and since the publication of a Draft Decision Notice, I have decided to make two additional changes related to red tree voles based on that conversation. Table 1 and the figures on page 6 above reflects those changes. While it is difficult to sort out what red tree vole related changes occurred based on citizen input vs. Forest Service contract surveys, a total of 306 acres of treatments have been deleted with approximately 20 acres of that occurring after the objection disposition meeting.

One change relates to Unit 198 and the typographical error in data submitted by the citizen group. One nest site coded as inactive in their data should have been coded as active. This has been corrected in the administrative record, and an adjusted buffer is shown in the attached appendix on page A14.

Another change was made to the buffer associated with Units 92 and 94. A group of inactive sites were not originally buffered based on the published Management Requirements because they are too far away from active nest sites. After consulting with the team biologist, I reconsidered the objector's recommendation and I have decided to create additional buffers as shown in the attached appendix on page A5.

A question arose about the meaning of a Project Design Criteria in the EA at page 24, given that citizen groups may provide additional red tree vole location data at a later date. It says, "...there is the possibility that new red tree vole sites may be found, even after a decision is made for this project. As they are confirmed and validated, additional deletions or buffers would be incorporated where appropriate." As a point of clarification, what this means is that I

⁸https://www.fs.fed.us/im/directives/fsh/1909.15/wo_1909.15_40_Environmental%20assessments%20and%20related%20documents.doc

intend to follow the guidance in the 2001 Survey and Manage Standards and Guidelines on page 24 that says, “Manage known site direction may also be applied to additional sites for uncommon species, depending upon factors such as the level of concern for persistence of the species and its habitat in and adjacent to the activity area.” The guidance of the Pechman exemption will also be considered.

This site-specific red tree vole information was considered and acted upon, where appropriate. The situation is documented elsewhere in this decision and in a Red Tree Vole Report. While the exact particulars of each nest location are not responded to individually, I am confident that the team biologist identified appropriate habitat buffers for active nest sites and that the agency is taking appropriate actions consistent with law, regulation and policy.

- Some commenters made recommendations about **specific roads**. The EA at s. 1.4.1 (page 10) identified several road related changes that were made to the proposal specifically based on public recommendation, where those recommendations seemed appropriate. Some recommendations that relate to haul roads where ruts or other issues were pointed out, will be dealt with by project engineers who examine each road and design appropriate repairs. Detailed road-by-road tables were created by the team to show the consideration of the entire road network in the project area and document the proposed changes to the road system. Since the team traveled these roads during project reconnaissance, most of the road issues pointed out were already known. Not all recommendations were adopted, however, such as the recommendation to decommission roads that I found would be needed for future management. The site-specific information on roads was considered, and in some cases, acted upon. While the exact particulars of each road location are not responded to individually, a review of the EA and the road tables show consideration of this information. I am confident that the agency is taking appropriate actions related to roads, consistent with law, regulation and policy.
- Some commenters made recommendation about **wet areas** they found. Since the team examined units during project reconnaissance, many of the wet areas or unmapped streams pointed out, were already known. Further examination is conducted by the implementation team where unit boundaries and skips are determined based on the Project Design Criteria. The list of riparian areas provided with geospatial coordinates and photos will be examined by the implementation team and when verified, would be dealt with according to the Project Design Criteria. Some suggested that their recommendations be shown on maps at this time, however, I have decided that that would be premature until areas are field verified. The site-specific information on wet areas and streams was considered, and will be acted upon after field verification. While the exact particulars of each location are not responded to individually, I am confident that the agency is taking appropriate actions related to wet areas, streams and riparian areas consistent with law, regulation and policy.
- Some commenters made recommendations about unauthorized **Off-Highway Vehicle (OHV)** restoration. The project includes the restoration of 7.1 miles of unauthorized OHV routes. Since user created routes can materialize over night, the project includes a provision for

Adaptive Management that allows the implementers of OHV restoration work to deal with any and all routes, even those that do not yet exist. Commenters submitted a list of areas with geospatial coordinates they recommend for restoration. The site-specific information on unauthorized OHV areas was considered, and may be acted upon after field verification, depending on the urgency of the problem and the availability of funding. While the exact particulars of each OHV location are not responded to individually, I am confident that the agency is taking appropriate actions related to unauthorized OHV use consistent with law, regulation and policy.

