United States
Department of
Agriculture

Forest
Service

June 2015

Decision Notice

Junction Vegetation Management Project

and Forest Plan Amendment

Bend/Ft. Rock Ranger District, Deschutes National Forest
Deschutes County, Oregon

Township 20 South, Range 9 East, Sections 1, 12, 13, 24, 25; T20S, R10E, Sections 3, 5-11, 14-22, 27-31; and T19S, R10E, Sections 28-33; Willamette Meridian

Decision Notice
Table of Contents

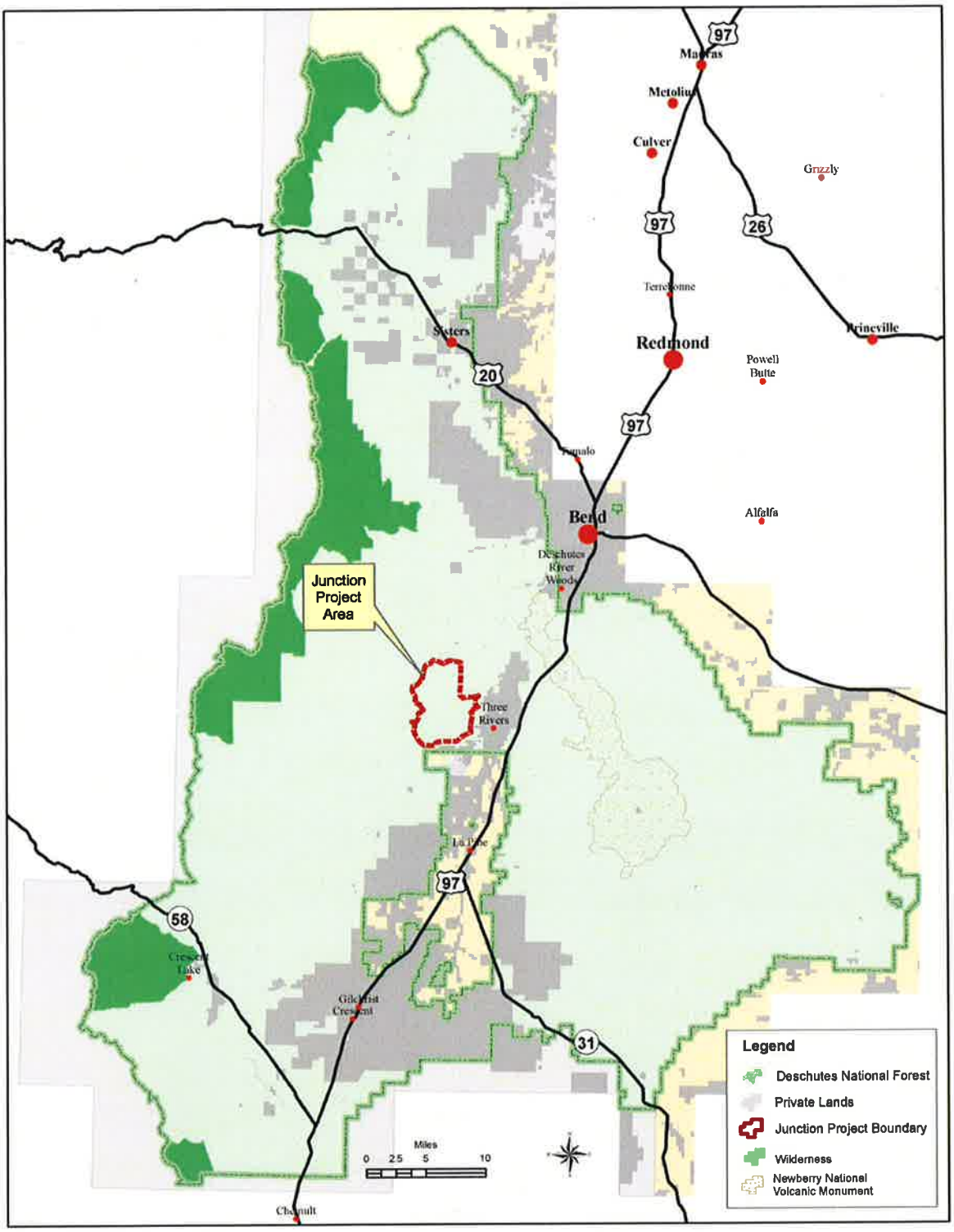

Figure 1. Location of the Junction Project area, Deschutes National Forest.

DECISION NOTICE

Junction Vegetation Management Project

USDA Forest Service
Bend/Ft. Rock Ranger District, Deschutes National Forest
Deschutes County, Oregon

Legal Location: Township 20 South, Range 9 East, Sections 1, 12, 13, 24, 25; T20S, R10E Sections 3, 5-11, 14-22, 27-31; and T19S, R10E, Sections 28-33; Willamette Meridian

Introduction and Background

This Decision Notice (DN) documents my decision and rationale for the selection of Alternative 3 Modified of the November 2014 Junction Vegetation Management Project Environmental Assessment. This project will address forest health and fuels issues in lodgepole pine forests, reduce hazardous fuels to protect values at risk, reduce stocking in ponderosa pine forests and will provide timber products to the local wood products industry.

The 17,556-acre Junction project area is located approximately 15 air miles southwest of the city of Bend and less than 5 miles west of the community of Sunriver (Figure 1). The project area is located within portions of the Spring River, Fall River, and Deschutes Braid-Deschutes River subwatersheds within the Fall River-Deschutes River watershed. Major roads that cross the project area include Forest Roads 40, 42, and 45. The majority of the project area (> 12,000 acres) is within the General Forest management allocation where the goal is to "emphasize timber production while providing forage production, visual quality, wildlife habitat and recreational opportunities for public use and enjoyment." (LRMP 4-117).

The Environmental Assessment (EA) documents the Forest's consideration of alternative ways to meet the purpose and need, and discloses and compares the environmental effects of the alternatives. Alternative 3 Modified offers the best combination of actions to meet the purpose and need at a landscape level and in an environmentally sound manner.

Decision and Rationale

I have reviewed the EA for the Junction Vegetation Management Project 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. It is my decision to select Alternative 3 Modified, including associated connected actions, forest plan amendments, and resource protection measures as described in the EA and Appendices of this Decision Notice.

Specifics of Decision

Table 1 displays a summary of the treatments in the selected alternative, which total 8,964 acres of overstory treatments and 12,280 acres of understory treatments. Fuels reduction and prescribed underburning is proposed on 5,738 acres and mowing or shrub mastication on 7,911 acres. Overstory, understory, and fuels treatments may occur on the same acres. Maps of the actions involved in the project are included in Appendix A of this DN and a list of all units with

the integrated prescription is included as Appendix B. The following table is a summary of the activities.

Table 1. Summary Treatment Acres

Activity	Acres*
Thinning	2,707
Seed Tree Harvest	2,322
Overstory Removal	3,935
Total Commercial Harvest	**8,964**
Precommercial Thinning	4,213
Ladder Fuel Reduction	5,745
Whip Felling	2,322
Total Understory Tree Treatment	**12,280**
Prescribed Underburning	5,738
Shrub Mowing / Mastication	7,911

*Acres are approximate and do not account for such things as retention patches or areas to protect. Actual treated acres will be fewer.

Road Closures & Decommissioning: A substantial amount of roads in this planning area were put into the maintenance level 1 category under previous planning efforts. An additional 0.57 mile would be closed and 2.62 miles decommissioned. Existing road closures would be maintained (see EA Appendix D).

Forest Plan Amendment: This decision includes one non-significant, site-specific forest plan amendment as described in the EA pp. 18-20. An amendment to the Scenic Views standard will allow the effects of treatment (primarily slash, piling and pile burning) to be visible for about five years. The second amendment described in the EA to amend Scenic Views standards and guidelines allowing prescribed fire to occur on areas greater than five acres is *not* included in this decision. I've decided to forego the proposed burning on about 60 acres within scenic corridor completely. This eliminates the need for the amendment and because the amount of prescribed burning within the corridor is not a substantial amount of the prescribed burning in the project area, our objectives will still be met.

Resource Protection Measures: This decision includes all resource protection measures described for Alternative 3 in the EA. Resource protection measures are listed in Appendix C of this Decision Notice.

Reasons for the Decision

I have reviewed the EA for the Junction Vegetation Management Project 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. It is my decision to select Alternative 3, including associated connected actions, one forest plan amendment, and resource protection measures, as described in the EA (pp. 34-42).

1. Response of Alternative 3 to the Purpose and Need

Reduce stocking in ponderosa pine stands to increase vigor and resilience to insects, disease, and wildfire. Address forest health and fuel issues in lodgepole pine stands by releasing the understory to grow healthy without infection of dwarf mistletoe from overstory and to increase vigor.

Ponderosa pine stands within the Junction project area are limited to the buttes and elevated areas where cold air drainage down slope moderates air temperatures (EA pp. 50-52). It accounts for 27% of the project area and 28% of the watershed (Historic range of variability (HRV) analysis area). The HRV shows that 24,682 acres (78%) are above HRV; i.e. there are nearly double the acres of mid-seral structural stages than would have been sustained historically under a natural fire regime and absent logging practices that removed the large trees. Considering the proportion of the analysis area that is out of HRV, Alternative 3 makes a modest contribution to restoration of the ponderosa pine plant association group (PAG). Thinning would reduce tree densities and promote healthy residual trees, improving stand health and maintaining it longer into the future than if untreated; underburning and mowing would aid in protecting vegetation from wildfire and maintain vegetation diversity across the landscape. Alternative 3 would accelerate development towards late/old structure (LOS) conditions on 78% of the ponderosa in the ponderosa pine PAG within the project area (EA p. 55). Underburning also allows for the continued maintenance of the stands using prescribed fire in the future.

