Legacy Pine Stand and Wildlife Habitat Improvement Project

Klickitat County, Washington
Township 3N, Range 11E, Section 2 NW ¼, Willamette Meridian

Decision Memo and Consistency Determination (CD-22-05-S)

Background

The Legacy Pine Stand and Wildlife Habitat Improvement Project is located on the Columbia River Gorge National Scenic Area. The approximately 50-acre project area is located approximately 5 miles northeast of White Salmon, WA in Klickitat County. The project area is generally bounded by Bonneville Power Administration (BPA) transmission lines to the north, West Fork Major Creek to the west, and a property owned by Klickitat Holdings, LLC property to the east.

Existing Condition

Existing stand conditions are overstocked with a high density of decadent (on the verge of dying) trees. Historically, disturbances like low intensity fire would have shaped this forest type, burning only on the forest floor, reducing fuels and killing small trees. Fire suppression over the past several decades has shifted the forest structure, density, and species composition. While stands are composed of fire adapted species, the current conditions are causing a lack of resistance to fire and insects and disease. Overstocking is also affecting resiliency by causing higher mortality due to the competition for resources such as water and sunlight.

The project area is divided into three areas, classified by age and dominant tree species. The oldest area is comprised of 30 to 50 dominant and codominant ponderosa pine and a few scattered Douglas-fir per acre, with competing young Douglas-fir and grand fir growing underneath. Tree diameters in this cohort range from approximately 35 to 60 inches or greater diameter at breast height (dbh). The second stand type is dominated by approximately 70 to 90 suppressed Douglas-fir and grand fir per acre, with individual and clumps of ponderosa pine dispersed through the stand. Tree diameters in this younger stand area range from 14 to 26 inches dbh. Oregon white oak is also present in this area; however, many either died or are succumbing to competition below the nearly closed canopy. The third area is made up of approximately 40 to 60 suppressed Doulgas-fir and grand fir (2-to-10-inch dbh) per acre. The stand is overstocked and experiencing density-related mortality. Canopy cover ranges from 70 percent to 90 percent or greater.

Without intervention, these forested areas would continue to become increasingly dense, resulting in a continued trend of low structural diversity and potential loss of old growth trees. Wildlife species that have evolved within this forest type may also decline since they require a more open stand structure for foraging.

Desired Condition

The desired stand conditions mimic historic density and species composition. The desired stand includes fire and drought resistant ponderosa pine and Oregon white oak at densities capable of sustaining individual tree vigor. The desired stands consist of an overstory of ponderosa pine widely spaced 30 to 40 feet apart with a mid-canopy of 10 to 30 Oregon white oak trees per acre. As a result of the project, the overall canopy will range from 50 to 65 percent, resulting in an average of 60 percent canopy cover. Approximately, five conifer snags of 10 to 20 inches dbh and three conifer snags greater than 20 inches dbh per acre will occur, and three pieces of down wood per acre each 30 feet long and greater than 20 inches dbh will occur.

Purpose and Need

The purpose of this project is to protect an ecologically significant remnant stand of old growth ponderosa pine that represents the ponderosa pine stands that were once common in the area and to improve wildlife habitat within the stand.

There is a need to improve forest health and increase the landscape resilience so disturbance from wildfire and insect and disease do not lead to uncharacteristic loss of forest habitat. There is a need to remove co-dominant, intermediate, and suppressed Douglas-fir and grand fir to alter species composition in favor of ponderosa pine overstory to move these ponderosa pine stands toward historic range of variability. There is a need to improve wildlife habitat and forage opportunities. More than 200 wildlife species, including northern spotted owl, western gray squirrel, deer, and elk, are associated with mixed conifer-oak stands, with many requiring mature and complex stand features necessary for food, reproduction, and survival. As stand diversity and habitat condition improves, an increase in wildlife species richness and abundance will help sustain ecosystem processes and forest health.

Decision

After interdisciplinary team review and public comment, I have decided to authorize the treatment of 50 acres to protect old growth trees and old growth conditions of a ponderosa pine stand and to improve stand and wildlife habitat.

My decision includes the following actions:

Phase 1 – Thinning, Tree Removal, Fuel Manipulation, Snag Creation, Pile Burning

Entire Project Area:

- Fell all Douglas-fir and grand fir 10 inches dbh or less.
- Fell live Douglas-fir and grand fir less than 20 inches dbh that are within 30 feet of a live Oregon white oak greater than 10 inches dbh. Measure thirty feet using the slope distance between the closest faces of the tree boles at breast height.
    - Approximately 30 to 50 live Oregon white oak are the subject of this radial thinning.
- Disperse (lop and scatter) treatment slash where possible, hand pile concentrations of slash.
- Pile burn slash piles within three years. Leave no more than one pile per acre unburned to provide wildlife habitat.
- Surface fuels loading after pile burning should meet the following parameters:
    - Five tons per acre or less of slash 1-to-3-inches diameter.

  - Five tons per acre or less of slash 4-to-9-inches diameter.
  - Large logs (greater than 20-inches in diameter at large end and greater than 30-foot length) equal to 3 to 6 pieces per acre.
- Tree felling and pile burning may occur over the duration of several years to keep accumulated slash from exceeding desired surface fuel loads. Trees may also be girdled rather than felled to manage slash.

Upper Ponderosa Pine Area (NW near BPA powerline road):

- Fell live Douglas-fir and grand fir less than 26 inches dbh that are within 50 feet of an old growth ponderosa pine (36 inches dbh or greater) or where the crown is within 10 feet of touching an old growth ponderosa pine. Measure fifty feet using the slope distance between the closest faces of the tree boles at breast height.
  - Approximately 10 to 20 old growth ponderosa pine are the subject of this radial thinning.
- Convert to standing snags, live Douglas-fir and grand fir (26 to 39 inches dbh) that are within 50 feet of legacy ponderosa pines (36 inches dbh or greater) or where the crown is within 10 feet of touching an old growth ponderosa pine. Conversion to snags may be accomplished by girdling the tree at breast height or with climbing when practicable.
- Felled trees in excess of the large down wood target (see surface fuels loading above) may be removed from the site via skidder or similar equipment.
- Disperse or pile treatment slash away from old growth ponderosa pine crowns. Where practical, leave larger (1,000-hour and greater) fuels a sufficient distance from remaining tree boles to prevent damage during prescribed burning or wildfire. Minimize pile burning within treatment circles and locate necessary piles as far from remnants as possible.
- For log boles greater than 10 inches at the large end, move material 5 feet away from the drip line where practical.

Lower Ponderosa Pine Area (South near gas line):

- Fell live Douglas-fir and grand fir less than 26 inches dbh that are within 40 feet of an old growth ponderosa pine (36 inches dbh or greater) or where the crown is within 10 feet of touching an old growth ponderosa pine. Measure forty feet using the slope distance between the closest faces of the tree boles at breast height.
- Convert to standing snags, live Douglas-fir and grand fir (26 to 39 inches dbh) that are within 40 feet of an old growth ponderosa pine (36 inches dbh or greater) or where the crown is within 10 feet of touching an old growth ponderosa pine.
- Disperse or pile treatment slash out from underneath the legacy ponderosa pines crown. Leave larger (1,000-hour and greater) fuels a sufficient distance from remnant boles to prevent cambium damage during prescribed burning or wildfire. Minimize slash pile burning within treatment circles and locate hand piles as far from remnants as possible.
- For log boles greater than 10 inches at the large end, move material 5 feet away from the drip line where practical.

Phase 2 – Prescribed Underburn

- Conduct a low to moderate intensity underburn throughout the entire project area approximately 5 years following pile burning.
- Prior to underburning, prepare control lines and mitigate control line hazard trees.
- Prior to underburning, rearrange surface fuels surrounding the boles of old growth pine. Within three feet of the bole, remove and disperse the upper half of the duff layer, and disperse any other accumulated surface slash.

Phase 3 – Prescribed Underburn

- Conduct a low to moderate intensity underburn throughout the entire project area approximately 10 years following the first underburn.

Phase 4 – Prescribed Underburn

- Conduct a low to moderate intensity underburn throughout the entire project area approximately 10 years following the second underburn.

The project area will primarily be accessed from the north by travelling along Dorsey Road, a county road, through the BPA corridor to Forest Service Road 3119097 which lies under the powerline corridor. This is the primary location for equipment staging and provides full access to Upper Ponderosa Pine Area units. Access to the Lower Ponderosa Pine Area will occur via three existing skid trails. These skid trails cross USFS lands immediately east of the project area and were authorized as a part of the Catherine Forest Restoration Project. Following completion of the Legacy Pines Project, skid trails within the project area will be restored to a natural condition and seeded with native grasses and forbs.

Approximately 15 acres will be hand thinned around large pines and Oregon white oak, followed by debris piling, pile burning, and, within portions of the project area, underburning. Wildlife habitat piles and snags will be created throughout the project area to meet down wood and habitat requirements outlined in Appendix A. Some larger trees (greater than 26 inches dbh) will be felled and left on the ground. Where access and topography allow, thinned firs may be utilized offsite for future stream habitat restoration projects. Disturbed areas created by tree removal and thinning or pile burning will be seeded with native grasses and forbs to encourage the native plant communities.

Slash materials that exceed the down wood requirements may be considered for public firewood collection opportunity, commercial firewood sale, chipping, or other non-commercial disposal. Staging and access to any of these activities will be coordinated with BPA and follow terms and conditions of the land use agreement.

My decision includes the following project design criteria to mitigate unwanted effects:

Scenery

- To ensure the project area remains compatible with the natural setting, all stumps should be flush cut, slash piles mitigated, and skid trails should be restored to a natural condition and seeded with native grasses and forbs.

Botany

- To reduce the potential for transport or spread of invasive plants, clean any equipment thoroughly before entering National Forest System lands. Remove mud, dirt, and plant parts from project equipment before moving it into the project area and before proceeding to the next project. Vehicles and equipment shall be required to be washed and inspected before entering NFS lands.
- Post implementation monitoring will occur as needed to determine if invasive plants have been introduced to the area. If new invasives plant infestations are discovered, they will be assessed for treatment.
- Where identified, as necessary, disturbed ground will be seeded with genetically appropriate native grass and forb seed to encourage native plant communities, preclude invasive plants, and limit soil erosion. Seed will be provided by the CRGNSA Botanist.

Wildlife

- To protect dispersal habitat for northern spotted owl, heavy equipment use will occur between July 16 and February 28. A Forest Service hydrologist, soil scientist, and wildlife biologist may provide an exception to allow heavy equipment use outside of this window.
- Conduct surveys for active western gray squirrel nests prior to each year of implementation based on Washington Department of Fish and Wildlife (WDFW) guidance. Flag and avoid any trees with active nests during implementation.
- Between December 15 and March 1, coordinate chainsaw and other small machinery use with CRGNSA Wildlife Biologist and WDFW to mitigate potential disturbance to deer and elk in designated winter range.

Hydrology and Soils

- Plan burn areas to use natural or in-place barriers that reduce or limit fire spread, such as roads, canals, utility rights-of-way, barren or low fuel hazard areas, streams, lakes, or wetland features, where practicable, to minimize the need for fireline construction.
- Coordinate spring burning with botany and wildlife staff and partners to minimize potential negative impacts to resources.
- Rehabilitate or otherwise stabilize fireline in areas that pose a risk to water quality or with high or severe erosion hazard.
- Pretreat Aquatic Management Zones (i.e. water resource buffers) and drainage ways to reduce excessive fuel loadings.
- Avoid building firelines in or around riparian areas, wetlands or other sensitive water-dependent sites unless needed to protect life, property, or wetlands.
- Keep high intensity fire out of the Aquatic Management Zones unless suitable measures are used to avoid or minimize adverse effects to water quality.
- Avoid piling and burning for slash removal in Aquatic Management Zones to the extent practicable.