- Some commenters made recommendations about **botanical findings** for *Usnea longissima* and *Allotropa virgata*. Neither of these is on lists of endangered, threatened, or sensitive species. *Usnea longissima* is a survey and manage category F species which does not require surveys or the protection of known sites. *Allotropa virgata* has no Federal status. These species have been found to be relatively common in the area as demonstrated by the quantity found by the team botanist and by citizen surveyors. The Survey and Manage Supplemental Environmental Impact Statement identified the rationale for the disposition of these species, finding that they were sufficiently abundant and their persistence was adequately provided for by reserve networks. I have decided that *Allotropa virgata* does not warrant any buffer. Even though protection of *Usnea longissima* is not required, I have decided to handle this species as one of several reasons for the placement of skips within units as described below. While there would be impact to some individuals, there would not be a trend toward federal listing. The site-specific information on these species was considered. While the exact particulars of each location are not responded to individually, I am confident that the agency is taking appropriate actions related to rare and uncommon species consistent with law, regulation and policy.
- Prioritization of **skips**. Skips are areas of no treatment within or adjacent to an area where trees are harvested. The quantity of skips in thinning units varies depending on location as described in the EA at section 2.2.1.1 to 2.2.1.3. The range is described as up to 5% in the Matrix and at least 10% in Late-Successional Reserves. Some skips may be placed randomly, but there are also many reasons to locate skips based on stand features. Since public comments have asked for skips for a number of reasons, I have decided to prioritize the rationale for skip placement here based on their importance. I would consider wet areas and seeps to be the highest priority. I would consider skips for certain moderately important special features such as patches of snags, patches of legacy trees, and active red tree vole nests in stands under age 80. I would consider sites of *Usnea longissimi* and other factors to be the lowest priority for the placement of skips. Moderate and low priority features may not end up in a skip based on the quantity of skips and other factors such as logging feasibility. Often, where a special feature is close to a unit edge, the unit boundary is adjusted to provide the desired protection.
- The discussion above relates to field-oriented specific recommendations, but similarly, some commenters requested dialogue about specific requested analysis. I believe in these instances the analysis performed by the interdisciplinary team was sufficient to provide the information I need to make an informed decision. With any topic, there can be a range of opinions about how any given

resource should be managed. I have considered those viewpoints and will address some of them here:

- Some commenters made recommendations and provided a list about how to reduce the impact from **unauthorized OHV use**, such as “provide adequate sale administration staffing.” I recognize that some commenters have ideas on how the Forest should be run. While the exact particulars of each recommendation are not responded to individually, I am confident that the agency is taking appropriate actions and has the personnel and contract provisions sufficient to achieve the desired results on the land.
- Some commenters made recommendations or have questions in list form about the implementation of **condition-based operating restrictions**. The condition-based factors and the assessment of effects in the specialist reports stand on their own merit and I fully endorse the process. While this process may be new to some, and the exact particulars of each recommendation listed are not responded to individually, I feel that my interdisciplinary team, has developed a solid plan as described in the Project Design Criteria. It will provide similar protections to the land, compared to the previous process and will be monitored.
- Some commenters have cited **published science papers or unpublished opinion pieces**, and have requested that we enter into a dialogue about each; either agreeing to the premise of the commenters interpretation of the paper, or rebutting it with newer or better science. While the exact particulars of each paper are not responded to individually, I have reviewed the cited papers and have considered their relevance and the relevance of the science cited by my interdisciplinary team, and I believe, the current proposal is sound and moves the landscape in an appropriate direction, consistent with applicable science, law, regulation and policy.
- Some commenters have suggested that I have failed to adequately respond to **public comment** or opposing viewpoints. They have critiques or suggest there is some inadequacy of the effects analysis and specialist reports. While the exact particulars of each critique are not responded to individually, I have considered those that are within the scope of project level planning, and I feel that my interdisciplinary team has done a good job of considering the current science and that their effects analysis is sound.
- Some commenters question **the age of the Forest Plan** and have suggestions on how they think the Forest should be managed today. They suggest that there are changed conditions and newer controversies that were not addressed at the time. The Forest Plan, as amended multiple times, remains the management direction for the Forest. This plan and each amendment were the subject of public participation efforts that found a balance between the various resources and uses of public lands. While some hold different views, this plan remains the collective public direction for land management. Where conditions or the advancement of science were found to warrant changes, the Forest Plan was amended (18 times to date).