Treatment on 2,044 acres of lodgepole pine would result in more even-age overstory and less dense understory. Removing mistletoe-infected overstory prevents the developing understory from being infected. Lodgepole pine biophysical environment is the primary forest type, covering about 70% of the project area. Treatments will maintain the lodgepole pine within the HRV for all structural stages. Healthier lodgepole pine stands will contribute to improved scenic integrity along important travel routes and decreased risk of losing a large area to beetles or wildfire.

Reduce hazardous fuels to protect values at risk to wildfire such as scenic corridors, critical transportation routes, public safety, Old Growth Mas, and unique plant and wildlife habitats.

Fire hazard across is currently rated extreme for most of the project area. With potential flame lengths over 11 feet, extreme fire behavior does not allow for safe working conditions for any type of fire suppression resources directly related to a fire. Much of the project area is also high to very high rating for wildfire risk. Alternative 3 moves a substantial amount of the area from extreme hazard to low hazard. This would allow direct attack with hand crews in the event of a wildfire under 97th percentile conditions on over 8,000 acres of the project area. Priority areas, identified in the E/W Deschutes County CWPP such as Forest Roads 40, 41, and 45 are treated and become low fire hazard. A reduction in wildfire risk also allows work to be done to slow fire's forward rate of spread and increase firefighter's abilities to suppress a fire. The communities to the west of the project area are at less risk as are valuable ponderosa pine-dominated stands in the west and north sides of the project area.

Contribute forest products to the local and regional economies.

Forest sector jobs remain important in central Oregon. Alternative 3 produces approximately 16.5 million board feet of timber. The removal and processing of the timber creates or maintains jobs. The approximate number of jobs created or maintained is estimated to be 193.

2. Response of Alternative 3 to the Key Issues

Managing for wildlife habitat within PAGs

With this key issue, Alternative 3 was designed to do two things: 1) retain more of the contiguous dense, older lodgepole pine to provide quality habitat for black-backed and three-toed woodpeckers; and 2) thin in ponderosa pine stands to a lower basal area to maintain white-headed woodpecker habitat for a longer period of time. Alternative 3 also provides skips and gaps in treatment across the project area to provide diversity in stand structure.

The black-backed woodpecker is a management indicator species representing species that rely on mature and old growth lodgepole pine forest type. Alternative 3 impacts fewer acres of black-backed woodpecker habitat than Alternative 2 would have. Two large contiguous blocks of older dense habitat totaling 1,520 acres are deferred from treatment. Additionally, retention of connectivity corridors and deferring treatments within Old Growth Management Areas also provides high quality habitat where there would be more snags and future snags. Currently lodgepole pine LOS stages comprise 39% of the watershed. The HRV for these stages is between 15 and 35%. Overstory treatments will reduce that but it will remain at the upper end of HRV.

The white-headed woodpecker is a Region 6 Sensitive species that prefers old growth ponderosa pine forest, including large snags. The limiting factor in this and most planning areas is large trees because past logging practices removed most of the large trees. Thinning will promote development of large tree structure and maintain a trajectory for areas that already provide suitable habitat. Large trees will eventually become the large snags that the species also rely on. Alternative 3 will thin 686 acres of ponderosa pine to promote white-headed woodpecker habitat which will also continue stands on a trajectory to LOS structure. An additional 143 acres of treatment will remove overstory lodgepole pine and retain ponderosa pine to promote resilience and large tree development. These acres would be on a trajectory to become suitable habitat in the future. Alternative 3 thins slightly fewer acres than Alternative 2, but by thinning these stands to a basal area of 50 sq. feet, the open condition, resilience, and tree vigor will be maintained longer than under Alternative 2 which thins to an average of 70 sq. feet. The activities of Alternative 3 are expected to have a beneficial impact on white-headed woodpecker at the Forest scale.

Managing Vegetation while providing for landscape diversity

This project is not expected to reduce diversity at either the project or the landscape level. Scoping responses expressed concerns about reducing diversity by removing character trees, large and/or old trees, down wood, minor species and stand age diversity. Alternative 3 responded to this issue by retaining large untreated blocks of habitat that will provide diversity of age class as well as higher levels of mortality. It also will retain all large trees over 21" dbh, and all character trees of ponderosa pine and white fir trees that exhibit old tree characteristics. Snag and down wood levels are maintained according to the Forest Plan. The HRV analysis shows that the ponderosa pine and mixed conifer LOS structural stages will not be reduced below current levels. Lodgepole pine LOS is currently above HRV and regeneration harvest moves it to within HRV.

Management of unique and limited habitats

Scoping comments showed that some people felt certain areas should not be entered with active management. The alternatives differed in how many acres were treated within the Wake Butte Special Interest Area and atop Pistol and Sitkum Buttes. The selected alternative would forego any treatment within the Special Interest Area and Pistol Butte, and reduces the acres treated on Pistol and Sitkum Buttes to 600 acres fewer than Alternative 2 would have treated.

The Junction project area is located for the most part within General Forest where the goal is to "emphasize timber production while providing forage production, visual quality, wildlife habitat, and recreational opportunities for the public." The objective in General Forest is to continue to convert unmanaged stands to manage stands and manage the forest to have stands in a variety of age classes utilizing the site growth potential. I believe Alternative 3 meets the goals and objectives of General Forest. Alternative 3 conducts timber harvest and maintains a variety of age classes in lodgepole pine and also provides large untreated blocks of habitat for black-backed woodpeckers, provides connectivity corridors, improves the scenic quality, retains hiding cover and forage for big game, and reduces open road density. Because the project area also includes WUI and is situated less than five miles from the community of Sunriver, the need to treat hazardous fuel conditions has to be addressed. Thinning, mowing, slash treatments, and underburning are active management techniques that will lower the fire hazard rating.

3. Consideration of Public Comment

As with most vegetation management projects on the Forest, we received a range of public comments with some people expressing support, some looking for more treatment, and others outlining concerns about potential environmental impacts. Some commenters are concerned that there has not been enough emphasis on the social and economic needs of the public. Commenters expressed concerns with impacts to wildlife habitat, aquatic resources, soils, recreation and scenery.

In making this decision I thoroughly considered the comments received during the 30-day public comment period. Appendix E of the EA details the consideration and response to public comments. In responding to comments the interdisciplinary team has supplemented and improved some of the analysis, made factual and editorial corrections, and made clarifications.

Other Alternatives Analyzed

Besides Alternative 3, two additional alternatives were analyzed in detail in the environmental assessment. They include Alternative 1 the No Action, and Alternative 2. Additional alternatives include those considered but eliminated from detailed analysis (EA p. 16-17).

Alternative 1 (No Action)

Alternative 1 is the No Action Alternative, used to provide a baseline for comparison of the effects of all of the alternatives. There would be no density management, overstory removals, fuels reduction, or other vegetation management. Alternative 1 does nothing to address the purpose and need described on page 4 of the EA. The EA shows that under Alternative 1 a large proportion of the project area (12,470 acres) would remain rated as extreme for wildfire hazard. These conditions can be expected to worsen as acres rated as low hazard transition to moderate or high fire hazard due to tree and shrub growth. These conditions are not acceptable because in the event of a wildfire it threatens wildlife habitat and soils. Fire suppression would be difficult and possibly lead to damage and mortality across the project area (EA pp. 78).

None of the ponderosa pine stands would be thinned to increase resilience and stand vigor. In overstocked stands, trees would remain slow growing. Mountain pine beetle activity would continue at present levels or increase. Dwarf mistletoe present in the overstory tress of lodgepole pine stands would continue to infect the understory and spread to healthy trees. For these reasons, I did not select Alternative 1.

Alternative 2

Alternative 2 was refined following scoping and is described in the EA pp. 23-27. It would have treated more overstory acres (10,619 compared to 9,864), more understory treatment (13,035 compared to 12,280), and produced slightly more timber volume at 19.5 mmbf. A substantial reduction in fire hazard reduction would occur, lodgepole pine would be managed for healthy stands, and ponderosa pine would become more resilient to insects, disease and fire. The difference in acres treated, however, is based on how Alternative 3 addressed the issues that were raised during scoping. This alternative does not adequately address all of the issues that were raised during scoping; therefore I did not select it.

Public Involvement Conducted

The Junction Vegetation Management project was initially announced to the public in a letter mailed to 193 individuals and organizations, including representatives of the Confederated Tribes of the Warm Springs, the Burns Paiute Tribe, and the Klamath Tribes, on August 9, 2010. It was subsequently published in the *Schedule of Projects for the Deschutes and Ochoco National Forests*. The scoping letter was also posted on the Deschutes National Forests NEPA project web site: http://data.ecosystem-management.org/nepaweb/nepa_project_exp.php?project=32816.

During the scoping period, a total of six responses were received from individuals, organizations, agencies and tribes. Responses varied from support for the proposal, to recommended changes to the proposed action, to strong disagreement with certain components of the proposal. Those who contacted the Forest Service about the proposed action include: Asante Riverwind, Deschutes County, American Forest Resource Council, Oregon Wild, Jim Larsen, and the Klamath Tribe.