General Access

- Establish designated areas for equipment staging and parking to minimize the area of ground disturbance.
- Operate equipment when soil compaction, displacement, erosion, and sediment runoff will be minimized. This generally occurs between June and October and should be coordinated with the hydrologist and soil scientist.
- Designate season of use to avoid or restrict road use during periods when use would likely damage the roadway surface or road drainage features. This generally occurs between June and October and should be coordinated with the hydrologist and soil scientist.
- Ensure that drainage features are fully functional on completion of seasonal operations.
    - Shape road surfaces to drain as designed.
    - Construct or reconstruct drainage control structures as needed.
    - Ensure that ditches and culverts are clean and functioning.
    - Remove berms unless specifically designed for erosion control purposes.

Aquatic Management Zones (i.e., Water Resource Buffers, Riparian Reserves)

- Conduct operations in a manner that avoids or minimizes introduction of excess slash or other vegetative debris into the AMZ and waterbodies; damage to streambanks, shorelines, and edges of wetlands; and adverse effects to floodplain functioning.
- Retain trees as necessary for canopy cover and shading, bank stabilization, and as a source of large woody debris within the AMZ.

- Avoid felling trees into streams or waterbodies, except as planned to create habitat features.
- Use suitable measures to disperse concentrated flows of water from road surface drainage features to avoid or minimize surface erosion, gully formation, and mass failure in the AMZ and sediment transport to the waterbody.

Lands

- All terms and conditions contained in the Bonneville Power Administration (BPA) Land Use Agreement for use of the BPA access road off the end of Dorsey Road on the north side of the project area must be followed.
- Contact BPA prior to felling any tree in striking distance of the BPA right-of-way corridor, or if there are questions about the potential to reach the corridor.
- Validate land line boundary posting with a Forest Service Land Surveyor prior to implementation.

I find this project consistent with the CRGNSA Management Plan if implemented as described in this decision memo, the project application, and the CRGNSA Consistency Determination Findings of Fact document (beginning on page 10, referenced as CD-22-05-S).

Reason for Categorical Exclusion

Based on regulations at 36 CFR 220.6, it has been determined that this authorization does not require either an environmental assessment or environmental impact statement (40 CFR 1502.4). This authorization will not individually or cumulatively have significant effects on the human environment.

The applicable category of actions is identified in agency procedures as 36 CFR 220.6(e)(6): "*Timber stand and/or wildlife habitat improvement activities that do not include the use of herbicides or do not require more than 1 mile of low standard road construction."* This category of actions is applicable because project activities improve habitat through vegetation treatments and prescribed burning, and there is no planned use of herbicides or road construction.

Relationship to Extraordinary Circumstances

I considered the following resource conditions identified in 36 CFR 220.6(b) to determine if extraordinary circumstances might exist. The presence of these resources or conditions does not preclude the use of a categorical exclusion (CE) or determine that extraordinary circumstances exist. Rather it is the potential cause and effect relationship between project activities and resource conditions as well as the degree of the effects.

- *Federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species.*

  The project may affect but is not likely to adversely affect the Federally listed northern spotted owl. The project will not cause a trend toward federal listing, nor a loss of viability of the species for the Forest Sensitive Species western gray squirrel.

- *Flood plains, wetlands, or municipal watersheds.*

  No mapped wetlands, other than those identified as "riverine" and associated with mapped streams are identified within the project area per the National Wetland Inventory. In addition, the streams that intersect the project area are generally steeper, headwater type confined streams with

very little to no established floodplains and little to no riparian wetland development. Therefore, this project will have no effect on Executive Order 11988 (Floodplains) and Executive Order 11990 (Wetlands).

Project activities will have no effect on any municipal watersheds since none are located within or adjacent to the project area.

- *Congressionally designated areas such as wilderness, wilderness study areas, or national recreation areas.*

  The project occurs within the congressionally designated National Scenic Area. A Consistency Determination was completed to ensure consistency with the CRGNSA Management Plan (see Page 10 of this document). The determination concludes that the project is consistent with the National Scenic Area Management Plan provided the applicant meet the criteria and conditions listed in the Findings of Fact and Consistency Determination.

  Project activities will have no effect on other congressionally designated areas since none are within or adjacent to the project area.

- *Inventoried roadless areas or potential wilderness areas.*

  This project is not located in or near an inventoried roadless area or potential wilderness area, and therefore will have no effect to such areas.

- *Research natural areas.*

  This project is not located in or near a Research Natural Area, and therefore will have no effect to such areas.

- *American Indians and Alaska Native religious or cultural sites, archaeological sites, or historic properties or areas.*

  No precontact archaeological sites or isolates were identified during inventory efforts conducted for the proposed undertaking.

  One historic isolated find was identified. It was determined "not eligible" for inclusion in the National Register of Historic Places (NRHP) by the Washington Department of Archaeology and Historic Preservation (DAHP) on September 17, 2021. A finding of "No historic properties affected" (36 CFR 800.4 (d)(1)) was recommended with concurrence by DAHP on September 15, 2021. No other responses were received by the consulting parties.

Based on the conclusions regarding effects to the resource conditions listed above and the information included in the project record, I find that this decision is consistent with agency policy regarding extraordinary circumstances. Potential effects to the resources identified in 36 CFR 220.6(b), as described above, are minor or nonexistent.

Findings Required by Other Laws and Regulations

National Scenic Area Act (16 USC 544)

The attached Findings of Fact address consistency with the CRGNSA Management Plan guidelines. The project is consistent with the 1986 Columbia River Gorge National Scenic Area Act. The proposed treatments are consistent with goals, policy, and guidelines of the Special Management Areas (SMA) allocations per the CRGNSA Management Plan.

National Forest Management Act (16 U.S.C. 1600)

The land proposed for treatment is productive forest as validated by soil interpretations, plant associations, and on-site growth measurements. The proposed silvicultural treatments meet all the requirements, conditions, and constraints for vegetation manipulation, where applicable, as specified in title 36 CFR 219.27(b) and Appendix F of the Gifford Pinchot Land and Resource Management Plan. This meets National Forest Management Act requirements as clarified in the Pacific Northwest Regional Guide. Findings relative to 16 U.S.C. 1604 (g)(3)(E) to harvest timber do not apply.

Endangered Species Act (16 U.S.C. § 1531 et seq.)

The U.S. Fish and Wildlife Service, in their Letter of Concurrence (0lEWFW00-2018-1-1183) agreed that the project may affect but is not likely to adversely affect (NLAA) the northern spotted owl. I find that this action is consistent with the Endangered Species Act of 1973. Relevant project design criteria and best management practices have been incorporated into the project design

Clean Water Act (33 U.S.C. §1251 et seq.)

Water quality has been addressed through project design criteria and acquisition of all necessary local, state and federal permits will be completed before implementation. With design features, mitigation measures, and Best Management Practices, water quality will be maintained throughout implementation of this proposed action and meet requirements of the Clean Water Act.

National Historic Preservation Act (54 U.S.C. § 300101 et seq.)

Site survey, report, and consultation have been concluded with a finding of "No historic properties affected" (36 CFR 800.4 (d)(1)) for the project. As designed, this project will not have any adverse impact to significant cultural resources.

Public Involvement

This project was posted to the Schedule of Proposed Actions and Columbia River Gorge National Scenic Area website on May 31, 2022. It can be viewed at https://www.fs.usda.gov/project/crgnsa/?project=60270.

A scoping letter offering the opportunity to comment on the project was sent to known interested and affected parties.

A notice of review to ensure consistency with the CRGNSA Management Plan offering a 30-day comment period was also published to the website linked above.

One comment was received from Steve McCoy, Staff Attorney with Friends of the Columbia Gorge, on June 30, 2022. The comment stated that the Forest Service is obligated to follow the Management Plan, as revised and concurred upon on February 19, 2021, and broadly discussed application standards and review requirements for the proposed action. Those comments are addressed in the Consistency Determination.

Administrative Review and Implementation

This project is not subject to administrative review under 36 CFR 218.

A written request for review of the CRGNSA Consistency Determination, with reasons to support the request, must be received within 20 days of the date shown with the Forest Supervisor signature below. Requests for review should be addressed to: Request for CRGNSA Review, Regional Forester, P.O. Box 3623, Portland, OR 97208. An electronic copy of the request should be provided to the USFS-CRGNSA Office at 902 Wasco Street, Suite 200, Hood River, Oregon 97031, ATTN Appeals, and/or emailed to appeals-pacificnorthwest-columbia-river-gorge-nsa@usda.gov.

This decision may be implemented immediately. The Consistency Determination expires two years after the date on this determination. If implementation has not commenced before that date and an extension of the determination has not been requested, a new consistency review shall be required.

Contact

For additional information concerning this decision, contact: Aiden Forsi, NEPA Planner, 541-645-3648 or aiden.forsi@usda.gov.

DONNA MICKLEY

Digitally signed by DONNA MICKLEY
Date: 2025.02.25 10:21:47 -08'00'

DONNA MICKLEY Date
Forest Supervisor
Columbia River Gorge National Scenic Area

CRGNSA Consistency Determination
Legacy Pine Stand and Wildlife Habitat Improvement Project, CD-22-05-S
Parcel/Tax Lot #031102000005003
Klickitat County, Washington

Findings of Fact

LANDOWNER:	**United States of America, U.S. Forest Service, Columbia River Gorge National Scenic Area**
APPLICANT:	**United States of America, U.S. Forest Service, Columbia River Gorge National Scenic Area**
PROPOSED ACTION:	**The Forest Service is proposing to bring the project area back to near historic condition where large pines thrived. Silvicultural prescription will be thinning from below targeting removal of codominant, intermediate, and suppressed Douglas-fir and grand fir to alter species composition in favor of ponderosa pine overstory. Hand thinning will occur around large pines and Oregon white oak, followed by pile and under burning within portions of the project area.**
LOCATION:	**Township 3N, Range 11E, Section 2 NW 1/4, Willamette Meridian Parcel 03110200000400**
NATIONAL SCENIC AREA DESIGNATION:	**Special Management Area (SMA)**
LAND USE DESIGNATION:	**Open Space**
LANDSCAPE SETTING:	**Gorge Walls, Canyonlands, and Wildlands**

The following findings of fact contain the applicable standards and guidelines from the CRGNSA Management Plan. The Management Plan, as adopted in 2020, is in effect. The CRGNSA Management Plan standards and guidelines are displayed in regular type. The findings are displayed in **bold type**.