While some commenters suggest that the project elements are controversial because of the age of the Forest Plan, I disagree. After years of discussion and field trips, the project elements are supported by all but one member of the collaborative group, Clackamas Stewardship

Partners. The collaborative group has a diverse membership including representation from Clackamas County, Clackamas River Basin Council, Clackamas County Soil and Water Conservation District, Oregon Department of Fish and Wildlife, Portland State University, local water providers, hunting and fishing groups, environmental groups, and local sawmills.

Some commenters see treatments such as regeneration harvest as outdated and suggest better uses for the land, such as for carbon sequestration. This issue is outside the scope of project level planning. While the exact particulars of each recommendation are not responded to individually, I feel that my interdisciplinary team has considered the current science and made a valid proposal that moves the landscape in an appropriate direction, consistent with the Forest Plan, law, regulation and policy.

To summarize, I considered the comments received and I believe that the action is both appropriate and consistent with relevant management plans (s. 1.2) and laws (s. 3.14) and that the environmental assessment clearly explains the effects and benefits. I find that the science used to develop the project and to assess the effects is current and valid. I believe that I have made a decision that balances the need for these actions against impacts to resources, and I have incorporated adequate design features (s. 2.2), and project design criteria (s. 2.2.4) to minimize impacts to resources and that those impacts have been thoroughly disclosed in the EA.

While I respect the opinions and wishes of commenters and appreciate the dialogue that has occurred, I do not consider most of the comments received to warrant the generation of additional fully-developed alternatives in the environmental assessment. The following section describes alternatives that were considered and the rationale for their elimination from detailed study.

Description of Other Alternatives and Reasons for Non Selection (s. 2.1 & s. 2.3)

In the EA, 'No Action' is not described as an alternative. Taking no action, is assessed in all of the topics in section 3 in terms of how the existing conditions might change over time. This is particularly important for the elements of the purpose and need (s. 1.3) because it helps show the urgency of taking action. Taking no action would result in undesired conditions across the landscape and would not achieve the goals or outputs of the Forest Plan, as amended.

Alternative 1

Alternative 1 was developed as the proposed action. I am not selecting it because I feel that Alternative 2 provides a better mix of regeneration harvests after all of the changes were made due to red tree vole surveys. The Forest Plan suggests that a sustainable level of forage and a mix of vegetation types are needed over time (page Four-71); "A consistent acreage quantity of early-successional plant communities created by timber harvest activities should be encouraged in all decades." The development of regeneration harvest proposals is discussed at sections 1.4.1.2 and 2.1.2.

Other Alternatives Considered

The EA discusses comments that were received from the public suggesting the consideration of other

alternatives. Details of the suggestions are in the EA at s. 2.1. The options of not constructing temporary roads (s. 2.1.1.1), and doing no regeneration harvest (s. 2.1.2.1) were considered but not selected because the selected alternative provides a better mix of outputs and resource enhancements and protections.

The environmental impact and benefits of the project elements suggested for change or deletion, have been fully analyzed and disclosed in Chapter 3; the effects were found to be minimal. The analysis found the impacts to be sufficiently mitigated by project design criteria (s. 2.2.4). Forest Plan standards and guidelines would be met and the project would be consistent with the Aquatic Conservation Strategy (s. 3.4.7.1).