The 30-day public comment period was initiated on August 15, 2014 and resulted in seven written comments from individuals and organizations: Oregon Wild, American Forest Resource Council, Interfor, Dick Artley, Dean Richardson, Blue Mountains Biodiversity Project. The comments were carefully reviewed and substantive comments have been responded to individually in Appendix E of the EA. Some comments led to edits, clarification, and additions to the final EA.

Consultation with Government Agencies and Tribes

The following tribal governments were notified of the project proposal: Confederated Tribes of the Warm Springs, Burns Paiute, and the Klamath Tribes (EA p. 11). Government to government conferences included discussions of this project.

The State Historic Preservation Office (SHPO) was consulted during project planning following guidelines in the Regional Programmatic Agreement among USDA-Forest Service, the Advisory Council on Historic Preservation, and the Oregon SHPO. A cultural resource inventory has been completed for the project area. The Bend/Ft. Rock Ranger District completed a cultural resource

report and submitted it to the Oregon State Historic Preservation Officer (SHPO). The activities in the selected alternative have been designed to have no effect to cultural resource sites through both protection and avoidance (EA p. 250-251). On March 29, 2013 the SHPO provided concurrence with the Forest's finding of no effect due to historic properties being avoided.

Formal consultation with the U.S. Fish and Wildlife Service or National Marine Fisheries Service was not required and did not occur because the project does not adversely affect any habitat for threatened or endangered wildlife or fish species.

Legal Requirements and Policy

In reviewing the EA and actions associated with Alternative 3 modified, I have concluded that my decision is consistent with the following laws and requirements:

The National Environmental Policy Act (NEPA)

NEPA establishes the format and content requirements of environmental analysis and documentation as well as requirements for public involvement and disclosure. The entire process of preparing this environmental impact statement was undertaken to comply with NEPA.

The National Forest Management Act (NFMA)

The Deschutes LRMP was developed under the 1982 Planning Rule.

We find this decision to be consistent with the long term management objectives as discussed in the Deschutes National Forest Plan as amended, except as discussed below. All other Forest Plan direction, including from the Regional Forester's Forest Plan Amendment #2 (Eastside Screens) has been adhered to and incorporated into the project's design.

Site-Specific Forest Plan Amendment:

Management Area 9 (Scenic Views) Standard M9-8 (LRMP 4-123), dealing with Timber/Ponderosa Pine – Foregrounds states: *In Retention Foregrounds, slash from a thinning or tree removal activity, or other visible results of management activities, will not be visible to the casual forest visitor for one year after the work has been completed. In Partial Retention foregrounds, logging residue or other results of management activities will not be obvious to the casual forest visitor two years following the activity.* Alternative 3 will treat within Retention Foreground areas. The amendment to this standard would allow the visible results of management activities to be visible for approximately five years.

This amendment will not have an impact on the goals and objectives for the Forest Plan and it provides for activities that contribute to meeting the Scenic Views management area objectives. All other aspects of the selected alternative are consistent with the direction in the Forest Plan and Eastside Screens. I find the amendments described and discussed in the EA (pp. 20-22, 208-209) to be non-significant based on the analysis in the EA.

I find the selected alternative to be consistent with the requirements of the National Forest Management Act implementing regulations; specifically under Alternative 3, there is no timber harvest on lands classified as unsuitable for timber production and Alternative 3 is consistent with the seven management requirements and the vegetation requirements from 36 CFR 219.11(d).

The Endangered Species Act of 1973, as amended

A Biological Evaluation was prepared to document the possible effects of the proposed activities to threatened and endangered wildlife species within the project area. The selected alternative is determined to have "No Effect" to the northern spotted owl or northern spotted owl critical habitat). It has been determined that implementation of all of the proposed activities will have no effect to any threatened or endangered fish or plant species and would have either no impact on any sensitive wildlife species or associated habitat or may impact individuals or habitat but not cause a trend toward federal listing (EA pp. 90-116).

The Clean Air Act

The selected alternative will comply with the Clean Air Act. The Act prescribes air quality to be regulated by each individual state. The Forest Service will follow directions of the Oregon State Forester in conducting prescribed burning in order to achieve strict compliance with all aspects of the Clean Air Act and adherence to the Oregon Smoke Management Plan (EA pp. 90).

Civil Rights and Environmental Justice

Executive Order 12898 on environmental justice requires federal agencies to identify and address any disproportionately high and adverse human health or environmental effects on minority and low income populations. The analysis focuses on potential effects from the project to minority populations, disabled persons, and low-income groups.

After evaluating the discussion in the EA p. 259, I have determined that there would be no discernible impacts from any of the alternatives on Native Americans, women, other minorities, or the Civil Rights of any American citizen.

Implementation

Implementation is expected to begin in the fall of 2015. I reviewed the EA and associated appendices and believe there is adequate information within these documents to provide a reasoned choice of action. I am fully aware of adverse effects that cannot be avoided and believe the risks are outweighed by the benefits. Implementing the selected alternative will cause no unacceptable cumulative impact to any resource.

Minor changes may be needed during implementation to better meet on-site resource management and protection objectives. In determining whether and what kind of further NEPA action is required, we will consider the criteria at FSH 1909.15, sec. 18. Connected or interrelated proposed changes regarding particular areas or specific activities will be considered together in making this determination. The cumulative impacts of these changes will also be considered.

Minor adjustments to unit boundaries may be needed during final layout for resource protection, to improve logging system efficiency, and to better meet the intent of our decision. Many of these minor changes will not present sufficient potential impacts to require any specific documentation or action to comply with applicable laws.

Finding of No Significant Impact

Context

Disclosure of effects in the EA may differ by the resource being analyzed and by the scale of analysis. Multiple scales and levels of analysis were used to determine the significance of the effects on the human environment.

The Deschutes National Forest is 1,600,000 acres. The Junction project area totals about 17,556 acres. The selected alternative includes overstory vegetation management activities on about 8,964 acres, or 51% of the project area. When considering understory-only treatments the footprint is about 70% of the project area. The project activities comprise less than 1% of the Deschutes National Forest. Within this context, I find that this project is local in scope.

Intensity

Environmental effects of the actions described on page 2 for the selected alternative are documented in the EA pp. 46-261. The beneficial and adverse direct, indirect, and cumulative effects discussed in the EA have been disclosed in the appropriate context, and effects are expected to be low in intensity because of project design elements, resource protection measures, and management requirements in place to protect or reduce impacts to resources. Significant effects to the human environment are not expected. I base my finding on the following intensity factors used to assess the potential for environmental effects to be significant.

1. *Impacts that may be both beneficial and adverse.* My finding of no significant environmental effects is not biased by the beneficial effects of the action.

2. *Public health and safety.* Significant effects to public health and safety are not anticipated to result from implementation of Alternative 3 because implementation incorporates appropriate safety measures as required by OSHA smoke management will occur to ensure compliance with the Clean Air Act and these types of projects have not been shown to produce significant health or safety effects in the past (EA pp. 258-259).

3. *Unique characteristics of the area such as park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.* There are no park lands, prime farmlands, wetlands, or ecologically critical areas in the Junction project. Effects to the Eligible W&S River Corridor of Fall River and W&S corridor of the Deschutes River are negligible. Only 130 acres of the Fall River corridor area treated with Alternative 3, and 29 acres of the Deschutes corridor. Activities are consistent with the UDWSR Plan and the Deschutes LRMP. ORVs would be protected through project design features and mitigation. Treatments are expected to improve forest health and tree vigor which over the long term improves or maintains Riparian Management Objectives.

4. *The degree to which the effects are likely to be highly controversial.* The nature of potential effects of forest management activities proposed in this project is well established and not likely to be highly controversial in a scientific context. I have reviewed science submitted by the public and found nothing new to significantly contradict the science utilized to develop alternatives and assess the impacts of the alternatives. While the public may perceive some aspect of the project to be controversial, there is no known scientific controversy over the impacts of the decision. I found the scientific literature that the Forest Service specialists relied upon to be the best available and most applicable science.

The Deschutes National Forest Plan permits thinning, regeneration harvest, fuels reduction, and prescribed fire in this area, and these activities have been conducted in this general area previously. The EA effectively addressed and analyzed all major issues associated with the

project in Chapter 3. During 30-day public review of the proposed action (scoping) and public review of the EA and effects analysis, no scientific controversy over unacceptable effects was identified.

5. *The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.* The effects on the human environment from Alternative 3 are not uncertain and do not involve unique or unknown risks. All proposed actions are standard practices that have been previously implemented with known cause and effect relationships. The Deschutes NF has considerable experience with the types of activities that will be implemented. The best available scientific information provided the foundation for designing Alternative 3 of the Junction project. I am satisfied that the project, as designed, and the effects disclosed in the EA present no highly uncertain or unknown risks.

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.* The action will not establish a precedent for future actions with significant effects, because it conforms to all existing Forest Plan direction except for non-significant site specific amendments. Future undertakings are subject to NEPA procedures.