Project Site Plan

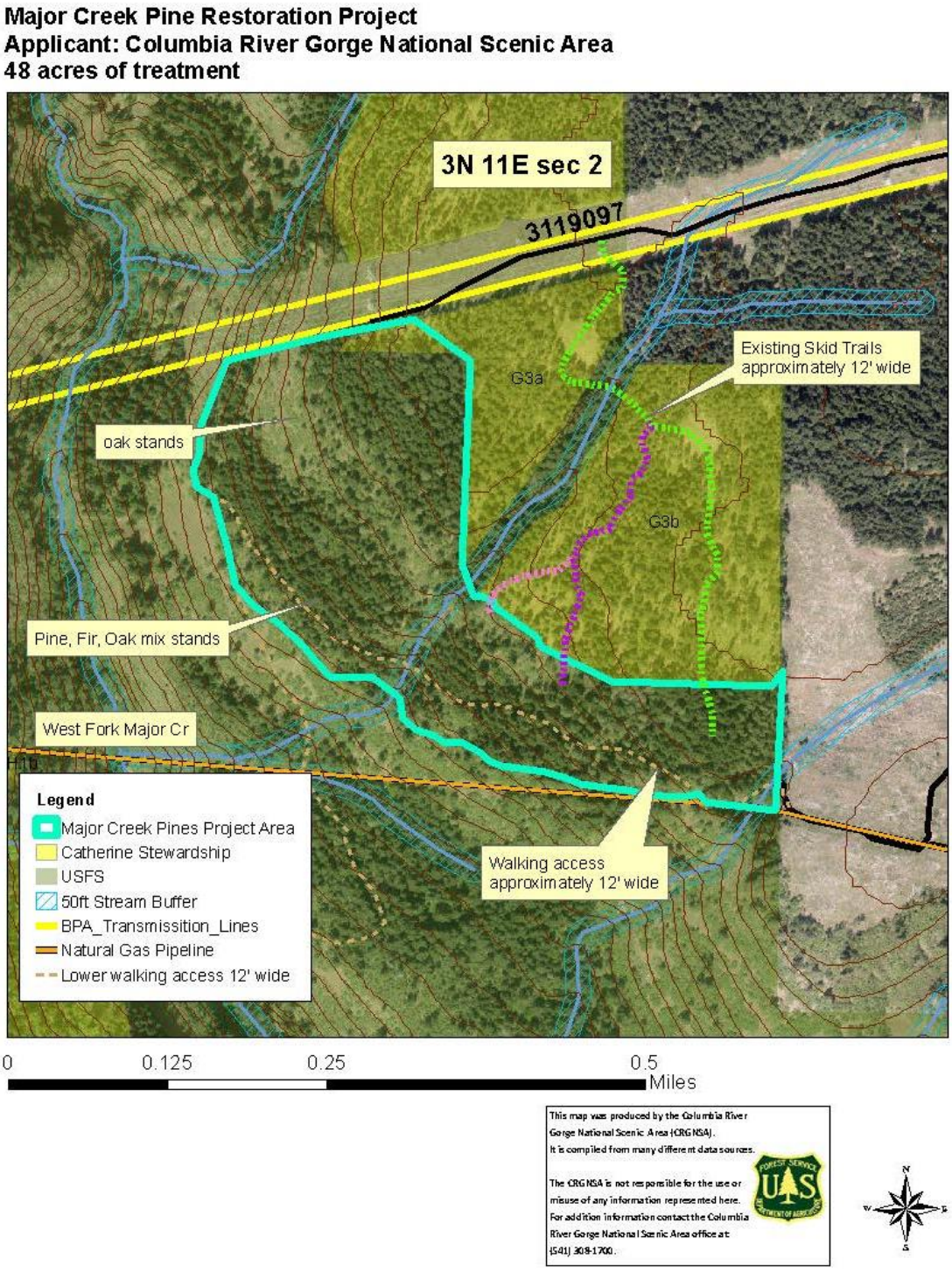

Figure 1: Project Site Plan for the Legacy Pine Stand and Wildlife Habitat Improvement Project.

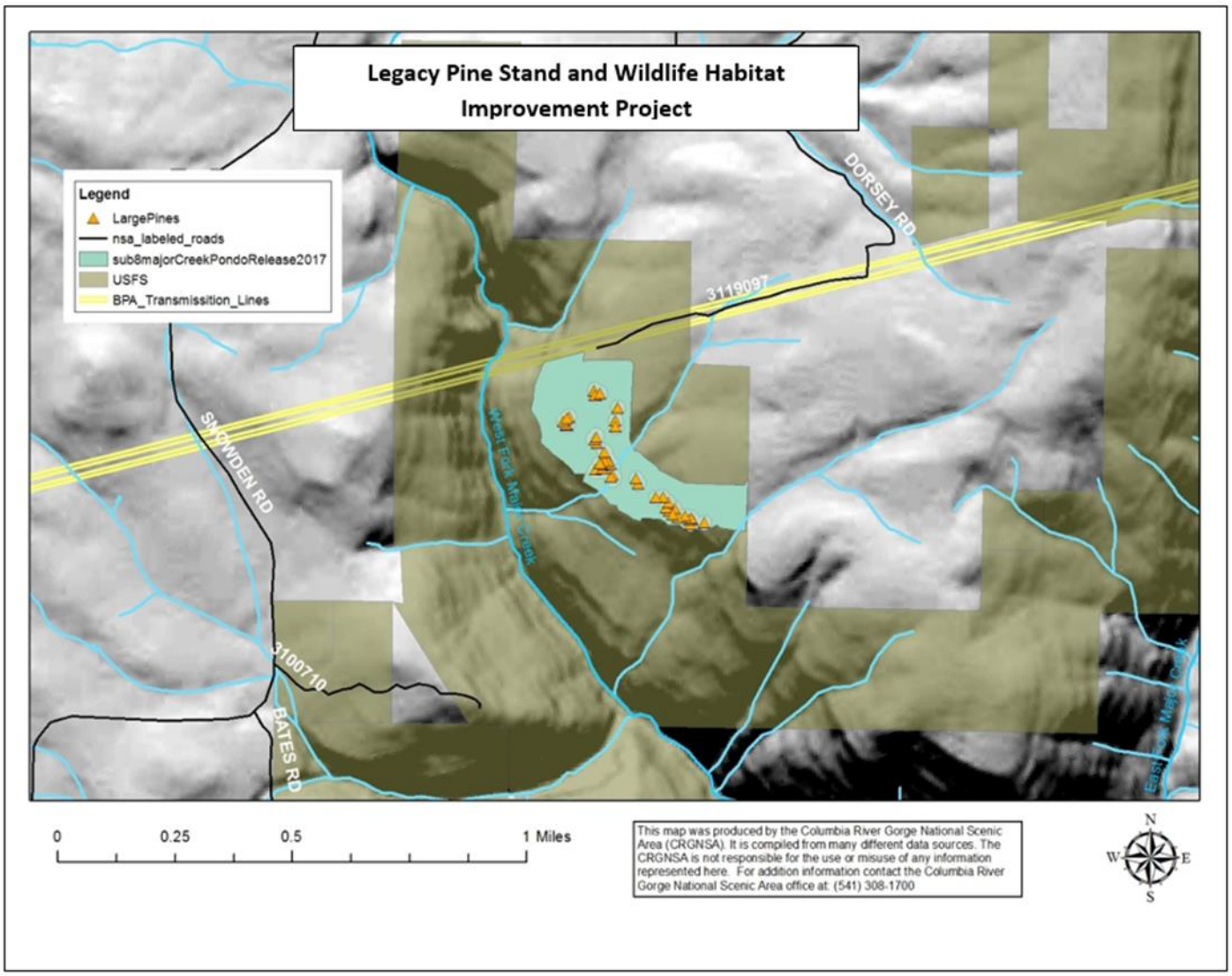

Figure 2: Map displaying overall project location.

Public Comment

A notice describing the project was sent to a mailing list of known interested parties and adjacent landowners on May 31, 2022. A period of 30 days was allowed for public comment. The following comments were received:

Comment: Steve McCoy, Staff Attorney for Friends of the Columbia Gorge, submitted a comment letter that included a summary of relevant resource protection guidelines from the Management Plan for the Columbia River Gorge National Scenic Area, including guidelines regarding forest practices in Special Management Areas and review uses within SMA Open Space Land Use Designations. Friends also stated that the Management Plan as revised in 2020 was in effect and that the CRGNSA was obligated to review this project under those revised standards.

Forest Service Response: The Consistency Determination and Findings of Fact document the project's consistency with all relevant guidelines from the CRGNSA Management Plan. The CRGNSA began

reviewing projects for consistency with the revised Management Plan in June 2022 following county adoption of updated NSA ordinances.

Project Proposal

The purpose of this project is to conduct forest stand and wildlife habitat improvements to protect a stand of old growth ponderosa pines. This stand was identified for its ecological significance, illustrating the nature of these once common ponderosa pine stands in the area. Without intervention, these forested areas will continue to become increasingly dense, resulting in a continued trend of low structural diversity and potential loss of old growth trees. Wildlife species such as northern spotted owl, Western gray squirrel, and deer and elk, evolved within this forest type. These species require more open stands with mature trees for dispersal, foraging, nesting, and hibernation sites, and these conditions may decline due to the encroachment of young trees.

The Forest Service is proposing 50 acres of vegetative treatments to move the project area toward historic conditions where large ponderosa pines thrived. The silvicultural prescription will target removal of co-dominant, intermediate, and suppressed Douglas-fir and grand fir to alter species composition in favor of ponderosa pine overstory. This project will occur in phases, described below, over multiple years.

Within the 50 acres, approximately 15 acres will be hand thinned around large pines and Oregon white oak, followed by debris piling, pile burning, and within portions of the project area, underburning. Wildlife habitat piles and snags will be created throughout the project area to meet down wood and habitat requirements. Some larger trees (greater than 26 inches dbh) will be felled and left on the ground. Where access and topography allow, thinned firs will be utilized offsite for future stream habitat restoration projects. Disturbed areas created by tree removal and thinning or pile burning will be seeded with native grasses and forbs to encourage the native plant communities.

The proposed action will also increase stand resilience and limit the effects of catastrophic wildfire, insect and disease, and other natural disturbances.

The project area will primarily be accessed from the north by travelling along Dorsey Road, a county road, through the Bonneville Power Administration (BPA) corridor to Forest Service Road 3119097 which lies under the powerline corridor. This is the primary location for equipment staging and provides full access to Upper Ponderosa Pine Area units. Access to the Lower Ponderosa Pine Area will occur via three existing skid trails. These skid trails cross USFS lands immediately east of the project area. Following project completion, skid trails within the project area will be restored to a natural condition and seeded with native grasses and forbs.

Slash materials that exceed the down wood requirements may be considered for public firewood collection opportunity, commercial firewood sale, chipping, or other non-commercial disposal. Staging and access to any of these activities will be coordinated with BPA and follow terms and conditions of the land use agreement.

Existing Condition

Existing stand conditions are overstocked with a high density of decadent (on the verge of dying) trees. Historically, disturbances like low intensity fire would have shaped this forest type, burning only on the forest floor, reducing fuels and killing small trees. Fire suppression over the past several decades has shifted the forest structure, density, and species composition. While stands are composed of fire adapted species, the current conditions are causing a lack of resistance to fire and insects and disease.

Overstocking is also affecting resiliency by causing higher mortality due to the competition for resources such as water and sunlight.

The project area is divided into three areas, classified by age and dominant tree species. The oldest area is comprised of 30 to 50 dominant and codominant ponderosa pine and a few scattered Douglas-fir per acre, with competing young Douglas-fir and grand fir growing underneath. Tree diameters in this cohort range from approximately 35 to 60 inches or greater diameter at breast height (dbh). The second stand type is dominated by approximately 70 to 90 suppressed Douglas-fir and grand fir per acre, with individual and clumps of ponderosa pine dispersed through the stand. Tree diameters in this younger stand area range from 14 to 26 inches dbh. Oregon white oak is also present in this area; however, many either died or are succumbing to competition below the nearly closed canopy. The third area is made up of approximately 40 to 60 suppressed Doulgas-fir and grand fir (2-to-10-inch dbh) per acre. The stand is overstocked and experiencing density-related mortality. Canopy cover ranges from 70 percent to 90 percent or greater.

Without intervention, these forested areas would continue to become increasingly dense, resulting in a continued trend of low structural diversity and potential loss of old growth trees. Wildlife species that have evolved within this forest type may also decline since they require a more open stand structure for foraging.