The Forest Plan as amended directs where it is appropriate and desired to manage vegetation to meet the multiple objectives of resource management. The areas affected by requested changes are on land allocations considered suitable for vegetation management as well as road construction.

I considered the suggested alternatives. While I respect the opinions and wishes of commenters and appreciate the dialogue that has occurred, I do not consider most of the suggestions received to warrant the generation of additional fully-developed alternatives in the environmental assessment.

FINDING OF NO SIGNIFICANT IMPACT (40 CFR 1508.27)

Context

Based on the documentation in the EA and project file, I have determined the following with regard to the context of this project:

The EA implements direction set forth in the Forest Plan, as amended. The Forest is comprised of about 1.1 million acres; the Clackamas River Ranger District encompasses about 414,700 acres of the Forest. The proposed actions equate to approximately 0.5% of the Forest and 1.2% of the Ranger District. Given the area affected by the project at both the District and Forest scale, I find that the effects of the project are not significant as disclosed throughout Chapter 3 of the EA and will have a negligible effect at the District and Forest scale.

Intensity

Based on the site-specific environmental analysis documented in the EA and the comments received from the public, I have determined that this is not a major Federal action that would significantly affect the quality of the human environment; therefore, an Environmental Impact Statement is not needed. This determination is based on the design of the proposed actions and the following intensity factors:

1. My finding of no significant environmental effect is not biased by the beneficial effects of the action. Impacts can be both beneficial and adverse. For this project, there are no known long-term adverse effects or cumulative effects to resources such as water quality, riparian areas, wildlife or heritage resources. These are documented in Chapter 3 of the EA.

2. The project contains design features to protect public health and safety including creating fuel breaks (s. 3.12), and burning when conditions are appropriate (s. 3.14.5). Roads that are deteriorating would be repaired to provide for user safety (s. 3.2).
3. There will be no significant effects on unique characteristics of the area. The project is not located in prime farmland or wetlands, and historic and cultural resources will be protected (s. 3.14). The outstandingly remarkable values associated with scenic and recreational rivers would be protected.
4. The effects on the quality of the human environment are not likely to be highly controversial. While there is some opposition to forest management, I have concluded that the science behind thinning and other vegetation management techniques is not highly controversial based on a review of the record that shows a thorough review of relevant scientific information (citations in the resource topics in section 3 and in specialist reports).
5. The possible effects on the human environment are not highly uncertain, nor do they involve unique or unknown risks. The effects analyses discussed in Chapter 3 of the EA are based on sound scientific research and previous experience implementing similar projects across the Forest.
6. The action is not likely to establish a precedent for future actions with significant effects because this action is not unusual in and of itself, nor does it lead to any further actions that are unique.
7. The analysis found no significant cumulative effects. Cumulative effects were assessed in each section of the EA including; Stand Productivity, Health and Diversity (s. 3.1.4), Transportation (s. 3.2.3), Water Quantity and Quality (s. 3.3.1.4, s. 3.3.2.4, & s. 3.3.3.4), Fisheries (s. 3.4.8), Geologic Stability (s. 3.5.3), Soil Productivity (s. 3.6.1.4, s. 3.6.2.4, & 3.6.3.4), Spotted Owls (s. 3.7.1.5), Deer and Elk (s. 3.7.3), and Snags and Down Wood (s. 3.7.5.2). The analysis considered not only the direct and indirect effects of the project, but also its contribution to cumulative effects. Past, present and foreseeable future projects have been included in the analysis. The analysis considered the proposed actions with project design criteria.
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 and will not cause loss or destruction of significant scientific, cultural, or historical resources (s. 3.14.1).
9. My decision is consistent with the Endangered Species Act. Consultation with U.S. Fish and Wildlife Service concerning the northern spotted owl has been completed (s. 3.7.1). The Letter of Concurrence from the U.S. Fish and Wildlife Service found that the project may affect but is not likely to adversely affect the spotted owl. The project is not in critical owl habitat.