7. *Cumulative effects. No significant cumulative effects have been identified:* The interidisciplinary team analyzed and disclosed the direct, indirect, and cumulative effects of the actions on forest vegetation, fire and fuels, threatened and endangered wildlife and fish species, Sensitive wildlife and fish species, management indicator species, water quality and quantity, recreation, botanical species, spread of invasive plants, transportation system, economics and jobs, air quality, cultural resources, and areas that could meet the criteria of potential wilderness. As described in the Junction EA, the direct, indirect, and cumulative effects of the selected alternative include the following:

Water Quality and Fisheries – There would be no effects to water resources, riparian areas, floodplains, or wetlands from implementing the Selected Alternative. There would be no effects to fisheries or Essential Fish Habitat from implementing the Selected Alternative. This is because of the small amount of surface water present in the project area (0.2 miles of Fall River) (EA p. 225-238).

Threatened/Endangered, and Sensitive Wildlife Species – There would be No Effect to any federally listed threatened or endangered species (EA pp. 90-116).

Management Indicator Species (MIS) – The Wildlife Report assessed direct, indirect, and cumulative impacts to MIS with habitat in the project area. The analysis did not identify any significant cumulative effects to any MIS (EA pp. 116-205).

Botanical Species – No direct or indirect effects have been identified for threatened or endangered plant species because no habitat exists in the project area. Habitat for and populations of the R6 Sensitive green-tinged paintbrush are present. Following project design requirements would reduce negative impacts to existing plants, and implementation may improve habitat by creating more open conditions (EA pp. 238-242).

Soils – there are no major soils related concerns. Alternative 3 will meet LRMP standards for soil productivity and comply with the recommended management guidelines that ensure adequate retention of snags, coarse woody debris, and fine organic matter following both harvest and fuels treatments (EA pp. 209-225).

Recreation – No developed recreation sites are present. The major roads in the area provide access to recreation areas outside of the project. Impacts to recreationists would be short term visual and noise impacts from implementation. No cumulatively significant impacts were identified (EA pp. 243-246).

Cultural Resources – There will be no direct and indirect effects to known cultural resource sites as a result of activities described in Alternative 4 because all eligible and unevaluated sites would be avoided, and any discovered during implementation would also be avoided (EA p. 250-251).

8. *Degree action may affect sites listed in or eligible for listing in the National Register of Historic Places or may cause loss of destruction of significant scientific, cultural, or historical resources.* Eligible historic and cultural resources will be flagged and avoided during ground disturbing activities. A finding of "No Historic Properties Adversely Affected" was made for this project.

9. *Degree action may adversely affected endangered or threatened species or its habitat that has been determined to be critical under the ESA.* No threatened or endangered species or designated critical habitat exists within or adjacent to the project area. The Biological Evaluation considered the gray wolf, northern spotted owl and its critical habitat, and Oregon spotted frog and its critical habitat. As stated before, there would be no effects to these species or their critical habitat .

10. *This action does not threatened a violation of Federal, State, or local law or requirements imposed for the protection of the environment.* All applicable laws and regulations were considered in the planning of this project such as Clean Air Act, Clean Water Act, NFMA, and ESA.

Predecisional Administrative Review Process

This project is subject to pre-decisional administrative review pursuant to 36 CFR 218, Subpart B. Also called the "objection process" the predecisional administrative review process replaced the appeal process in March of 2013. The primary difference with the objection process is that a person may object to a project prior to the final decision, whereas under the appeal procedures, appeals were made after the decision. The full text of the rule can be found here: http://federal.eregulations.us/cfr/title/5/28/2013/title36/chapterII/part218.

An opportunity to object was provided between February 4, 2015 and March 23, 2015 with the distribution of a draft Decision Notice. The Forest received two objections to the proposed decision. Through resolution meetings, both objections were withdrawn. Therefore the Regional Forester has set them aside from review (36 CFR 218.10(a)(6). There are no other administrative review opportunities.

Contact Persons / Further Information

Project records are on file at the Bend/Ft. Rock Ranger District office. The EA and other project documents are available on the internet at http://www.fs.usda.gov/project/?project=32816.

For additional information concerning the specific activities authorized with this decision, you may contact:

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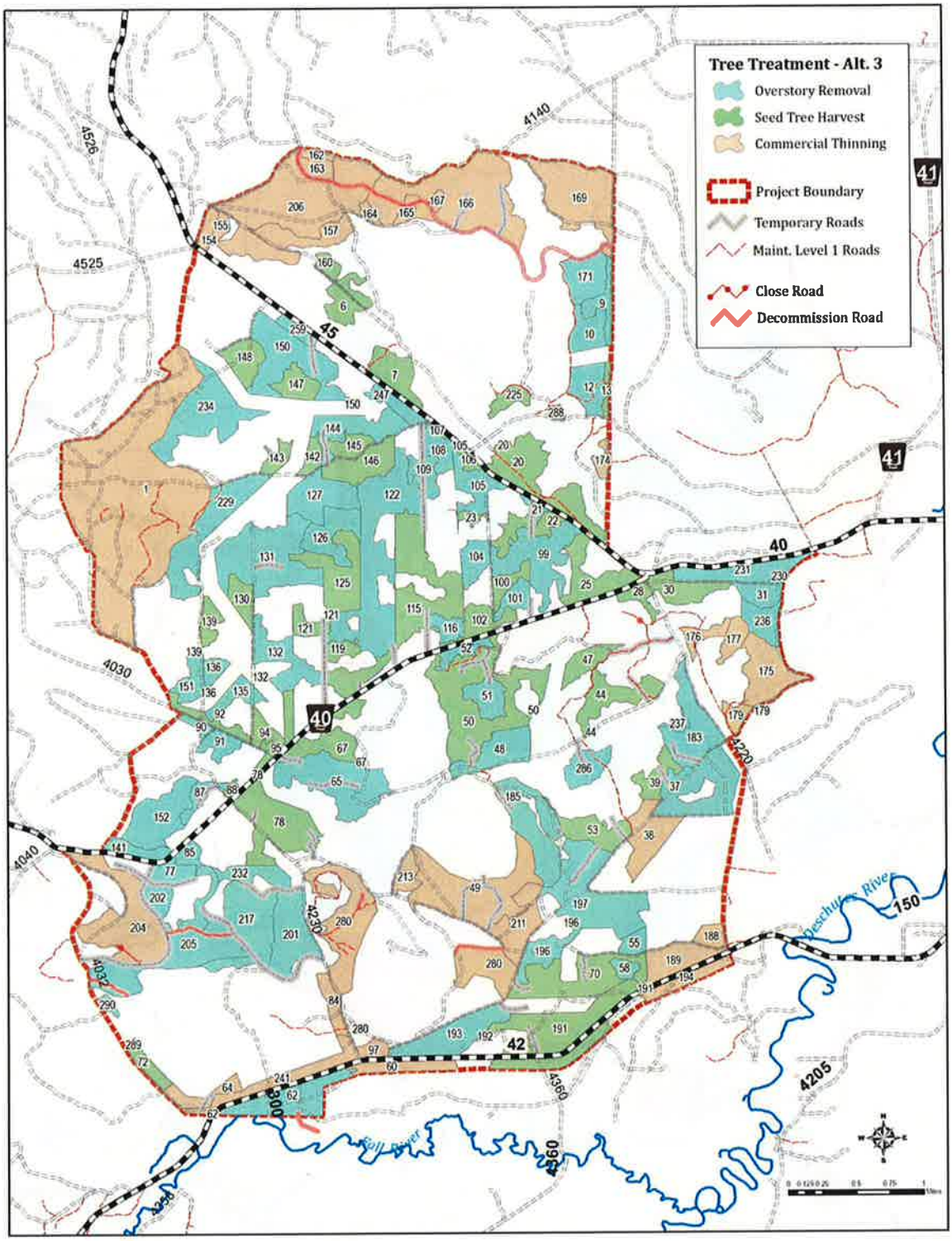
Responsible Official

The Supervisor of the Deschutes National Forest is the official responsible for deciding the type and extent of management activities in the Junction project area.