Desired Condition

The desired stand conditions mimic pre-fire suppression density and species composition. The desired stand includes fire and drought resistant ponderosa pine and Oregon white oak at densities capable of sustaining individual tree vigor. The desired stands consist of an overstory of ponderosa pine widely spaced 30 to 40 feet apart with a mid-canopy of 10 to 30 Oregon white oak trees per acre. As a result of the project, the overall canopy will range from 50 to 65 percent, resulting in an average of 60 percent canopy cover. Approximately, five conifer snags of 10 to 20 inches dbh and three conifer snags greater than 20 inches dbh per acre will occur, and three pieces of down wood per acre each 30 feet long and greater than 20 inches dbh will occur.

Proposed Action

Phase 1 – Thinning, Tree Removal, Fuel Manipulation, Snag Creation, Pile Burning

Entire Project Area:

- Fell all Douglas-fir and grand fir 10 inches dbh or less.
- Fell live Douglas-fir and grand fir less than 20 inches dbh that are within 30 feet of a live Oregon white oak greater than 10 inches dbh. Measure thirty feet using the slope distance between the closest faces of the tree boles at breast height.
    - Approximately 30 to 50 live Oregon white oak are the subject of this radial thinning.
- Disperse (lop and scatter) treatment slash where possible, hand pile concentrations of slash.
- Pile burn slash piles within three years. Leave no more than one pile per acre unburned to provide wildlife habitat.
- Surface fuels loading after pile burning should meet the following parameters:
    - Five tons per acre or less of slash 1-to-3-inches diameter.
    - Five tons per acre or less of slash 4-to-9-inches diameter.
    - Large logs (greater than 20-inches in diameter at large end and greater than 30-foot length) equal to 3 to 6 pieces per acre.

- Tree felling and pile burning may occur over the duration of several years to keep accumulated slash from exceeding desired surface fuel loads. Trees may also be girdled rather than felled to manage slash.

Upper Ponderosa Pine Area (NW near BPA powerline road):

- Fell live Douglas-fir and grand fir less than 26 inches dbh that are within 50 feet of an old growth ponderosa pine (36 inches dbh or greater) or where the crown is within 10 feet of touching an old growth ponderosa pine. Measure fifty feet using the slope distance between the closest faces of the tree boles at breast height.
    - Approximately 10 to 20 old growth ponderosa pine are the subject of this radial thinning.
- Convert to standing snags, live Douglas-fir and grand fir (26 to 39 inches dbh) that are within 50 feet of legacy ponderosa pines (36 inches dbh or greater) or where the crown is within 10 feet of touching an old growth ponderosa pine. Conversion to snags may be accomplished by girdling the tree at breast height or with climbing when practicable.
- Felled trees in excess of the large down wood target (see surface fuels loading above) may be removed from the site via skidder or similar equipment.
- Disperse or pile treatment slash away from old growth ponderosa pine crowns. Where practical, leave larger (1,000-hour and greater) fuels a sufficient distance from remaining tree boles to prevent damage during prescribed burning or wildfire. Minimize pile burning within treatment circles and locate necessary piles as far from remnants as possible.
- For log boles greater than 10 inches at the large end, move material 5 feet away from the drip line where practical.

Lower Ponderosa Pine Area (South near gas line):

- Fell live Douglas-fir and grand fir less than 26 inches dbh that are within 40 feet of an old growth ponderosa pine (36 inches dbh or greater) or where the crown is within 10 feet of touching an old growth ponderosa pine. Measure forty feet using the slope distance between the closest faces of the tree boles at breast height.
- Convert to standing snags, live Douglas-fir and grand fir (26 to 39 inches dbh) that are within 40 feet of an old growth ponderosa pine (36 inches dbh or greater) or where the crown is within 10 feet of touching an old growth ponderosa pine.
- Disperse or pile treatment slash out from underneath the legacy ponderosa pines crown. Leave larger (1,000-hour and greater) fuels a sufficient distance from remnant boles to prevent cambium damage during prescribed burning or wildfire. Minimize slash pile burning within treatment circles and locate hand piles as far from remnants as possible.
- For log boles greater than 10 inches at the large end, move material 5 feet away from the drip line where practical.

Phase 2 – Prescribed Underburn

- Conduct a low to moderate intensity underburn throughout the entire project area approximately 5 years following pile burning.
- Prior to underburning, prepare control lines and mitigate control line hazard trees.
- Prior to underburning, rearrange surface fuels surrounding the boles of old growth pine. Within three feet of the bole, remove and disperse the upper half of the duff layer, and disperse any other accumulated surface slash.

Phase 3 – Prescribed Underburn

- Conduct a low to moderate intensity underburn throughout the entire project area approximately 10 years following the first underburn.

Phase 4 – Prescribed Underburn

- Conduct a low to moderate intensity underburn throughout the entire project area approximately 10 years following the second underburn.

Silvicultural Prescriptions

Table 1. Desired Conditions and Proposed Treatments

Component	Desired Condition	Proposed Treatment
Shrub Understory	There should be big leaf maples intermixed as understory with other smaller hardwoods. Shrubs are scattered except in more open areas.	Retain shrubs and oaks consistent with open cathedral dry coniferous forest and oak woodland habitat types.
Overstory	There should be a few irregularly shaped/ mosaic small openings of differing sizes and patches of oaks and pines on southern facing slopes but generally the dominant canopy will be above a 60 percent closure dominated by Douglas Fir. Larger Pines or Oaks exist sporadically across this cover type where larger openings or drier soil conditions exist.	Canopy closure must be greater than 60 percent over entire cover type, ranging from 50 to 65 percent throughout the project area A widely spaced (30 to 40 feet) ponderosa pine stand with 10 to 30 Oregon white oak per acre occupying the mid-canopy. Over entire project area, fell all Douglas-fir and grand fir less than 10 inches dbh. Fell live Douglas-fir and grand fir less than 20 inches dbh that are within 30 feet of a live Oregon white oak greater than 10 inches dbh (approximately 30 to 50 live Oregon white oak). Upper project area: Fell or push over live Douglas-fir and grand fir less than 26 inches dbh that are within 50 feet of an old growth ponderosa pine (greater than 36 inches dbh) or if their crown is within 10 feet of touching the legacy ponderosa pines. Lower project area: Fell live Douglas-fir and grand fir less than 26 inches dbh that are within 40 feet of old growth ponderosa pine (greater than 36 inches dbh) or if their crown is within 10 feet of touching the old growth ponderosa pines.
Snags	More than 5 snags per acre exist in the 10 to 20 inches dbh size and at least 3 snags per acre in the greater than 20 inches dbh size range.	Convert to standing snags, live Douglas-fir and grand fir (26 to 39 inches dbh) that are within 50 feet (upper area) and 40 feet (lower area) of old growth ponderosa pines (greater than 36 inches dbh) or if their crown is within 10 feet of touching the old growth ponderosa pine. Across stand type, outside of riparian buffers, conifer snags (20-to-40-foot height) per acre will

Component	Desired Condition	Proposed Treatment
		include 5 snags at 10 to 20 inches dbh and 3 snags greater than 20 inches dbh
Openings	Mosaic of smaller openings	Not to exceed 4 percent of widely dispersed, variable sized mosaic of irregular shapes blending with existing openings widely spaced (30 to 40 feet) ponderosa pine stand with 10 to 30 Oregon white oak per acre occupying the mid-canopy is desirable. Smaller opening will be created via radial thinning of legacy pines and oaks.
Herbaceous Layer	Bare ground still common but more grasses/herbaceous increasing	Seed areas disturbed from pile burns or skid trails with native grasses and forbs to encourage native plant communities, preclude invasive weeds, and limit soil erosion. Low intensity prescribed underburn to develop grass/herbaceous species richness and maintain areas of bare ground.
Downed Wood	There should be at least 6 pieces of wood per acre that are each greater than 20 inches dbh and 30 feet long.	Five tons per acre or less of slash 1-to-3-inches diameter. Five tons per acre or less of slash 4-to-9-inches diameter. Large logs (greater than 20-inches in diameter at large end and greater than 30-foot length) equal to 3 to 6 pieces per acre.

Land Use Designation

The Management Plan, Part II, Chapter 2 Open Space, SMA Guidelines, Review Uses, states:

1. An Open Space plan shall be completed by the primary managing agency or landowner prior to any new land uses or development and shall be reviewed by the Forest Service. The Open Space plan shall include the following:

A. Direction for resource protection, enhancement, and management.

B. Review of existing uses to determine compatibility with Open Space values.

C. Consultation with members of the public and with agency and resource specialists.

Finding: This project area is covered by the 2005 Watershed Analysis Update of the Catherine Creek and Major Creek Area, which replaced the Catherine-Major Creeks Open Space Plan dated July 1995. This open space plan highlights the need to complete resource enhancement projects within these areas.

2. The following new uses may be allowed on lands designated Open Space subject to review for compliance with scenic, cultural, natural, and recreational resources guidelines:

B. Resource enhancement projects for the purpose of enhancing scenic, cultural, recreation or natural resources, subject to the guidelines in "Resource Enhancement Projects" (Part II, Chapter 7: General Policies and Guidelines). These projects may include vegetation management and

forest practices (subject to the forest practice guidelines of Part II, Chapter 2: Forest Land) for the restoration of forest health, new structures (e.g., fish ladders, sediment barriers) or activities (e.g., closing and revegetating unused roads, recontouring abandoned quarries).

Finding: The purpose of this project is timber stand improvement and wildlife habitat improvement, both with the goal of enhancing the natural resources within the project area. This project includes vegetation management and forest practices, and the guidelines outlined in Part II, Chapter 2: Forest Land of the management plan have been included in this document.

The Management Plan, Part II, Chapter 2 Forest Land, SMA Guidelines, Review Uses, states:

1. The following uses may be allowed on lands designated Forest subject to review for compliance with scenic, cultural, natural, and recreational resources guidelines. The use or development shall be sited to minimize the loss of land suitable for the production of forest products:

X. Forest practices in accordance with an approved forest practices application (see application requirements) and subject to the additional guidelines in this chapter.

(1) The following information, in addition to general site plan requirements (see Part II, Chapter 7: General Policies and Guidelines) shall be required:

(a) Delineate the following on a recent aerial photo or detailed map:

(i) The size, shape, and exact location of the proposed treatment area including any clumps of leave trees to remain. If more than one silvicultural prescription is to be used, code each on the photo.

(ii) Other important natural features of the subject parcel such as steep areas, streams, wetlands, rock outcrops, etc.

(iii) Road and structure construction or reconstruction location.

(iv) Location of proposed rock or aggregate sources.

(v) Major skid trails, landings, and yarding corridors.

(vi) Commercial firewood cutting areas.

(vii) Protection measures for scenic, cultural, natural, and recreation resources, such as road closures.

(b) Describe the existing forest in terms of species, ages, sizes, landscape pattern (including how it fits into the surrounding landscape pattern) and canopy closure for all canopy layers.

(c) Describe how the forest practice will fit into the existing landscape pattern and how it will meet scenic and natural resource standards in Review Uses 1.X(4)(a-g) and1.X(5)(a-d).

(d) Written silvicultural prescriptions with projected post-treatment forest condition specified in terms of species, ages, sizes, landscape pattern (including how it fits into the surrounding landscape pattern) and canopy closure for all canopy layers.

(e) Road and structure construction or reconstruction design.

(f) Existing and proposed rock pit development plans.

(g) A discussion of slash disposal methods.

(h) A reforestation plan as reviewed by the appropriate state forest practices agency.

Finding: This guideline was met as part of the SMA Forest Practice Application provided by the applicant.