Consultation with the National Marine Fisheries Service was not necessary for this project because the analysis found there would be no effect to listed fish (s. 3.4.1).

There will be no significant adverse effects to sensitive species or survey and manage species (s. 3.4.2, s. 3.7.2 & s. 3.10). The project will not jeopardize the continued existence of any listed species nor will it cause a trend to federal listing or loss of viability for these species.

10. My decision 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 (s. 3.14). The action is consistent with the Forest Plan (each part of section 3). The selected alternative is consistent with the National Forest Management Act regulations for vegetative management. There will be no regulated timber harvest on lands classified as unsuitable for timber production (36 CFR 219.14) and vegetation manipulation is in compliance with 36 CFR 219.27(b). The project complies with Executive Order 12898 regarding environmental justice (s. 3.14.2). No disproportionately high adverse human or environmental effects on minorities and/or low-income populations were identified during the analysis or public scoping process.

Other Findings Required by Law or Regulation

Section 3.14 identifies relevant laws and references to documentation in the EA.

Clean Air Act: My decision is consistent with the Clean Air Act. Burning would be scheduled in conjunction with the State of Oregon to comply with the Oregon Smoke Implementation Plan to minimize the adverse effects on air quality (s. 3.12 & s. 3.14.5).

Clean Water Act: The Water Quality Report discusses the adjacent Clackamas River's listing as impaired under the Clean Water Act (303(d)). The project would not exacerbate any of the water quality issues there (s. 3.3). Implementation of my decision will incorporate Project Design Criteria, as described in the EA (s. 2.2.4), which will protect and maintain water quality conditions. It is anticipated that only minor amounts of sediment would actually enter any stream as a result of implementation (s. 3.3.3.3).

Endangered Species Act (ESA): Consultation has been completed for northern spotted owls (s. 3.7.1). Consultation is not required for listed fish (s. 3.4.1).

Magnuson-Stevens Fishery Conservation and Management Act: The project would not adversely affect essential fish habitat for chinook or coho salmon (s. 3.14.12).

National Forest Management Act: The proposed actions were developed to be in full compliance with NFMA via compliance with the Forest Plan, as amended. The project area has been found to be suitable for timber management (s. 3.1.6 & s. 3.14.6). Other requirements are discussed in the Mt. Hood Forest Plan section below.

National Historic Preservation Act: The Forest operates under a programmatic agreement between the Oregon State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation for consultation on project determination. Consultation with SHPO was completed for this project (s. 3.14.1).

Consistency with Mt. Hood Forest Plan

I find that the selected alternative is consistent with direction found in the Forest Plan as amended. It is consistent with standards and guidelines specific to the relevant land allocations and it is consistent with the applicable Forest-wide standards and guidelines (s. 1.2 & s. 3).

- **Aquatic Conservation Strategy** – The project will contribute to maintaining or restoring aquatic conditions and is consistent with the Aquatic Conservation Strategy objectives (s. 3.4.7.1).
 - I have considered the relevant information from the watershed analyses completed for the watersheds (s. 1.2.2 and the North Clack Project Additional Information document). This project has adopted the concepts for riparian reserve delineation described in the watershed analyses (s. 2.2.1.1). The site-potential tree height for this project is 180 feet.
 - I find that the Project Design Criteria (s. 2.2.4), such as stream protection buffers and operating restrictions on ground-based machinery, will minimize impacts and maintain the function of key watershed indicators that make up elements of the Aquatic Conservation Strategy. These key indicators for water quality, habitat, flow, channel condition, and watershed condition, will be maintained or enhanced (s. 3.4.7.1).
- **Management Indicator Species** - I have considered the impacts to Forest Management Indicator Species (MIS) (Wildlife Report, s. 5.0). MIS for this portion of the Forest include northern spotted owl, pileated woodpecker, American marten, deer, elk, salmonid smolts and legal trout. I find that the selected alternative is consistent with the standards and guidelines pertaining to MIS, and that based on the limited effects to any MIS, the proposed actions do not contribute toward a negative trend in viability on the Forest.
- **Invasive Plants** - I find that the selected alternative is consistent with Pacific Northwest Invasive Plant Program Preventing and Managing Invasive Plants Record of Decision issued in 2005 and the Site-Specific Invasive Plant Treatments for Mt. Hood National Forest Record of Decision issued in 2008 (s. 3.11). Design criteria are included to minimize the spread and establishment of invasive plants (s. 2.2.4).
- Compliance with the **2001 Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines** (s. 3.4.2, s. 3.7.4 & s. 3.10).