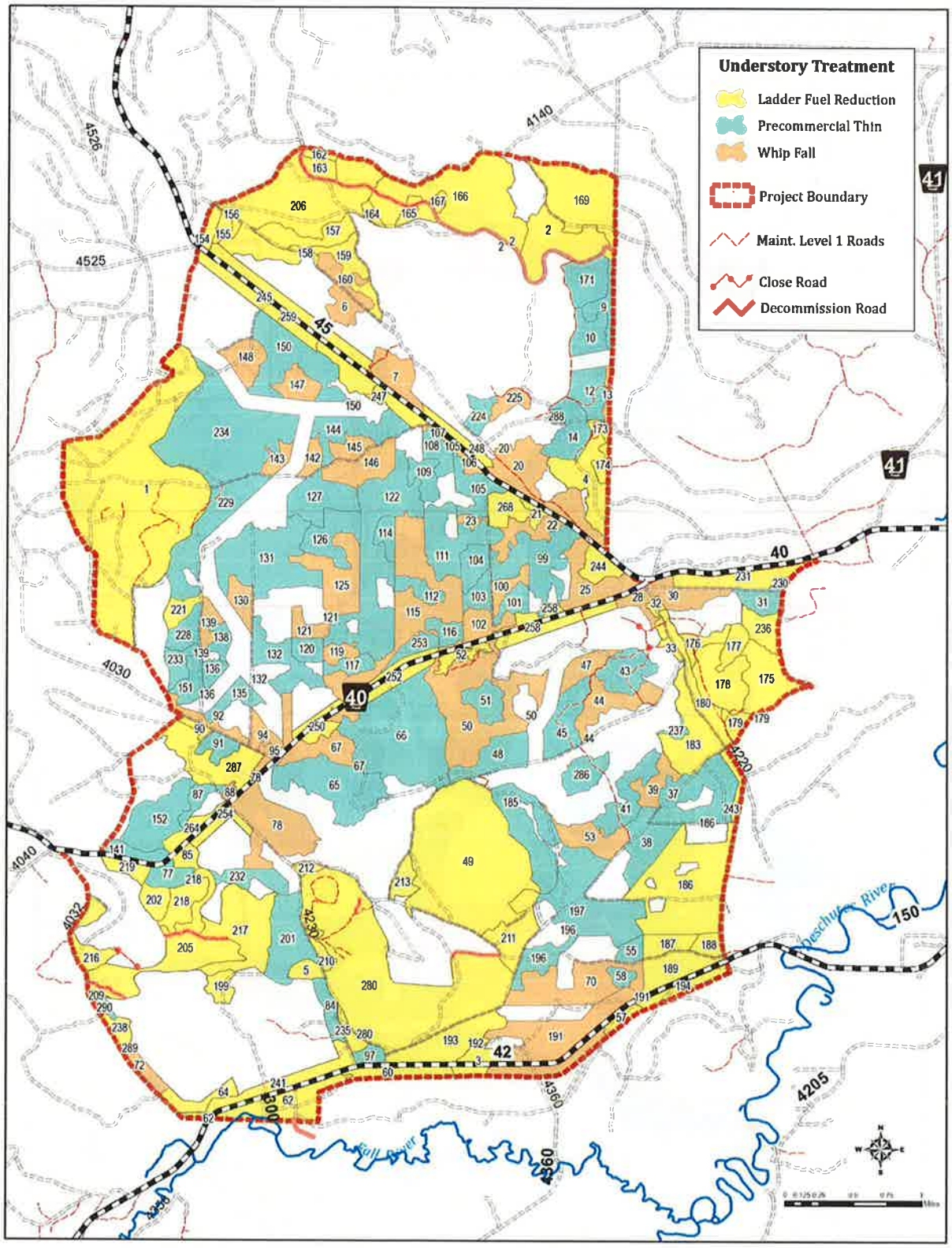
JOHN ALLEN
Deschutes National Forest Supervisor

6-30-15
Date

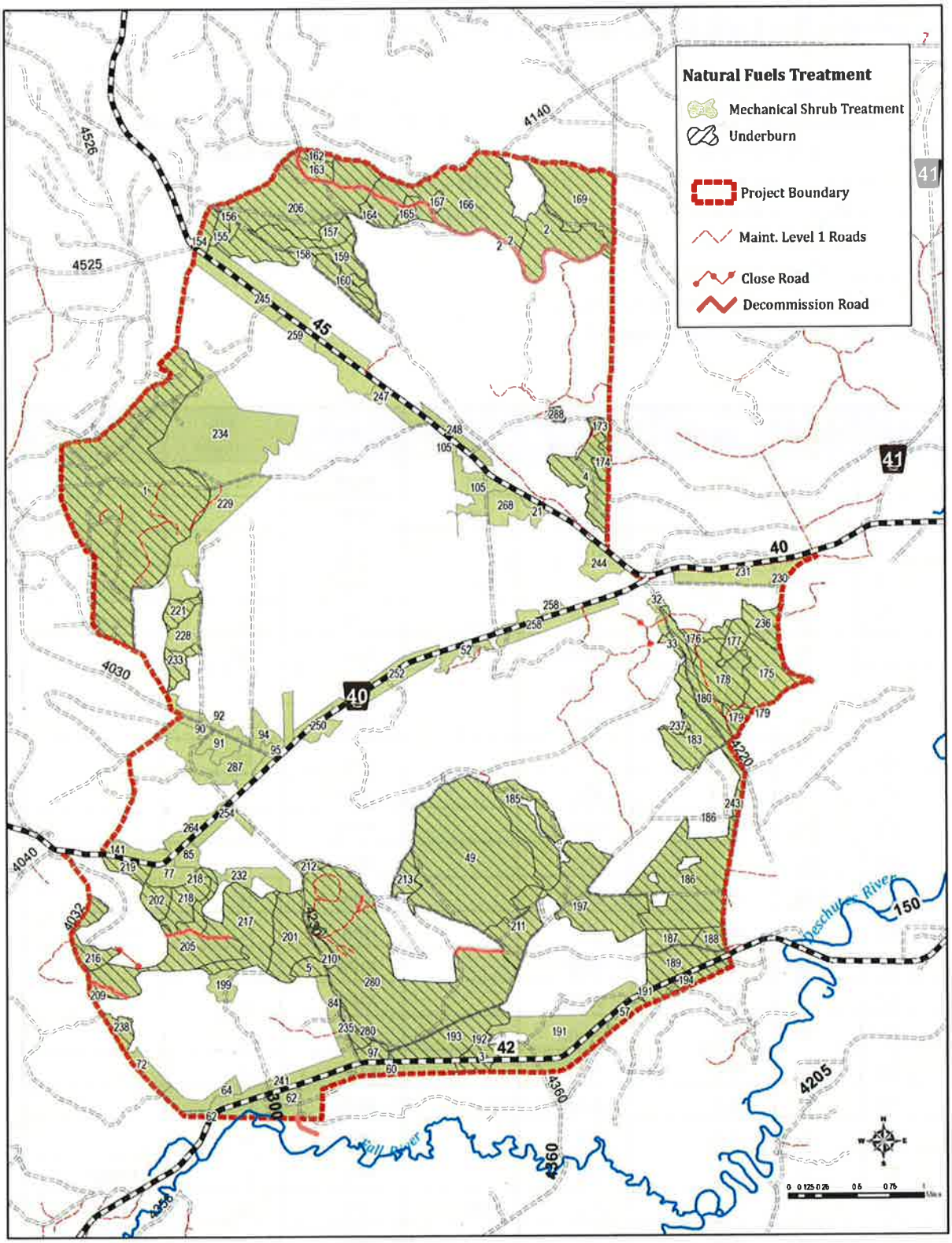
Appendix A – Maps of Selected Alternative



DN-1: Map of Overstory Tree Treatments



DN-2: Small Tree (understory) Treatments



DN-3: Fuel Treatments

Appendix B – Unit Prescriptions for Selected Alternative

HTH – Commercial Thin
HST – Shelterwood Creation
HOR – Overstory Removal
MPB – Machine Pile & Burn Piles
LFR – Ladder Fuel Reduction
WHIP – Falling of trees less than 4.5'
L – Low Biomass Utilization Potential
M – Moderate Biomass Utilization Potential
H – High Biomass Utilization Potential

L&S – Lop and Scatter Material
MOW– Mow (Mechanical Shrub Treatment)
HPB – Handpile & Burn Piles
UB – Underburn
SPC – Pre-Commercial Thin

Unit	Acre	Harvest	Under-story	Rx Fire	Slash	Bio-mass	Mow
1	760	HTH	LFR	UB	MPB	M	MOW
2	116		LFR	UB	HPB	L	MOW
3	38		LFR	UB	HPB	L	MOW
4	92		LFR	UB	HPB	L	MOW
5	20		LFR	UB	HPB	L	MOW
6	34	HST	WHIP		MPB	M	
7	62	HST	WHIP		MPB	M	
9	33	HOR	SPC		L&S	H	
10	45	HOR	SPC		L&S	M	
12	52	HOR	SPC		L&S	L	
13	11	HST	WHIP		MPB	H	
14	63		SPC		L&S	L	
20	140	HST	WHIP		MPB	H	
21	13	HOR	LFR		HPB	H	MOW
22	44	HST	WHIP		MPB	H	
23	9	HST	WHIP		MPB	H	
25	78	HST	WHIP		MPB	H	
28	23	HST	WHIP		MPB	H	
30	55	HST	WHIP		MPB	H	
31	32	HOR	SPC		HPB	M	
32	14		LFR		HPB	L	MOW
33	8		LFR	UB	HPB	M	MOW
37	127	HOR	SPC		MPB	L	
38	78	HTH	SPC		MPB	M	
39	38	HST	WHIP		MPB	H	
41	68		SPC		L&S	L	

Unit	Acre	Harvest	Under-story	Rx Fire	Slash	Bio-mass	Mow
43		HOR	SPC		L&S	L	
44	70	HST	WHIP		MPB	H	
45		HOR	SPC		L&S	L	
47	37	HST	WHIP		MPB	H	
48	70	HOR	SPC		L&S	L	
49.1	133	HTH	LFR	UB	MPB	M	MOW
49.2	350		LFR	UB	MPB	M	MOW
50	224	HST	WHIP		MPB	H	
51	42	HOR	SPC		L&S	L	
52	25	HOR	LFR		HPB	L	MOW
53	59	HST	WHIP		MPB	H	
55	20	HOR	SPC		L&S	M	
57	20		LFR		HPB	L	MOW
58	14	HOR	SPC		HPB	L	
60	48	HTH	LFR		MPB	M	MOW
62	103	HOR	LFR		MPB	H	MOW
64	34	HTH	LFR		HPB	M	MOW
65	150	HOR	SPC		L&S	L	
66	288		SPC		L&S	L	
67	54	HST	WHIP		MPB	H	
70	130	HST	WHIP		MPB	H	
72	22	HST	WHIP		MPB	H	MOW
77	33	HOR	SPC		L&S	L	MOW
78	136	HST	WHIP		MPB	H	
84	30	HTH	SPC		L&S	M	MOW
85	19	HOR	LFR		HPB	H	MOW
87	23	HOR	SPC		L&S	L	
88	7	HST	WHIP		MPB	H	
90	10	HOR	LFR		HPB	M	MOW
91	28	HOR	SPC		HPB	H	MOW
92	28	HST	WHIP		MPB	H	MOW
94	25	HST	WHIP		MPB	M	MOW
95	35	HST	WHIP		MPB	H	MOW
97	19	HTH	SPC	UB	MPB	H	MOW
99	121	HOR	SPC		L&S	L	
100	26	HST	WHIP		MPB	H	
101	26	HOR	SPC		L&S	M	