(2) As part of the application, flag, stake or mark buffers, any trees or downed wood to be retained or removed (whichever makes the most sense), and areas for placing fill or removing material in preparation for a field visit by the reviewer.

Finding: This guideline was met as part of the SMA Forest Practice Application provided by the applicant.

(3) Stewardship Plan Requirements: The following information, in addition to the applicable portions of the forest practice application requirements above and general site plan requirements (see Part II, Chapter 7: General Policies and Guidelines) shall be provided:

(a) Outline the long-term goals, proposed operations, and future sustainability of the subject parcel.

(b) Describe the time frame and steps planned to reach the long-term goals.

(c) For Forest Practices, describe how the proposed activities fit into the long-term goals and sustainability of the parcel and forest health. The following shall be addressed:

(i) Describe the range of natural conditions expected in the forest in terms of tree species, structure, and landscape pattern.

(ii) Describe what the resulting tree species, structure, and landscape pattern will be after the proposed activities.

(iii) Give a clear explanation of how a deviation from the applicable guidelines may better achieve forest health objectives.

(iv) Give a clear explanation of how and why the proposed activities will move the forest towards its range of natural variability and result in reaching sustainability, resiliency to disturbances.

(d) For clearing trees for new agricultural use, the following shall be addressed in addition to X(3)(a) and (b)above:

(i) Submit NRCS soil unit description and map for each soil unit affected by the proposed clearing or treatment.

(ii) Based on the needs of the operation, give a clear explanation as to the exact size of the clearing needed and how it will meet the natural and scenic requirements set forth in W(4)(a-d) in this chapter.

(iii) Describe in sufficient detail for evaluation the proposed agricultural use, the improvements needed on the parcel, timeline for its establishment, and its marketability.

(iv) Show evidence that an agricultural specialist, such as the county extension agent, has examined and found the proposed agricultural use reasonable and viable.

Finding: The project application outlines the long-term goals, proposed operations, and future sustainability of the project area. This includes the phased approach to treatment of the area and steps to accomplishing project goals. The proposed activities fit into the long-term goals and sustainability of the parcel and forest health.

(4) For forest practices, the following scenic resource guidelines shall apply: (See Scenic Resources section)

(5) Forest practices shall maintain the following in addition to applicable natural resources guidelines in Part I, Chapter 4, SMA Natural Resources: (See Natural Resources section)

Finding: SMA Forest practice guidelines 4 and 5 are addressed under the appropriate resource areas indicated above.

Scenery

SMA Design Guidelines Based on Landscape Settings

1. The following guidelines apply to all lands within SMA landscape settings regardless of visibility from KVAs (includes areas visible from KVAs as well as areas not visible from KVAs):

E. Gorge Walls, Canyonlands, and Wildlands: New development and land uses shall retain the overall visual character of the natural-appearing landscape.

(1) Structures, including signs, shall have a rustic appearance, use nonreflective materials, have low contrast with the surrounding landscape, and be of a Cascadian architectural style.

(2) Temporary roads shall be promptly closed and revegetated.

(3) New utilities shall be below ground surface, where feasible.

(4) Use of plant species non-native to the Columbia River Gorge shall not be allowed.

Finding: The project area is in the Gorge Walls, Canyonlands and Wildlands Landscape Setting. No structures, temporary roads, new utilities, or use of non-native plant species are proposed.

Historically, vegetation patterns for this setting are on steep slopes and rocky cliffs devoid of much vegetation or loose talus slopes with limited vegetation, and most often include large, old fir, pine, and maple trees. Other portions of this setting include stands of large fir and pine trees, some of which appear to be the original forest cover.

The existing condition is an overstocked stand with high density levels of decadent trees that have developed due to a lack of frequent low intensity fire. The canopy cover ranges from 70 to 90

percent or more and is experiencing density-related mortality. Vegetation types range from East Conifer to Ponderosa Pine/Oregon White Oak and consist of suppressed Douglas-fir and grand fir with individual and clumps of ponderosa pine dispersed throughout.

The Forest Service proposes to bring the approximately 50 acre project area toward historic range of variability by (1) thinning from below, targeting removal of co-dominant, intermediate, and suppressed Douglas-fir and grand fir to alter species composition in favor of ponderosa pine overstory; (2) hand thinning 15 acres around large pines and Oregon white oak; (3) piling and underburning while creating wildlife habitat piles and snags to meet down wood and habitat requirements; and (4) performing underburning across the project area after 5 and 10 years. Disturbed areas created by tree removal and thinning or pile burning will be seeded with native grasses and forbs to encourage the native plant communities.

Together these actions will help move the current vegetative condition closer to its historic condition where large pines thrived, and natural fire will occur at low intensity. These actions will make the project and area more resilient from the potential negative effects of wildfires.

The result will resemble a stand which more closely aligned with the historic range of variability for this area and allow the local forest to retain the overall visual character and natural appearance of the Gorge Walls, Canyonlands, and Wildlands Landscape Setting.

SMA Guidelines for Development and Uses Visible from Key Viewing Areas (KVAs)

Guidelines 4-5 and 8-15 are not included and not applicable because no structures are proposed, and new landscaping or screening is not required.

1. The guidelines in this section shall apply to proposed development on sites topographically visible from key viewing areas.

2. New development and land uses shall be evaluated to ensure that the required scenic standard is met and that scenic resources are not adversely affected, including cumulative effects, based on the degree of visibility from key viewing areas.

3. The required SMA scenic standards for all development and uses are summarized in the following table:

LANDSCAPE SETTING	LAND USE DESIGNATION	SCENIC STANDARD
Coniferous Woodland, Oak-Pine Woodland	Forest (National Forest Lands), Open Space	Not Visually Evident
River Bottomlands	Open Space	Not Visually Evident
Gorge Walls, Canyonlands, Wildlands	**Forest, Agriculture, Public Recreation, Open Space**	**Not Visually Evident**
Coniferous Woodland, Oak-Pine Woodland	Forest, Agriculture, Residential, Public Recreation	Visually Subordinate
Residential	Residential	Visually Subordinate
Pastoral	Forest, Agriculture, Public Recreation, Open Space	Visually Subordinate
River Bottomlands	Forest, Agriculture, Public Recreation	Visually Subordinate

Finding: The impacts to Scenic standards for this project are Not Visually Evident.

6. The extent and type of conditions applied to a proposed development or use to achieve the scenic standard shall be proportionate to its degree of visibility from key viewing areas.

A. Decisions shall include written findings addressing the factors influencing the degree of visibility, including but not limited to:

(1) The amount of area of the building site exposed to key viewing areas,

(2) The degree of existing vegetation providing screening,

(3) The distance from the building site to the key viewing areas from which it is visible,

(4) The number of key viewing areas from which it is visible, and

(5) The linear distance along the key viewing areas from which the building site is visible (for linear key viewing areas, such as roads).

B. Conditions may be applied to various elements of proposed developments to ensure they meet the scenic standard for their setting as visible from key viewing areas, including but not limited to:

(1) Siting (location of development on the subject property, building orientation, and other elements),

(2) Retention of existing vegetation,

(3) Design (form, line, color, texture, reflectivity, size, shape, height, architectural and design details, and other elements), and

(4) New landscaping.

Finding: The CRGNSA Landscape Architect used ArcGIS and Google Earth to if determine the project area is visible from the following KVAs:

KEY VIEWING AREA	FOREGROUND	MIDDLEGROUND	BACKGROUND
Tom McCall	Not visible.	Not visible.	8 miles
Historic Columbia River Highway	Not visible.	Not visible.	8 miles
Interstate 84	Not visible.	Not visible.	Greater than 7 miles
Dog Mountain Trail	Not visible.	Not visible.	Greater than 15 miles
Columbia River	Not visible.	Not visible.	Greater than 6 miles

According to GIS, the project area is visible from multiple KVAs in the background (greater than 4 miles away). After analysis in Google Earth and ArcGIS, the CRGNSA Landscape Architect determined visibility to the project area from KVAs is highly unlikely by a casual observer. The duration of views along the identified KVA trails and corridors will be short and from distances greater than 6 miles in varied steep and undulating terrain with heavy screening vegetation. Considering the context and intensity of visibility, it is determined the level of discernable detail will be reduced to appearing as shadow or slight variations in color and be imperceptible to a casual observer.

Cumulative Effects: Because there are no anticipated effects to scenic resources, there will be no cumulative effects.

7. Sites approved for new development to achieve scenic standards shall be consistent with guidelines to protect wetlands, riparian corridors, sensitive plant or wildlife sites and the buffer zones of each of these natural resources, and guidelines to protect cultural resources.

Finding: See Natural Resource section.

SMA Guidelines for KVA Foregrounds and Scenic Routes

Finding: The project is not within the foreground of KVAs or Scenic Routes. These guidelines not applicable.

SMA Guidelines for Areas Not Visible from KVAs

Finding: The project is visible from KVAs, and structures are not proposed. These guidelines not applicable.

SMA Forest Practice Guidelines for Scenic Resources

(4) For forest practices, the following scenic resource guidelines shall apply:

(a) Forest practices shall meet the design guidelines and scenic standards for the applicable landscape setting and zone (See Required SMA Scenic Standards table, SMA Guidelines for Development Visible from KVAs, SMA Scenic Resource Provisions, Part I, Chapter I).

Finding: See SMA Guidelines for Development and Uses Visible from KVAs and SMA Design Guidelines Based on Landscape Settings above.

(b) In the western portion (to White Salmon River) of the SMA Coniferous Woodland Landscape Setting, no more than 8% of the composite KVA viewshed from which the forest practice is topographically visible shall be in created forest openings at one time. The viewshed boundaries shall be delineated by the Forest Service.

(c) In the western portion (to the White Salmon River) of the SMA Gorge Walls, Canyonlands, and Wildlands Landscape Setting, no more than 4% of the composite KVA viewshed from which the forest practice is topographically visible shall be in created forest openings at one time. The viewshed boundaries shall be delineated by the Forest Service.

(d) For all other landscape settings, created forest openings visible at one time shall be within the desired range for the vegetation type as set forth in Natural Resources guidelines in Review Uses 1.X(5)(a)- (c) in this chapter.

(e) Size, shape, and dispersal of created forest openings shall maintain the desired natural patterns in the landscape as set forth in Natural Resources guidelines in Review Uses 1.X(5)(a)- (c) in this chapter.

(f) The maximum size of any created forest opening is set forth by the "Desired" vegetation type in the Forest Structure and Pattern Table.

(i) If the treatment is proposed to go beyond the above guideline based on forest health or ecosystem function requirements, a Stewardship Plan shall be required.

(ii) If the Stewardship Plan proves that the above guideline is detrimental to either forest health or ecosystem function, the size of the created forest opening shall be within the

natural range for the vegetation type as listed in the Desired Forest Structure and Pattern Table for each vegetation type, shall not mimic catastrophic fires, and shall maintain scenic standards.

(g) Created forest openings shall not create a break or opening in the vegetation in the skyline as viewed from KVAs.

Finding: The Management Plan defines created opening as:

> ***Created opening (SMA): A created forest opening with less than 40 percent average canopy closure of overstory trees and less than 60 percent average canopy closure of understory trees averaging less than 5 inches diameter at breast height for coniferous forests and less than 25 percent total canopy cover for oak woodlands. This definition does not include agricultural fields.***

The forest practice is within the Gorge Walls, Canyonlands, and Wildlands Landscape Setting. The application states no new openings are proposed, therefore, the project will not contribute to more than 4 percent of the composite KVA viewshed in created forest openings at one time. Therefore, this guideline is met.