I have reviewed the relevant sections in the Environmental Assessment and I find this decision to be consistent with the 2001 Record of Decision. For many of the stands, survey and manage does not apply because of the Pechman exemption and the proposal to thin stands under 80 years-of-age. Other stands were surveyed where there was likely habitat. The only species found that requires protection is the red tree vole.

Exceptions - The Forest Plan describes the process for documenting exceptions to “should” standards and guidelines (p. Four-45). The Forest Plan does not require a Forest Plan amendment for project level exceptions to these standards and guidelines. The following documents the rationale for exceptions.

I approve exceptions for the **soil productivity** standards and guidelines FW-22 and FW-28, as documented at section 3.6.3.5.

The project is consistent with Forest Plan objectives for long-term soil productivity. However, additional soil impact will occur on areas where there is existing soil disturbance. Most units that were logged with ground-based equipment in the original clear cut harvest would remain above 15% detrimental soil condition (s. 3.6.3.3).

There was no standard and guideline for limiting the extent of detrimental soil impacts when the original clearcuts were logged prior to the Forest Plan and in some cases before the land was obtained by the Forest Service. Back then, ground-based logging was less restricted and operators were not required to limit their skid-trail system, landings, and temporary roads to a specified extent.

The Forest will continue to manage soil resources with the goal of maintaining or enhancing its productivity. The proposed actions have been designed to minimize additional detrimental soil impacts. The project design criteria and contractual specifications would be employed that aim to contain the extent of detrimental soil conditions.

- All or portions of a few thinning units that were originally logged with ground-based equipment would be thinned using skyline machines or helicopters, which have lower soil impact.
- Old roads and landings would be reused where appropriate.
- Existing skid trails would be reused where they are not hydrologically connected.
- Where the existing skid trail pattern has far more trails than are needed with today's equipment and logging techniques, only the skid trails that are needed to efficiently operate would be reused and the unused skid trails would be allowed to continue to recover.
- Where new skid trails are needed due to changes in logging system or landing location, they would be spaced 150 feet apart and on appropriate slopes.
- Mechanical harvesters would walk on layers of slash.
- Ground-based operations would occur when weather conditions provide for soil moisture conditions that are sufficiently dry to prevent excessive compaction, rutting or erosion.
- Some trees would be felled to create down woody debris.
- Appropriate erosion control techniques would be used including constructing waterbars on skid trails and placing slash on certain skid trails and OHV routes.
- After operations are completed, new temporary roads, existing road alignments and landings that were used would be decompacted where appropriate.
- After operations are completed, mainline skidtrails in regeneration units would be decompacted and revegetated and/or covered with logging slash.
- Some system roads would be decommissioned.
- Some system roads would be stormproofed and closed which would reduce unauthorized OHV use.
- In areas not disturbed again, natural recovery would continue to occur, as roots and burrowing animals penetrate and break up compacted soils, as organic matter accumulates, and as soil wetting/drying and freezing/thawing cycles occur.

In dense stands, site and soil resources are used by all the trees to stay alive with little left over for root expansion and stem strength. When high tree density is coupled with the existing extent of detrimental soil conditions, productivity could be considered lower than the sites potential.