Unit	Acre	Harvest	Under-story	Rx Fire	Slash	Bio-mass	Mow
102	46	HST	WHIP		MPB	H	
103	28		SPC		L&S	M	
104	37	HOR	SPC		L&S	L	
105	55	HOR	SPC		L&S	M	MOW
106	12	HST	WHIP		MPB	H	
107	6	HST	WHIP		MPB	H	
108	34	HOR	SPC		L&S	L	
109	34	HOR	SPC		L&S	M	
111	102		SPC		L&S	M	
112	26		SPC		L&S	M	
114	24		SPC		L&S	M	
115	226	HST	WHIP		MPB	H	
116	25	HOR	SPC		L&S	M	
117	24		SPC		L&S	M	
119	20	HST	WHIP		MPB	H	
120	25		SPC		L&S	L	
121	26	HST	WHIP		MPB	H	
122	250	HOR	SPC		L&S	L	
125	97	HST	WHIP		MPB	H	
126	68	HOR	SPC		L&S	M	
127	83	HOR	SPC		L&S	L	
130	31	HST	WHIP		MPB	H	
131	188	HOR	SPC		L&S	L	
132	74	HOR	SPC		L&S	L	
135	31	HOR	SPC		L&S	L	
136	17	HOR	SPC		HPB	L	
138	20		SPC		L&S	L	
139	25	HST	WHIP		MPB	H	
141	32	HOR	SPC		HPB	H	MOW
142	20	HST	WHIP		MPB	H	
143	21	HST	WHIP		MPB	H	
144	80	HOR	SPC		L&S	M	
145	27	HST	WHIP		MPB	H	
146	71	HST	WHIP		MPB	H	
147	38	HST	WHIP		MPB	H	
148	47	HST	WHIP		MPB	H	
150	140	HOR	SPC		L&S	L	

Unit	Acre	Harvest	Under-story	Rx Fire	Slash	Bio-mass	Mow
151	35	HOR	SPC		L&S	M	
152	99	HOR	SPC		L&S	M	
154	19	HTH	LFR		MPB	M	MOW
155	13	HTH	LFR		HPB	M	MOW
156	7		LFR		HPB	L	MOW
157	58	HTH	LFR	UB	HPB	M	MOW
158	6		LFR		L&S	L	MOW
159	53		LFR	UB	HPB	M	MOW
160	34	HST	WHIP	UB	MPB	H	MOW
162	11	HTH	LFR	UB	MPB	H	MOW
163	22	HTH	LFR	UB	MPB	H	MOW
164	10	HTH	LFR	UB	HPB	L	MOW
165	14	HTH	LFR	UB	HPB	L	MOW
166	165	HTH	LFR	UB	HPB	M	MOW
167	7	HTH	LFR	UB	HPB	M	MOW
169	159	HTH	LFR	UB	HPB	M	MOW
171	61	HOR	SPC		L&S	L	
173	9		LFR	UB	HPB	L	MOW
174	14	HTH	LFR	UB	HPB	M	MOW
175	91	HTH	LFR	UB	HPB	M	MOW
176	24	HTH	LFR	UB	HPB	M	MOW
177	27	HTH	LFR	UB	MPB	H	MOW
178	92		LFR	UB	HPB	M	MOW
179	20	HTH	LFR	UB	HPB	M	MOW
180	52		LFR	UB	HPB	L	MOW
183	100	HOR	LFR	UB	HPB	M	MOW
185	120	HOR	SPC	UB	L&S	L	MOW
186	253		LFR	UB	HPB	L	MOW
187	34		LFR	UB	MPB	M	MOW
188	22	HTH	LFR	UB	MPB	M	MOW
189	71	HTH	LFR	UB	HPB	L	MOW
191	205	HST	WHIP		MPB	H	MOW
192	4	HTH	LFR	UB	MPB	M	MOW
193	101	HOR	LFR	UB	MPB	M	MOW
194	43	HTH	LFR	UB	MPB	L	MOW
196	44	HOR	SPC		L&S	L	
197	181	HOR	SPC	UB	MPB	L	MOW

Unit	Acre	Harvest	Under-story	Rx Fire	Slash	Bio-mass	Mow
199	25		LFR		MPB	M	MOW
201	101	HOR	SPC	UB	HPB	L	MOW
202	28	HOR	LFR	UB	HPB	M	MOW
205	163	HOR	LFR	UB	MPB	M	MOW
206	313	HTH	LFR	UB	HPB	L	MOW
209	5		LFR	UB	HPB	L	MOW
210	18		LFR	UB	HPB	L	MOW
211	74	HTH	LFR	UB	HPB	L	MOW
212	10		LFR	UB	HPB	L	MOW
213	27	HTH	LFR	UB	MPB	H	MOW
216	46		LFR	UB	L&S	L	MOW
217	141	HOR	LFR	UB	HPB	M	MOW
218	48		LFR	UB	HPB	L	MOW
219	27		LFR	UB	HPB	L	MOW
221	25		LFR	UB	MPB	L	MOW
224	26		SPC		HPB	L	
225	23	HST	WHIP		MPB	H	
228	35		SPC		MPB	M	MOW
229	124	HOR	SPC		MPB	M	MOW
230	6	HOR	SPC		MPB	H	MOW
231	76	HOR	LFR		HPB	H	MOW
232	40	HOR	SPC		MPB	M	MOW
233	29		SPC	UB	MPB	L	MOW
234	144		SPC		MPB	M	MOW
235	18		LFR	UB	HPB	L	MOW
236	41	HOR	LFR	UB	MPB	M	MOW
237	8	HOR	SPC	UB	MPB	M	MOW
238	22		LFR	UB	HPB	L	MOW
241	79	HTH	LFR		HPB	M	MOW
243	19		LFR	UB	HPB	L	MOW
244	35		LFR		HPB	L	MOW
245	179		LFR		HPB	L	MOW
247	31	HOR	LFR		MPB	M	MOW
248	33		LFR		HPB	L	MOW
250	34		LFR		HPB	L	MOW
252	58		LFR		HPB	L	MOW
253	25		SPC		L&S	L	

Unit	Acre	Harvest	Under-story	Rx Fire	Slash	Bio-mass	Mow
254	27		LFR		HPB	L	MOW
258	76		LFR		HPB	L	MOW
259	20	HOR	LFR		HPB	M	MOW
264	30		LFR		HPB	L	MOW
268	41		LFR		HPB	L	MOW
280.1	236	HTH	LFR	UB	MPB	M	MOW
280.2	350		LFR	UB	MPB	M	MOW
286	44	HOR	SPC		L&S	L	
287	111		LFR		HPB	L	MOW
288	7	HTH	SPC	UB	HPB	M	MOW
289	2	HOR	SPC		L&S	L	
290	8	HOR	SPC		L&S	L	
291	648			UB	MPB	M	MOW

Appendix C - Resource Protection Measures for Selected Alternative

Resource Protect Measure	Units
Wildlife Species and Habitat	
Provide a 300 foot buffer around wildlife guzzlers	10, 142, 229, 219
Retain white fir ≥ 18" dbh in Unit 166	166
Retain ponderosa pine trees regardless of size that exhibit old tree characteristics (from Van Pelt) except where they are either 1) ladder fuels which pose a threat to larger diam. trees or 2) individual DMT-infected trees that contribute to infection potential of desired understory trees. Ponderosa old tree characteristics include all of the following 1) orange bark with plates generally more than three times wider than the darker fissures that separate them, 2) rounded crown, and 3) below the main crown, few if any dead branches present and knots not noticeable.	All
Retain all ponderosa pine snags	All
To reduce disturbance within northern spotted owl habitat adjacent to project area: Do not conduct project activities between March 1 and Sept. 30	169
To reduce disturbance to riparian-dependent species during breeding season, such as great blue herons: Do not conduct project activities between March 1 and August 31 unless cleared through monitoring There are no known active nests along the portion of Fall River that is proposed for treatment, however prior to implementation; the wildlife biologist shall monitor the proposed treatment area for any potential nests for that year.	62
Great Gray Owl	
If a nest is discovered protect every known active nest from March 1 to June 30 from disturbing activities within a ¼ mile (WL-31, 32 and 33, LRMP pg. 4-54).	None known
Townsends Big Eared Bat	
If a bat roost is discovered during implementation management activities shall cease and a Bend-Fort Rock wildlife biologist would be notified. If a roost is discovered during the course of prescribed burning, quit lighting within a 250 foot radius to minimize smoke inhalation to bats.	None known
Old Growth Management Area	
Where available, ponderosa pine down wood shall be maintained at 3 to 6 pieces per acre, with 12 inches diameter at the small end, at least 6 feet long, and the total pieces should be 20 to 40 feet in length.	
Leave the vegetation on the upslope and down slope near the gate or at the base of the 630 road to discourage illegal ATV use going around the gate.	
Goshawk	
If a nest is discovered: (1) protect every known active and historical nest-site from March 1st –August 31st (previous 5 years) from disturbance such as logging, ladder fuels reduction activities and human disturbance; (2) protect 30 acres of the most suitable nesting habitat surrounding all active and historical nest tree(s) and defer from harvest; and	None known