Cultural

SMA Guidelines

1. All cultural resource surveys, evaluations, assessments, and mitigation plans shall be performed by professionals whose expertise reflects the type of cultural resources that are involved. Principal investigators shall meet the professional standards published in 36 CFR 61.

2. For federal or federally assisted undertakings, the reviewing agency shall complete its consultation responsibilities under Section 106 of the Historic Preservation Act of 1966 [36 CFR 800.2].

3. Discovery during construction: All authorizations for new developments or land uses shall require the immediate notification of the reviewing agency if cultural resources are discovered during construction or development. If cultural resources are discovered, particularly human bone or burials, work in the immediate area of discovery shall be suspended until a cultural resource professional can evaluate the potential significance of the discovery and recommend measures to protect and if possible recover the resource. If the discovered material is suspected to be human bone or a burial, the following procedures shall be used:

A. The applicant shall stop all work in the vicinity of the discovery.

B. The applicant shall immediately notify the Forest Service, the applicant's cultural resource professional, the county coroner, and appropriate law enforcement agencies.

C. The Forest Service shall notify the tribal governments if the discovery is determined to be an Indian burial or a cultural resource.

4. Reviewing agencies shall use the […] steps under 36 CFR 800.4 for assessing potential effects to cultural resources and 36 CFR 800.5 for assessing adverse effects to cultural resources. [The Management Plan includes descriptions of these steps. The descriptions have been removed from this document.]

5. Determination of potential effects to significant cultural resources shall include consideration of cumulative effects of proposed developments that are subject to any of the following: 1) a reconnaissance or historic survey; 2) a determination of significance; 3) an assessment of effect; or 4) a mitigation plan.

Finding: CRGNSA Heritage Resources staff determined that a cultural resource survey was necessary for the proposed forest practice. The survey report was sent to DAHP and the Tribes on September 14, 2021. The 30-day review period ended on October 14, 2021. CRGNSA Heritage Resources staff determined that no historic properties would be affected (36 CFR 800.4 (d)(1)) by the proposed forest practice. DAHP concurred with that determination on September 14, 2021. No other responses were received.

A condition of approval shall require that the inadvertent discovery procedure described above is followed in the event that cultural resources are discovered during construction.

Natural Resources

SMA Guidelines for Water Resources / Wildlife and Plants

1. All new development and uses, as described in a site plan prepared by the applicant, shall be evaluated using the following guidelines to ensure that natural resources are protected from adverse effects. Cumulative effects analysis is not required for expedited review uses or development. Comments from state and federal agencies shall be carefully considered. (Site plans are described under "Review Uses" in Part II, Chapter 7: General Policies and Guidelines.)

2. Water Resources (Wetlands, Streams, Ponds, Lakes, and Riparian Areas)

A. All Water Resources shall, in part, be protected by establishing undisturbed buffer zones as specified in 2.A.(2)(a) and 2(b) below. These buffer zones are measured horizontally from a wetland, stream, lake, or pond boundary as defined below.

(1) All buffer zones shall be retained undisturbed and in their natural condition, except as permitted with a mitigation plan.

(2) Buffer zones shall be measured outward from the bank full flow boundary for streams, the high-water mark for ponds and lakes, the normal pool elevation for the Columbia River, and the wetland delineation boundary for wetlands on a horizontal scale that is perpendicular to the wetlands, stream, pond, or lake boundary. On the main stem of the Columbia River above Bonneville Dam, buffer zones shall be measured landward from the normal pool elevation of the Columbia River. The following buffer zone widths shall be required:

(a) A minimum 200-foot buffer on each wetland, pond, lake, and each bank of a perennial or fish bearing stream, some of which can be intermittent.

(b) A 50-foot buffer zone along each bank of intermittent (including ephemeral), non-fish bearing streams.

(c) Maintenance, repair, reconstruction and realignment of roads and railroads within their rights-of-way shall be exempted from the wetlands and riparian guidelines upon demonstration of all of the following:

(i) The wetland within the right-of-way is a drainage ditch not part of a larger wetland outside of the right-of-way.

(ii) The wetland is not critical habitat.

(iii) Proposed activities within the right-of-way would not adversely affect a wetland adjacent to the right-of-way.

(3) The buffer width shall be increased for the following:

(a) When the channel migration zone exceeds the recommended buffer width, the buffer width shall extend to the outer edge of the channel migration zone.

(b) When the frequently flooded area exceeds the recommended riparian buffer zone width, the buffer width shall be extended to the outer edge of the frequently flooded area.

(c) When an erosion or landslide hazard area exceeds the recommended width of the buffer, the buffer width shall be extended to include the hazard area.

(4) Buffer zones can be reconfigured if a project applicant demonstrates all the following: (1) the integrity and function of the buffer zone is maintained, (2) the total buffer area on the development proposal is not decreased, (3) the width reduction shall not occur within another buffer, and (4) the buffer zone width is not reduced more than 50% at any particular location. Such features as intervening topography, vegetation, man-made features, natural plant or wildlife habitat boundaries, and flood plain characteristics could be considered.

(5) Requests to reconfigure buffer zones shall be considered if an appropriate professional (botanist, plant ecologist, wildlife biologist, or hydrologist) hired by the project applicant (1) identifies the precise location of the rare wildlife/plant or water resource, (2) describes the biology of the rare wildlife/plant or hydrologic condition of the water resource, and (3) demonstrates that the proposed use will not have any negative effects, either direct or indirect, on the affected wildlife/plant and their surrounding habitat that is vital to their long-term survival or water resource and its long-term function.

(6) The local government shall submit all requests to re-configure rare wildlife/plant or water resource buffers to the Forest Service and the appropriate state agencies for review. All written comments shall be included in the project file. Based on the comments from the state and federal agencies, the local government will make a final decision on whether the reconfigured buffer zones are justified. If the final decision contradicts the comments submitted by the federal and state agencies, the local government shall justify how it reached an opposing conclusion.

Finding: The identified streams on site are intermittent and are non-fish bearing, and therefore have a 50-foot buffer. Project activities proposed in the buffer include thinning and prescribed fire. These uses will require a mitigation plan.

B. When a buffer zone is disturbed by a new use, it shall be replanted with only native plant species of the Columbia River Gorge.

Finding: Project design criteria specify that use of native plant species is required when revegetating disturbed areas. This guideline is met.

C. The applicant shall be responsible for identifying all water resources and their appropriate buffers (see above).

Finding: The proposal meets this guideline because the applicant has provided maps of water resources and associated buffers, and the hydrologist has field verified the accuracy of this mapped information.

D. Wetlands Boundaries shall be delineated using the following:

(1) The approximate location and extent of wetlands in the National Scenic Area is shown on the National Wetlands Inventory (U.S. Department of the Interior). In addition, the list of hydric soils and the soil survey maps shall be used as an indicator of wetlands.

(2) Some wetlands may not be shown on the wetlands inventory or soil survey maps. Wetlands that are discovered by the local planning staff during an inspection of a potential project site shall be delineated and protected.

(3) The project applicant shall be responsible for determining the exact location of a wetlands boundary. Wetlands boundaries shall be delineated using the procedures specified in the 'Corps of Engineers Wetland Delineation Manual (on-line edition)' and applicable Regional Supplements.

(4) All wetlands delineations shall be conducted by a professional who has been trained to use the federal delineation procedures.

Finding: The CRGNSA Hydrologist determined that there are no wetlands in the project area. This guideline is met.

E. Stream, pond, and lake boundaries shall be delineated using the bank full flow boundary for streams and the high-water mark for ponds and lakes. The project applicant shall be responsible for determining the exact location of the appropriate boundary for the water resource.

Finding: The proposal meets this guideline because the applicant's soil and hydrology staff conducted field surveys to map the spatial extent of the intermittent stream that flows through the project area.

F. The local government may verify the accuracy of, and render adjustments to, a bank full flow, high water mark, normal pool elevation (for the Columbia River), or wetland boundary delineation. If the adjusted boundary is contested by the project applicant, the local government shall obtain professional services, at the project applicant's expense, or the local government will ask for technical assistance from the Forest Service to render a final delineation.

Finding: This guideline is not applicable.

G. Buffer zones shall be undisturbed unless the following criteria have been satisfied.

H. The proposed use must have no practicable alternative as determined by the practicable alternative test.

(1) Those portions of a proposed use that have a practicable alternative will not be located in wetlands, stream, pond, lake, and riparian areas or their buffer zone.

(2) Filling and draining of wetlands shall be prohibited with exceptions related to public safety or restoration/enhancement activities as permitted when all of the following criteria have been met:

(a) A documented public safety hazard exists, or a restoration/ enhancement project exists that would benefit the public and is corrected or achieved only by impacting the wetland in question, and

(b) Impacts to the wetland must be the last possible documented alternative in fixing the public safety concern or completing the restoration/enhancement project, and

(c) The proposed project minimizes the impacts to the wetland.

(3) Unavoidable impacts to wetlands and aquatic and riparian areas and their buffer zones shall be offset by deliberate restoration and enhancement or creation (wetlands only) measures as required by the completion of a SMA mitigation plan.

Finding: The buffer zone of the intermittent streams within the project boundary will be disturbed by thinning activities and by prescribed fire. There is no practicable alternative to these activities. No wetlands are affected. See "Practicable Alternative Test" below.

I. Proposed uses and development within wetlands, streams, ponds, lakes, riparian areas, and their buffer zones shall be evaluated for cumulative effects to natural resources and cumulative effects that are adverse shall be prohibited.

Finding: See "Practicable Alternative Test" and "Mitigation Plan" sections below. Through project design criteria, the project will have no effect to water resources. Because there are no effects to those resources, there are no cumulative effects to those resources.

3. Wildlife and Plants

A. Protection of wildlife/plant areas and sites shall begin when proposed new development or uses are within 1000 feet of a rare wildlife or rare plant area or site. Rare wildlife areas are those areas depicted in wildlife data, including all sensitive wildlife sites and Priority Habitats listed in this Chapter. The approximate locations of rare wildlife and rare plant areas and sites are shown in wildlife and rare plant data.

Finding: The proposal meets this guideline because while there are no records of northern spotted owl or western gray squirrel within 1,000 feet of the project area, the possibility of their presence exists. There are old growth trees within 1,000 feet of the project area (i.e., old growth priority habitat). There are also no sensitive plant species within 1,000 feet of the project.

B. The local government shall submit site plans (of uses that are proposed within 1,000 feet of a rare wildlife or rare plant area or site) for review to the Forest Service and the appropriate state agencies (Oregon Department of Fish and Wildlife or the Washington Department of Wildlife for wildlife issues and by the Oregon Biodiversity Information Center or Washington Natural Heritage Program for plant issues).

Finding: The proposal meets this guideline because the Washington Department of Fish and Wildlife was made aware of the project. Site plans for project activities were submitted to the appropriate state agencies. This guideline is met.

C. The Forest Service wildlife biologists and botanists, in consultation with the appropriate state biologists, shall review the site plan and their field survey records. They shall:

(1) Identify/verify the precise location of the wildlife or plant area or site,

(2) Determine if a field survey will be required,

(3) Determine, based on the biology and habitat requirements of the affected wildlife/plant species, if the proposed use would compromise the integrity and function of or result in adverse effects (including cumulative effects) to the wildlife and plant area or site. This would include considering the time of year when wildlife and plant species are sensitive to disturbance, such as nesting and rearing seasons, or flowering season, and,

(4) Delineate the undisturbed 200-ft buffer on the site plan for rare plants or the appropriate buffer for rare wildlife areas or sites, including nesting, roosting, and perching sites.