Conversely, thinning to maintain tree spacing and therefore stand health, results in a reallocation of site and soil resources to the remaining trees, therefore offsetting to some degree, the negative effects of detrimental soil condition. The availability of site and soil resources for growth would increase substantially after thinning.

The objective of maintaining long-term site productivity would still be met. Section 3.6.3 and the Soils Report describe that site productivity has not been substantially impaired. The Silviculture Report also indicates that stands are growing well and that they would grow even better after thinning. The cumulative effects of the proposed actions would not be substantial and trees and other vegetation are expected to continue growing and developing at appropriate rates.

Even though many units already exceed the levels of detrimental soil condition specified in FW-22, it is not possible or practical to rehabilitate all of the impacts at this time.

Temporary roads, landings and skid trails are key parts of the stand management transportation system and where appropriately located, would likely be reused when stand management is proposed. Stand management techniques have evolved over time, changing the portion of land used for the stand management transportation system and the portion kept productive and resilient to grow trees and other vegetation at appropriate rates.

Even though there have been advances in the past 50 years in understanding the critical role soil conditions play in forest productivity, it is not always possible to reverse all past impacts so that soils can be returned to the same level of functionality that they once had. For example where severe burning resulted in scorched soils or where duff and the top soil horizon have been moved a great distance, it is not feasible to restore these impacts quickly. Some actions are proposed to restore or minimize impacts to soils including those listed above; they would provide some benefit but they are not likely to fully restore soils.

One technique used in the past to partially restore soils is to use deep soil tillage equipment on skid trails. This has been done before in regeneration harvests where a winged subsoiler pulled by a tractor was used to decompact soils on skid trails. This technique is recommended by another guideline (FW-030) which suggests that all logging skid trails should be considered for rehabilitation through deep soil tillage techniques as a means to achieve the goals of FW-028. This technique is appropriate in some circumstances such as directly after a regeneration harvest but is not appropriate in other circumstances. This guideline was not a requirement at the time of the initial clearcutting.

Deep soil tillage is being proposed for the primary skid trails (and existing road alignments and landings) on several units. Even with deep soil tillage on skid trails, road alignments and landings, these units would not likely get below 15% because a portion of the detrimental impact comes from past site preparation which displaced topsoil and duff; tillage would not repair that damage.

Most thinning units have existing skid trails that are still considered to have detrimental soil conditions. However, there are tree roots that have penetrated into the skid trails. Reusing the skid trails again may add some additional compaction around these roots but they would likely

remain intact. Deep soil tillage of skid trails in a thinning unit would break the roots that have penetrated into the trails and lead to reduced growth, increased root disease and tree mortality. Using this technique on skid trails that are not reused at this time, (e.g. where there are more skid trails than needed or where units are changed to skyline or helicopter) would require that trees growing in the trails be cut prior to treatment. This would set back the partial recovery that has occurred on these skid trails.

Deep soil tillage was considered for all skid trails but the technique was not selected for thinning units. The project is consistent with FW-030 because serious consideration was given to this technique even though it was not selected in every case. The opportunity to mechanically rehabilitate skid trails by deep soil tillage may come in the future if regeneration harvest occurs in these stands. Most units that were logged with ground-based equipment in the original clearcut harvest would remain above 15% detrimental soil condition.

I approve exceptions to guidelines related to the **National Forest Management Act**, FW-306 as documented at section 3.1.5.

FW-306 indicates that timber stands should not be regeneration harvested until they have reached or surpassed 95 percent of culmination of mean annual increment measured in cubic feet. FW-307 explains that exceptions to this may be made where resource management objectives or special resource conditions require earlier harvest.

Mean annual increment is a calculation that measures stand growth. Culmination of mean annual increment is the time in a stand's life when it is considered biologically mature (i.e. when growth slows and when decay and mortality increase).

Three units have not culminated. They are proposed for regeneration harvest to enhance forage where palatable browse plants are present, to address disease issues, and to get a more diverse mix of seral stages across the landscape. The actions create early-seral conditions without impacting suitable spotted owl habitat or old growth.