Resource Protect Measure	Units
(3) a 400 acre "post-fledgling" (PFA) would be established around every known active nest site. Review project activities to ensure that within the PFA the project would retain the LOS stands and enhance younger aged stands towards LOS conditions, as possible. There would also be no activity conducted within newly discovered goshawk nest stands or post-fledgling areas during the season restriction period.	
Scenery	
To preserve scenic views (MA9) along FS roads 40 and 45 and to eliminate recreational and visual conflicts the following measures should be followed: • Locate landings, skid trails, slash piles or staging areas using existing openings and skid trails and minimize bole damage to remaining vegetation along scenic travel corridors and access to developed recreation sites. • Design underburning activities to minimize short-term visual effects by maintaining crown scorch at less than 30 percent and minimize bole scorch up to 10 feet in height. • Minimize amount of leave-tree markings and black out tagging units with vertical orange paint on both sides of trees along scenic travel corridors and access to developed recreation sites after sale closes. • Flush cut stumps (6 inches or less with angle cut away from line of sight in immediate Foreground areas (0-300 feet). • Remove all boundary flagging as part of the post treatment activities within two years.	4, 6, 7, 20, 21, 22, 25, 28, 30, 31, 50, 52, 65, 67, 77, 78, 85, 87, 88, 91, 92, 94, 95, 97, 99, 102, 105, 106, 107, 108, 115, 116, 141, 154, 156, 188, 189, 191, 193, 194, 219, 230, 231, 241, 244, 245, 247, 248, 250, 252, 254, 258, 259, 264, 268, 287
Soils	
Sensitive Soil: Frost Pockets or high degree of existing detrimental soil disturbance	
Overstory Treatments • Restrict operations to winter only if feasible. Winter logging would only be executed when conditions are cold enough that the ground is consistently frozen throughout the day. Place new landings in existing roadways Understory Treatments • Avoid post-harvest mechanical operations; conduct by hand as is practicable. For young stand management , limit equipment travel and utilize machines with long boom reach, designate and maximize distance between primary travel routes Fuels Treatments • Prohibit mechanical operations off of existing primary skid trails • Prescribe hand only treatments where feasible • Maintain effective ground cover and organics, retain >50% of litter/duff depth if it exists • Retain existing large CWD or as much as is acceptable	Units: 1, 3-5, 13, 14, 20, 21, 23, 32, 33, 37, 38, 41, 43, 45, 48, 49, 52, 55, 57, 62, 66, 70, 84, 90, 97, 109, 116, 131, 135, 141, 146, 148, 152, 156, 158, 166, 167, 173, 174, 179, 185, 186, 187, 189, 191, 193, 194, 196, 197, 199, 201, 205, 206, 211, 212, 216, 217, 219, 221, 229, 233, 243, 245, 250, 252, 253, 258, 280, 287
Sensitive Soil: steep slopes ≥30% and >200 feet in length	
Overstory Treatments • Avoid operating late in the dry season • Minimize side slope movements by heavy equipment • Require a parallel skid trail network Understory Treatments	Units: 2, 14, 48, 49, 166, 185, 194, 216, 219, 280, 288

Resource Protect Measure	Units
• Prohibit mechanical operations off of existing primary skid trails • Supplement with hand-only treatments where practicable Fuels Treatments • Prohibit mechanical operations off of existing primary skid trails • Supplement with hand-only treatments where practicable • Maintain effective ground cover and organics, retain >50% litter/duff layer wherever it exists • Minimize upslope pre-heating when underburning to maintain low intensity burning, target burning in cool, moist conditions	
Sensitive soils – shallow soils on forested lavas	
Overstory Treatments • Too shallow to subsoil, thus avoid new landings and temporary roads as is feasible • Locate new landings in existing roadways • Restrict operations to winter only if feasible Understory Treatments • Prohibit mechanical operations off of existing primary skid trails • Supplement with hand-only treatments where practicable Fuels Treatments • Prohibit mechanical operations off of existing primary skid trails • Supplement with hand-only treatments where practicable • Maintain effective ground cover and organics, retain >50% of litter/duff depth wherever it exists, retain existing large CWD or as much as is feasible	Units: 1, 5, 49, 58, 70, 84, 148, 199, 201, 202, 205, 209, 210, 216, 217, 218, 232, 234, 280
Best Management Practices Many Best Management Practices (BMPs) are employed during operations to protect resources. They generally follow those defined in the guide, National Best Management Practices for Water Quality Management on National Forest System Lands (USDA 2012). Local variations to these have evolved over the last several decades to adapt to changing practices, methods, and markets. Listed below are BMPs most commonly practiced to minimize detrimental soil impacts that are applicable to the activities being proposed in the Junction project.	
Convey to all equipment operators the need to limit ground disturbance as much as is feasible. Avoid traveling over untrammeled ground unless necessary.	BMPS apply in all units.
Avoid repetitive passes by heavy equipment except over designated primary routes (i.e., roads or skid trails). Restrict travel of heavy equipment off designated primary routes to two passes or fewer.	
Limit as is feasible heavy equipment, particularly tracked machinery from pivoting or unnecessary side-hill travel on slopes >15%. Travel should mostly be down the fall-line and perpendicular to the contour of the slope.	
Minimize travel of heavy equipment on slopes >15% late in the season when soils are extremely dry and susceptible to excessive soil displacement.	
Suspend operations during wet periods when soil moisture is high and heavy equipment tracks sink deep below the soil surface, particularly during spring thaw or	

Resource Protect Measure	Units
after heavy rains.	
Heavy equipment should avoid using the bottom of dry swales or draws as primary travel routes. The location of temporary roads would be approved by the Forest Service and would be prohibited from being routed down swales or dry natural drainage ways.	
Operations on sensitive soils or where the extent of existing detrimental soil impacts is high should be conducted over frozen ground as is feasible, or when the snowpack is at a depth sufficient to protect mineral soil. Travel of heavy equipment off designated primary routes on sensitive soils should be avoided as much as is feasible. All attempts should be made to avoid new landings and skid trails in previously managed stands on sensitive soils.	
Re-use existing log landings and primary skid trails whenever feasible. Locations of new landings, primary skid trails, and temporary roads must be approved by the Forest Service prior to use.	
For whole-tree harvest systems, primary skid trails would be spaced at least 100 to 150 feet apart, except at convergence zones around landings or where terrain limitations dictate otherwise.	
For cut-to-length harvest systems, spacing of primary forwarder trails should be at least 65 feet, except where terrain limitations dictate otherwise. To the extent possible, slash mats should be deposited over primary forwarder trails during cutting operations.	
Restrict grapple skidders to designated areas only (i.e., roads, landings, primary skid trails) and on slopes ≤30%.	
Install waterbars on all segments of primary designated travel routes and temporary roads on slopes ≥10%. Space of waterbars shall depend on the steepness of the slope and its length.	
Conduct preventive road maintenance regularly to avoid deterioration of the prism and prevent accelerated erosion	
Avoid locating temporary roads on sensitive soils.	
Subsoil or decompact all temporary roads to a depth of at least 24 inches after use. Outslope any segments requiring a cut into the hillslope.	
Piling of post-activity fuels should be limited as is feasible to existing primary travel routes and skid trails. Restrict travel of heavy equipment off designated primary routes to two passes or fewer. On sensitive soils, prohibit machine travel off primary skid trails.	
Machine constructed slash piles should be located on primary designated travel routes as much as is feasible.	
Except where there are heavy concentrations of residual slash, retain as much residual CWD as possible. In previously harvested areas, refrain from incorporating existing CWD in slash piles as much as is feasible.	
Minimize the amount of large diameter CWD that is incorporated into slash piles, particularly those that are relatively sound (decay classes 1 through 3).	
Underburning activities should be conducted so that at least 50% of the duff and litter layer remains intact. Sites where the organic layers are thin such as frost pockets or heavily disturbed sites where effective ground cover is <50%, conduct underburning in	