(a) Buffer zones can be reconfigured if a project applicant demonstrates all of the following: (1) the integrity and function of the buffer zones is maintained, (2) the total buffer area on the development proposal is not decreased, (3) the width reduction shall not occur within another buffer, and (4) the buffer zone width is not reduced more than 50% at any particular location. Such features as intervening topography, vegetation, man-made features, natural plant or wildlife habitat boundaries, and flood plain characteristics could be considered.

(b) Requests to reduce buffer zones shall be considered if an appropriate professional (botanist, plant ecologist, wildlife biologist, or hydrologist), hired by the project applicant, (1) identifies the precise location of the rare wildlife/plant or water resource, describes the biology of the rare wildlife/plant or hydrologic condition of the water resource, and (3) demonstrates that the proposed use will not have any negative effects, either direct or indirect, on the affected wildlife/plant and their surrounding habitat that is vital to their long-term survival or to the water resource and its long-term function.

(c) The local government shall submit all requests to re-configure rare wildlife/plant or water resource buffers to the Forest Service and the appropriate state agencies for review. All written comments shall be included in the record of application and based on the comments from the state and federal agencies, the local government will make a final decision on whether the reduced buffer zone is justified. If the final decision contradicts the comments submitted by the federal and state agencies, the local government shall justify how it reached an opposing conclusion.

Finding: Beneficial effects from the proposed project will include retaining features critical to the survival and reproductive needs of several species. Northern spotted owl and its habitat, which

includes portions of ponderosa pine forest, benefits from the retention of large trees and snags that provide ample perching posts for hunting, especially where edges occur in transitional forest types. Western gray squirrels need variably-spaced, older conifer and oak woodland habitat that supports nesting opportunities and produces seed and mast food supplies. Additionally, the removal of small-stemmed trees will allow mature trees to expand their high-canopy features, creating favorable conditions for arboreal travel and protection from predators. Deer and elk use ponderosa pine forests for bedding sites and thermal cover in winter, and as openings in the understory are created, palatable grasses, forbs and shrubs will fill in the gaps and deliver substantial foraging opportunities necessary for their survival.

For the western gray squirrel, pre-implementation surveys will be coordinated with WDFW. If needed, surveys will be conducted and trees with active western gray squirrel nests will be marked and left standing. There are no sensitive plant species within 1000 feet of the project. This guideline is met.

D. The local government, in consultation with the state and federal wildlife biologists and botanists, shall use the following criteria in reviewing and evaluating the site plan to ensure that the proposed development or uses do not compromise the integrity and function of or result in adverse effects to the wildlife and plant area or site:

(1) Published guidelines regarding the protection and management of the affected wildlife/plant species. Examples include: the Oregon Department of Forestry management guidelines for osprey and great blue heron; Washington Department of Wildlife guidelines for a variety of species, including the western pond turtle, the peregrine falcon, and the Larch Mountain salamander.

(2) Physical characteristics of the subject parcel and vicinity, including topography and vegetation.

(3) Historic, current, and proposed uses in the vicinity of the rare wildlife/plant area or site.

(4) Existing condition of the wildlife/plant area or site and the surrounding habitat of the area or site.

(5) In areas of winter range, habitat components, such as forage and thermal cover, important to the viability of the wildlife must be maintained or, if impacts are to occur, enhancement must mitigate the impacts so as to maintain overall values and function of winter range.

(6) The site plan is consistent with published guidance documents such as "Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources" (Oregon Department of Fish and Wildlife 2008 or most recent version) and Washington's Aquatic Habitat Guidelines (2002 or most recent version).

(7) The site plan activities coincide with periods when fish and wildlife are least sensitive to disturbance. These would include, among others, nesting and brooding periods (from nest building to fledgling of young) and those periods specified.

(8) The site plan illustrates that new development and uses, including bridges, culverts, and utility corridors, shall not interfere with fish and wildlife passage.

(9) Maintain, protect, and enhance the integrity and function of Priority Habitats as listed on the following Priority Habitats Table 1. This includes maintaining structural, species, and age diversity, maintaining connectivity within and between plant communities, and ensuring that cumulative impacts are considered in documenting integrity and function.

Finding: Project activities within deer winter range will be coordinated with WDFW and restrictions will be imposed on the implementation as needed. Additionally, implementation buffers, as recommended by WDFW, on trees with active western gray squirrel nests will minimize the impacts of project activities. Therefore, this guideline is met.

E. The wildlife/plant protection process may terminate if the local government, in consultation with the Forest Service and state wildlife agency or heritage program, determines (1) the rare wildlife area or site is not active, or (2) the proposed use is not within the buffer zones and would not compromise the integrity of the wildlife/plant area or site, or (3) the proposed use is within the buffer and could be easily moved out of the buffer by simply modifying the project proposal (site plan modifications). If the project applicant accepts these recommendations, the local government shall incorporate them into its development review order and the wildlife/plant protection process may conclude.

Finding: The proposal meets this guideline because CRGNSA accepts these recommendations. The project will not compromise the integrity of any sensitive wildlife or plant areas.

F. If the above measures fail to eliminate the adverse effects, the proposed project shall be prohibited, unless the project applicant can meet the Practicable Alternative Test and prepare a mitigation plan to offset the adverse effects by deliberate restoration and enhancement.

Finding: This guideline is not applicable; see above Finding.

G. The local government shall submit a copy of all field surveys (if completed) and mitigation plans to the Forest Service and appropriate state agencies. The local government shall include all comments in the record of application and address any written comments submitted by the state and federal wildlife agency/heritage programs in its development review order.

Finding: The proposal meets this guideline because pre-project western gray squirrel surveys data will be retained.

H. Based on the comments from the state and federal wildlife agency/heritage program, the local government shall make a final decision on whether the proposed use would be consistent with the wildlife/plant policies and guidelines. If the final decision contradicts the comments submitted by the state and federal wildlife agency/heritage program, the local government shall justify how it reached an opposing conclusion.

Finding: Project design criteria, informed by CRGNSA staff, US Fish and Wildlife Service, and WDFW, (see Decision Memo) are in place to ensure that this project is consistent with wildlife and plant policies and guidelines. Therefore, this guideline is met.

I. The local government shall require the project applicant to revise the mitigation plan as necessary to ensure that the proposed use would not adversely affect a rare wildlife/plant area or site.

Finding: This guideline is not applicable.

4. Soil Productivity

A. Soil productivity shall be protected using the following guidelines:

(1) A description or illustration showing the mitigation measures to control soil erosion and stream sedimentation.

(2) New developments and land uses shall control all soil movement within the area shown on the site plan.

(3) The soil area disturbed by new development or land uses, except for new cultivation, shall not exceed 15 percent of the project area.

(4) Within 1 year of project completion, 80 percent of the project area with surface disturbance shall be established with effective native ground cover species or other soil-stabilizing methods to prevent soil erosion until the area has 80 percent vegetative cover.

Finding: The proposal meets this guideline because ground disturbing activities, such as the use of heavy equipment, will be limited to the dry season, to existing skid trails, and to other previously disturbed areas. No new ground disturbance is expected to result from proposed project activities.

Practicable Alternative Test

1. An alternative site for a proposed use shall be considered practicable if it is available and the proposed use can be undertaken on that site after taking into consideration cost, technology, logistics, and overall project purposes.

2. A practicable alternative does not exist if a project applicant satisfactorily demonstrates all of the following:

A. The basic purpose of the use cannot be reasonably accomplished using one or more other sites in the vicinity that would avoid or result in less adverse effects on wetlands, ponds, lakes, riparian areas, or wildlife or plant areas or sites.

B. The basic purpose of the use cannot be reasonably accomplished by reducing its proposed size, scope, configuration, or density, or by changing the design of the use in a way that would avoid or result in less adverse effects on wetlands, ponds, lakes, riparian areas, or wildlife or plant areas or sites.

C. Reasonable attempts were made to remove or accommodate constraints that caused a project applicant to reject alternatives to the proposed use. Such constraints include inadequate infrastructure, parcel size, and land use designations. If a land use designation or Recreation Intensity Class is a constraint, an applicant must request a Management Plan amendment to demonstrate that practicable alternatives do not exist.

Finding: The purpose of this project is resource enhancement, to protect a remnant stand of ponderosa pine from encroachment by other tree species and from catastrophic wildfire. The proposed activities within the water resource buffer include tree thinning and prescribed fire. These activities cannot occur elsewhere while also achieving the purpose of protecting the remnant ponderosa pine stand. Changes to the project design within the water resource buffers will diminish

the effectiveness of the project, detracting from the basic purpose of the use. The use of project design criteria for activities taking place within water resource buffers constitute the reasonable attempts made to accommodate the constraints that the Management Plan places on uses within water resource buffers. A practicable alternative for the proposed use does not exist.

Mitigation Plan

1. Mitigation Plans shall be prepared when:

A. The proposed development or use is within a buffer zone (wetlands, ponds, lakes, riparian areas, or wildlife or plant areas or sites).

B. There is no practicable alternative (see the "practicable alternative" test).

Finding: Proposed project activities include thinning and prescribed fire within a water resource buffer. There is no practicable alternative to the proposed activities. A mitigation plan is required.

2. In all cases, mitigation plans are the responsibility of the applicant and shall be prepared by an appropriate professional (botanist/ecologist for plant sites, a wildlife/fish biologist for wildlife/fish sites, and a qualified professional for water resource sites).

3. The primary purpose of this information is to provide a basis for the project applicant to redesign the proposed use in a manner that protects the identified water resources and rare wildlife/plant areas and sites, that maximizes their development options, and that mitigates, through restoration, enhancement, creation, and replacement measures, impacts to the water resources and wildlife and plant area or site and buffer zones.

4. The applicant shall submit the mitigation plan to the local government. The local government shall submit a copy of the mitigation plan to the Forest Service, and appropriate state agencies. If the final decision contradicts the comments submitted by the state and federal wildlife agency/heritage program, the local government shall justify how it reached an opposing conclusion.

5. A project applicant shall demonstrate sufficient fiscal, technical, and administrative competence to successfully execute a mitigation plan involving wetland creation.

Finding: The mitigation plan was prepared by the CRGNSA Hydrologist, with support from CRGNSA planning staff. The above guidelines are met.

6. Mitigation plans shall include maps, photographs, and text. The text shall:

A. Describe the biology and function of the protected resources (e.g., wildlife/plant species or wetland) that will be affected by a proposed use. An ecological assessment of the protected resource and the condition of the resource that will result after restoration shall be required. Reference published protection and management guidelines.

B. Describe the physical characteristics of the subject parcel, past, present, and future uses, and the past, present, and future potential impacts to the protected resources. Include the size, scope, configuration, or density of new uses being proposed within the buffer zone.

C. Explain the techniques that will be used to protect the protected resources and their surrounding habitat that will not be altered (for example, delineation of core habitat of the rare wildlife/plant species and key components that are essential to maintain the long-term use and integrity of the wildlife/plant area or site).

D. Show how restoration, enhancement, and creation measures will be applied to ensure that the proposed use results in minimum feasible impacts to protected resources, their buffer zones, and associated habitats.

E. Show how the proposed restoration, enhancement, or creation mitigation measures are NOT alternatives to avoidance. A proposed development/use must first avoid a protected resource, and only if this is not possible should restoration, enhancement, or creation be considered as mitigation. In reviewing mitigation plans, the local government, appropriate state agencies, and Forest Service shall critically examine all proposals to ensure that they are indeed last resort options.

Finding: This project involves entering and completing work within the water resource buffers of intermittent streams within the project area. The streams are generally steeper, headwater type confined streams with no established floodplains or riparian wetland development. No mapped wetlands occur within the project area.