According to growth and yield modeling, these stands are between 40% and 88% of culmination of Mean Annual Increment. More discussion of the value of forage can be found in the Deer and Elk section at s. 3.7.3. The proposed actions were developed to target forage creation in stands with the appropriate forage plants instead of targeting old-growth stands. I find that an exception for FW-306 is appropriate to achieve the forage goals for this area.

I approve exceptions to guidelines related to the **open road density**, FW-208 as documented at section 3.7.3.2.

The project would close roads and rehabilitate unauthorized OHV routes. Open-road density is one way to measure disturbance to deer and elk. OHV trails are included in the analysis because they create impacts similar to open roads. The project would close a total of 28.5 miles of open roads and reduce open-road densities in both summer and winter range. Summer range open road density would be reduced from 2.7 to 1.4 miles per square mile which is well below the 2.5

miles per square mile in Forest Plan standard FW-208. The LaDee Flat OHV area is entirely within winter range and affects the ability to manage for solitude in the project area. In winter range, the combined open road/OHV trail density would be reduced from 2.9 to 2.1 miles per square mile which is above the 2.0 miles per square mile in Forest Plan standard FW-208.

No additional roads were identified that were suitable for closure in the winter range. Open roads in the winter range area include Highway 224, and other primary routes such as Roads 4610, 4611, 4612 and 4613 that provide access to the broader landscape including trail heads. Additionally, the Forest OHV plan made a commitment to locating the OHV area in winter range and identified the impacts of doing so (s. 3.7.3.2).

Predecisional Administrative Review Process

This project was subject to predecisional administrative review pursuant to 36 CFR 218, Subpart B, also called the “objection process.” The full text of the rule can be found at [USDA website](#)⁹.

A draft decision notice was made available during a 45-day period for objections to be filed prior to making this final decision. The legal notice of the opportunity to object was published in the Oregonian newspaper on August 17, 2019. Seven objections were filed: Dick Artley #19-06-06-0002-218(B); American Forest Resource Council #19-06-06-0003-218(B); Donald Fontenot #19-06-06-0004-218(B); Bark #19-06-06-0005-218(B); Mia T. Pisano #19-06-06-0006-218(B); and Tara Hershberger #19-06-06-0007-218(B); and Oregon Wild #20-06-06-0001-218(B).

An objection resolution meeting was conducted on November 6, 2019 with the Forest Supervisor, the Objection Reviewing Official. No resolution was made on the issues raised by objectors.

In letters dated December 9, 2019, the Objection Reviewing Official, Richard Periman, Forest Supervisor, documented the following:

- The draft decision described the actions to be taken in sufficient detail that the reader can easily understand what will occur as a result of the draft decision.
- The draft decision considered a range of alternatives that was adequate to respond to the Purpose and Need. The purpose and need and alternatives considered in the EA reflect a reasonable range of alternatives, consistent with law, regulation and policy.
- The draft decision is consistent with Forest Plan standards and guidelines, as amended.
- The draft decision is consistent with all policy, regulation, law, direction, and the EA contains adequate supporting evidence that is reflected in the draft decision. The record contains adequate documentation regarding resource conditions, and the Responsible Official’s draft decision document is based on the record and reflects a reasonable conclusion.

⁹ https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5442116.pdf

The draft decision notice is replaced by this final decision notice.

For further information regarding this project, contact Jim Roden at 541-383-4770 or by email at james.roden@usda.gov. For further information regarding objection procedures, contact Michelle Lombardo at 971-303-2083 or by email at michelle.lombardo@usda.gov.

Project Implementation

Implementation may occur immediately following the date that this final decision is signed.

The EA, decision notice and maps can be downloaded from the [Forest web site](#)¹⁰.

January 22, 2020

Date Signed

Jackie Groce
District Ranger
Clackamas River Ranger District
Mt. Hood National Forest

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¹⁰ <http://www.fs.usda.gov/projects/mthood/landmanagement/projects>





