Resource Protect Measure	Units
a manner that retains as much of the duff and litter layer as possible.	
Minimize the consumption of sound, large diameter CWD during prescribed underburns. Where CWD is close to or in contact with the ground attempt to minimize the duration and intensity that it burns to lessen effects to soil resources.	
Restore as much machine-constructed fire lines as is feasible by redistributing displaced topsoil and unburned woody debris over the disturbed surface.	
Mitigation necessary to restore soil quality Mitigation would consist of subsoiling, obliterating temporary roads, and possible soil amendments in frost pockets. Subsoiling would be used as a means for reducing the extent of detrimental soil conditions by ameliorating heavy compaction on landings and converging segments of primary skid trails. In some cases particularly in frost pockets mulch, wood chips, or slash mats could be added as a protective ground cover and soil amendment where feasible. All of the temporary roads would be reclaimed as well. This would entail de-compacting the road surface, installing waterbars as needed, and hiding their entry or barricading it. Those in frost pockets should also be covered with a layer of mulch or wood chips across their surface. Subsoiling units are listed in Appendix B.	
Fisheries and Water	
Water quality and fisheries habitat would be protected by the use of the following Best Management Practices (USDA, 2012) and other project design features:	
All log landings shall be located outside of RHCAs to prevent potential sedimentation (Best Management Practice (BMP) Veg-4 Ground-based Skidding and Yarding Operations, and INFISH S&G RF-2(b).	
Minimize skid trails within RHCAs to prevent potential sedimentation (BMP Veg-4 Ground-based Skidding and Yarding Operations).	
To prevent pollutants from entering water, all servicing and refueling of equipment shall occur outside of RHCAs (BMP Veg-3 – Aquatic Management Zone, and INFISH S&G RA-4.	
The following project design features are specific to Unit 62, the only unit in the project area within an RHCA, based on BMP Veg-3 – Aquatic Management Zone (approximately 12 acres within the RHCA of Fall River and the hatchery canal would receive mechanical and hand treatments within this unit): • Management activities to only occur on north side of Fall River. • No thinning or management activities to occur in riparian vegetation. • Heavy equipment is restricted to top of slope break, or 100 feet from stream where no defined slope break exists, whichever is greatest. Adjacent to hatchery canal, heavy equipment restricted to 50 feet from canal. • Handpiling is allowed 50 feet or greater from Fall River and canal. Placement of handpiles would focus on upslope areas and avoid areas of washes and depressions that may facilitate water run-off toward Fall River. Burning would occur under conditions that do not allow excessive creeping from the pile, generally 10 feet or less. Handpiles should not exceed 50 square feet. • Retain all snags in RHCA of Fall River within 100 feet of riparian vegetation. For hazard trees that must be felled within 100 feet of stream, fall toward stream and leave on-site. • The RHCA (300 feet slope distance from Fall River and the hatchery	62

Resource Protect Measure	Units
canal) is the Aquatic Management Zone for the Junction Project. The RHCA is divided into zones for the purpose of applying Best Management Practices. **North side of Fall River and canal RHCA (south facing) Thinning Requirements** **Zone 1** (high water line of stream edge to 12 feet): No management activities allowed. This zone includes a narrow band of riparian vegetation typically 3-4 feet wide along the streambank, composed primarily of sedges and grasses. Lodgepole pine are also located within this zone, with root masses being incorporated into the streambank. Vegetation quickly transitions into lodgepole pine and bitterbrush away from the streambank. **Zone 2** (12 feet to 30 feet): Hand thinning of trees < 4" dbh allowed. Machinery is excluded. Vegetation is lodgepole pine overstory and understory, with bitterbrush and grasses. **Zone 3** (30 feet to 50 feet): Hand thinning of trees < 60 feet height. Machinery is excluded. Vegetation is similar to that described above for Zone 2. **Zone 4** (50 feet to outer limit of RHCA, which is 300 feet slope distance from stream and canal): Thinning of trees >60 feet height but heavy machinery only allowed 100 feet or greater from Fall River (50 feet from canal). Thinning prescription can be the same as adjacent unit located outside the RHCA. Vegetation is similar to that described above for Zone 2.	
Botanical Resources	
To protect green-tinged paintbrush populations *Overstory Treatments* (Seed tree harvest, commercial thinning, and overstory removal): • In implementation units with green-tinged paintbrush populations, avoid ground disturbance and damage to these populations by employing winter logging. Winter logging would only be executed when conditions are cold enough that the ground is consistently frozen throughout the day. Operations need to be cleared by the Timber Sale Administrator. • If conditions do not allow for proper winter logging in the units specified above or if there are road hauling constraints upon which winter logging is not appropriate then: a) The District Botanist would be notified promptly to permit ample time for site preparations which may include hiring seasonal help, map making, and locating and flagging populations on the ground. b) Green-tinged paintbrush populations would be flagged in such a manner that they would be clearly visible to equipment operators. c) Flagging of sites would be done during summer months when plants are visible. d) Heavy machinery would not enter the flagged areas; however, if the machinery is operating with a boom, harvesters may reach into the	7, 20, 21, 22, 28, 30, 31, 43, 44, 45, 48, 50, 51, 52, 58, 65, 67, 70, 77, 78, 87, 88, 95, 99, 101, 102, 105, 115, 116, 122, 125, 131, 135, 142, 144, 146, 147, 150, 151, 152, 175, 176, 183, 185, 191, 202, 231, 234, 236, 247, 286.

Resource Protect Measure	Units
flagged area to retrieve materials. e) Do not lay slash in flagged areas. • Before temporary road construction occurs, consult with the District Botanist to prevent construction on known green-tinged paintbrush populations. • Log landings would not be placed on known populations. Timber Sale Administrators would consult with the District Botanist about landing placement. • During unit layout, mark unit boundaries to ensure that any adjacent green-tinged paintbrush sites remain outside of the unit. If needed, the botanist(s) would be available to assist in unit layout. *Understory Treatments* (Ten percent retention, whip, precommercial thinning, ladder fuel reductions, slash treatments, mowing, and prescribed fire): • Green-tinged paintbrush populations in understory and slash treatment units (units referred to above) would be flagged during the summer months when plants are visible. All understory project work occurring in these units must be cleared with the District Botanist prior to implementation. • Heavy machinery, including mowers, must avoid traveling through a flagged boundary. However, if the machinery is operating with a boom than it may reach into the flagged area to retrieve material. • Remove all slash and understory materials from flagged sites. Do not pile materials within these sites. • Understory treatment operations that do not require heavy equipment may treat within flagged sites. All trees felled within the area must be removed and no piles would be built in flagged areas. • In order to maintain healthy, vigorous green-tinged paintbrush populations, keep fire outside of flagged areas. Burn Bosses must consult with the District Botanist prior to prescribed fire treatments in the following units: 175, 176, 183, 185, 202, and 236. If possible, have a District botany representative present during fire treatments to assist with the protection of these populations.	
Noxious Weeds Prevention	
Clean all equipment before entering National Forest System lands. Remove mud, dirt, and plant parts from equipment before moving it into the project units and before proceeding to the next project.	
All fill material to be used would be inspected for weeds by the District Botanist prior to use.	
If a weed site is located on a landing or skid trail, an alternative uninfested route would be used, unless a workable solution is found between the noxious weed coordinator and sale administrator.	
Weed sites in and adjacent to the Junction planning area along Forest Service roads 40 and 42 would be treated prior to project activities (as authorized in the Forest-wide Weed EIS.	
Any water sources proposed for this project would be evaluated for weeds by the District Botanist and if weeds are found, another source may be recommended, or if	

Resource Protect Measure	Units
possible, the site would be treated prior to use.	
Noxious Weed Prevention Practices Guidelines (USDA Forest Service Guide to Noxious Weed Prevention Practices)	
Weed prevention specific to timber harvest operations	
Where there is a potential for being spread by contractors' equipment, treat prior to entry.	
Train contract administrators or make sure that they are aware of the noxious weed problem and what those weeds look like. Select lower risk sites for landings and skid trails.	
Discuss noxious weed problems with operators during pre-work meetings and the required prevention practices.	
Use standard timber sale contract provisions to ensure appropriate equipment cleaning.	
To minimize soil disturbance logging should take place during a snow period. For the protection of sensitive species logging must be completed when the ground is frozen, if conditions are not suitable other measures would be considered.	
Existing landings and skid trails within the Junction planning area would be reused. If weeds are found then the site would not be used.	
Weed prevention specific to Road Management	
For road maintenance and decommissioning related to timber sale contracts, use standard timber sale contract provisions to ensure appropriate equipment cleaning.	
Evaluate water sites that would be used for dust abatement for noxious weeds. Avoid acquiring water for dust abatement where access is through weed-infested sites. If an alternative site is not feasible and if it is practical and possible, treat the area prior to use.	
Temporary roads that would be subsoiled need to be inventoried for weeds after subsoiling takes place and as budget permits. If weeds are found then treatment would be necessary.	
Recreation	
Treatment activities along the unnumbered access road to Fall River Hatchery would be conducted during fall and winter months to avoid public access issues.	
Notify Oregon Department of Fish and Wildlife prior to treatment activities around there helispot to allow helicopter flights to be scheduled outside of the schedule for project work.	
Special use administrator would need to provide alternative routes for the OHV outfitter so they can continue their tours.	
When possible obliterate unauthorized motorized routes.	
Specific project design related to units with trails • When possible, retain trees that hold signs and mark winter trails. Replace any signs that may be damaged or removed during logging and/or burning operations. • Design treatments units to maintain access to large trail systems that are located beyond treatment units. For example, if a large trail system is	154, 162, 163, 164, 165, 166, 167, 169, and 206

Resource Protect Measure	Units
accessed by two primary trail access points, consider unit boundaries and implementation schedules that would maintain access to at least one trail access point. • Snow berms created by winter logging activities, which conflict with winter recreation routes (snowmobile routes) or create a hazard for recreationists, would be leveled immediately where standards are recognized in Road User Permit stipulations. • Post signs and educational materials where project activities occur near trailheads, campgrounds, snow parks, or other developed recreation sites to inform users of project activities. If possible, use before and after photos to help the public understand what treatment results would look like.	
Heritage Resources	
Known heritage sites would be avoided. Should any new sites be discovered during project activities, work shall be halted and the Bend-Fort Rock archaeologist would be notified immediately. Appropriate protection measures would be implemented.	
Danger trees identified within known sites would be directionally felled towards the associated access route.	