The project design criteria are included to reduce the impacts of necessary project activities on protected resources. Specifically, removal of small diameter trees within the water resource buffer will reduce the risk of high intensity fire within the riparian areas that will burn existing riparian vegetation and result in excess sediment delivery and higher stream temperatures in the long term. There are three identified ponderosa pines with more intensive thinning prescriptions that will occur within the water resource buffers; the project design criteria identify that larger trees to be removed will be converted to snags or otherwise left to become large woody debris in the stream overtime, adding beneficial complexity to the stream system and increasing ecosystem value over time. Other project design criteria identify the need to protect soil and smaller vegetation within the riparian areas, and restrict access and development of roads, fire lines or other landscape features within riparian areas.

This proposed action was designed for restoration and resource enhancement. The project design criteria serve as the mitigation plan for this project, ensuring no net loss of water quality or impacts to water resources.

7. At a minimum, a project applicant shall provide to the local government a progress report every 3 years that documents milestones, successes, problems, and contingency actions. Photographic monitoring stations shall be established and photographs shall be used to monitor all mitigation progress.

8. A final monitoring report shall be submitted to the local government for review upon completion of the restoration, enhancement, created or replacement activity. This monitoring report shall document successes, problems encountered, resource recovery, status of any rare wildlife/plant species and shall demonstrate the success of restoration or enhancement actions. The local government shall submit copies of the monitoring report to the Forest Service; who shall offer technical assistance to the local government in helping to evaluate the completion of the mitigation plan. In instances where restoration and enhancement efforts have failed, the monitoring process shall be extended until the applicant satisfies the restoration and enhancement guidelines.

9. Mitigation measures to offset impacts to resources and buffers shall result in no net loss of water quality, natural drainage, fish/wildlife/plant habitat, and water resources by addressing the following:

A. Restoration and enhancement efforts shall be completed no later than one year after the protected resource or buffer zone has been altered, or as soon thereafter as is practicable.

B. All natural vegetation within the buffer zone shall be retained to the greatest extent practicable. Appropriate protection and maintenance techniques shall be applied, such as fencing, conservation buffers, livestock management, and noxious weed control. Within five years, at least 75 percent of the replacement vegetation shall survive. All plantings shall be with native plant species that replicate the original vegetation community.

C. Habitat that will be affected by either temporary or permanent uses shall be rehabilitated to a natural condition. Habitat shall be replicated in composition, structure, and function, including tree, shrub and herbaceous species, snags, pool-riffle ratios, substrata, and structures, such as large woody debris and boulders.

D. If this standard is not feasible or practical because of technical constraints, a protected resource of equal or greater benefit may be substituted, provided that no net loss of protected resource functions occurs and provided the local government, in consultation with the appropriate state and federal agency, determine that such substitution is justified.

E. Rare plants that will be altered shall be transplanted or replaced, to the maximum extent practicable. Replacement is used here to mean the establishment of a particular plant species in areas of suitable habitat not affected by new uses. Replacement may be accomplished by seeds, cuttings, or other appropriate methods. Replacement shall occur as close to the original plant site as practicable. The project applicant shall ensure that at least 75 percent of the replacement plants survive 3 years after the date they are planted.

F. Nonstructural controls and natural processes shall be used to the greatest extent practicable.

(1) Bridges, roads, pipeline and utility corridors, and other water crossings shall be minimized and should serve multiple purposes and properties.

(2) Stream channels shall not be placed in culverts unless absolutely necessary for property access. Bridges are preferred for water crossings to reduce disruption to hydrologic and biologic functions. Culverts shall only be permitted if there are no practicable alternatives as demonstrated by the “Practicable Alternative Test.”

(3) Fish passage shall be protected from obstruction.

(4) Restoration of fish passage should occur wherever possible.

(5) Show location and nature of temporary and permanent control measures that shall be applied to minimize erosion and sedimentation when riparian areas are disturbed, including slope netting, berms and ditches, tree protection, sediment barriers, infiltration systems, and culverts.

(6) Groundwater and surface water quality will not be degraded by the proposed use. Natural hydrologic conditions shall be maintained, restored, or enhanced in such a manner that replicates natural conditions, including current patterns (circulation, velocity, volume, and normal water fluctuation), natural stream channel and shoreline dimensions and materials, including slope, depth, width, length, cross-sectional profile, and gradient.

(7) Those portions of a proposed use that are not water-dependent or that have a practicable alternative shall be located outside of stream, pond, and lake buffer zones.

(8) Streambank and shoreline stability shall be maintained or restored with natural vegetation.

(9) The size of restored, enhanced, and created wetlands shall equal or exceed the following ratios. The first number specifies the required acreage of replacement wetlands, and the second number specifies the acreage of wetlands altered.

Restoration: 2: 1

Creation: 3: 1

Enhancement: 4: 1

G. Wetland creation mitigation shall be deemed complete when the wetland is self-functioning for 5 consecutive years. Self-functioning is defined by the expected function of the wetland as written in the mitigation plan. The monitoring report shall be submitted to the local government to ensure compliance. The Forest Service, in consultation with appropriate state agencies, shall extend technical assistance to the local government to help evaluate such reports and any subsequent activities associated with compliance.

H. Wetland restoration/enhancement can be mitigated successfully by donating appropriate funds to a non-profit wetland conservancy or land trust with explicit instructions that those funds are to be used specifically to purchase protection easements or fee title protection of appropriate wetlands acreage in or adjacent to the Columbia River Gorge meeting the ratios given above in Guideline 9.F.(9). These transactions shall be explained in detail in the Mitigation Plan and shall be fully monitored and documented in the monitoring report.

Finding: No wetlands occur in the project area, and no mitigation measures address wetlands. The project design criteria establish water resource buffers to achieve resource enhancement while ensuring water resources are protected from alteration. Therefore, this guideline is met.

SMA Forest Practice Guidelines for Natural Resources

(5) Forest practices shall maintain the following in addition to applicable natural resources guidelines in Part I, Chapter 3, SMA Natural Resources:

(a) Silvicultural prescriptions shall maintain the desired natural forest stand structures (tree species, spacing, layering, and mixture of sizes) based on forest health and ecosystem function requirements. Forest tree stand structure shall meet the requirements listed in the Desired Forest Structure and Pattern Table for each vegetation type. Forest tree stand structure is defined as the general structure of the forest in each vegetation type within which is found forest openings.

Finding: This project is subject to Management Plan standards for the East Conifer forest type outlined in the Desired Forest Structure and Pattern Table. The table below addresses the Legacy Pines Project consistency with the East Conifer forest type standards. The complete Desired Forest Structure and Pattern Table can be found in Appendix A.

(b) Created forest openings shall be designed as mosaics not to exceed the limits defined as Desired in the Desired Forest Structure and Pattern Table unless proposed as a deviation as allowed under the scenic resource guideline in Review Uses1.X(4)(f).

Finding: The proposal meets this guideline because no created forest openings are expected, and canopy closure is not expected to not drop below 60 percent.

(c) Snag and down wood requirements shall be maintained or created as listed in the Desired Forest Structure and Pattern Table for each vegetation type.

Finding: The proposal meets this guideline because existing quantities of large down wood and snags will be maintained wherever possible in the treatment unit.

(d) If the treatment is proposed to deviate from the snag and down wood requirements based on forest health or ecosystem function requirements, a Stewardship Plan shall be required and shall demonstrate why a deviation from the snag and down wood requirements is required.

Finding: The proposal will not deviate from the snag and down wood requirements. A stewardship plan is not required.

Finding of consistency with the East Conifer forest type standards outlined in the CRGNSA Management Plan for the proposed action of the Legacy Pines Stand and Wildlife Habitat Improvement Project.

CATEGORY	MANAGEMENT PLAN REQUIREMENTS	PROPOSED ACTION	FINDING OF CONSISTENCY
Vegetation Type: East Conifer			
Forest Structure (Average percent total canopy closure (cc))	40 to 80 percent canopy closure Understory layer less than 25 percent of total cc	Canopy closure must be greater than 60 percent over entire cover type, ranging from 50 to 65 percent throughout the project area A widely spaced (30 to 40 feet) ponderosa pine stand with 10 to 30 Oregon white oak per acre occupying the mid-canopy. Over entire project area, fell all Douglas-fir and grand fir less than 10 inches dbh. Fell live Douglas-fir and grand fir less than 20 inches dbh that are within 30 feet of a live Oregon white oak greater than 10 inches dbh. (approximately 30 to 50 live Oregon white oak). Upper project area: Fell or push over live Douglas-fir and grand fir less than 26 inches dbh that are within 50 feet of a legacy ponderosa pine (greater than 36 inches dbh) or if their crown is within 10 feet of touching the legacy ponderosa pines. Lower project area: Fell live Douglas-fir and grand fir less than 26 inches dbh that are within 40 feet of legacy ponderosa pine (greater than 36 inches dbh) or if their crown is within 10 feet of touching the legacy ponderosa pines. All shrubs and oaks will be retained.	**Consistent**

CATEGORY	MANAGEMENT PLAN REQUIREMENTS	PROPOSED ACTION	FINDING OF CONSISTENCY
Forest Openings Size and **Percent Openings at One Time**	Openings less than 1-acre Openings have 0 to 40 percent canopy closure Openings widely dispersed 1 to 10 percent openings at one time (percent by vegetation type)	Not to exceed 4 percent of widely dispersed, variable sized mosaic of irregular shapes blending with existing openings widely spaced (30 to 40 feet) ponderosa pine stand with 10 to 30 Oregon white oak per acre occupying the mid-canopy is desirable. Smaller opening will be created via radial thinning of legacy pines and oaks.	**Consistent**
Leave Trees	No leave trees required	No leave trees proposed as part of these treatments.	**Consistent**
Average Down Wood	3 to 6 pieces greater than 20 inches dbh	1 to 3 inches diameter slash less than 5 tons per acre. 4 to 9 inches diameter slash less than 5 tons per acre. Large logs (greater than 20 inches diameter large end, greater than 30 foot length) equal to 3 to 6 pieces per acre.	**Consistent**
Average Snags	5 snags at 10 to 20 inches dbh and 3 snags greater than 20 inches dbh	Convert to standing snags, live Douglas-fir and grand fir (26 to 39 inches dbh) that are within 50 feet (upper area) and 40 feet (lower area) of legacy ponderosa pines (greater than 36 inches dbh) or if their crown is within 10 feet of touching the legacy ponderosa pine. Across stand type, outside of riparian buffers, conifer snags (20-to-40-foot height) per acre will include 5 snags at 10 to 20 inches dbh and 3 snags greater than 20 inches dbh.	**Consistent**

Recreation

SMA Guidelines

1. New development and land uses shall not displace existing recreational use.

Finding: There are no National Forest System trails or other recreational uses within the proposed project area that will be displaced by proposal. Therefore, this guideline is met.

2. Recreation resources shall be protected from adverse effects by evaluating new development and land uses as proposed in the site plan. An analysis of both onsite and offsite cumulative effects shall be required.

Finding: There are no National Forest System trails or other recreational uses within the proposed project area that will be displaced by proposal. Therefore, this guideline is met.

3. New pedestrian or equestrian trails shall not have motorized uses, except for emergency services.

Finding: This guideline is not applicable. No new pedestrian or equestrian trails proposed as part of project.

4. Mitigation measures shall be provided to preclude adverse effects on the recreation resource.

Finding: There are no anticipated adverse effects on recreation resources as a result of the proposed action.

5. The Facility Design Guidelines are intended to apply to individual recreation facilities. Development or improvements within the same Recreation Intensity Class are considered as separate facilities if they are separated by at least 1/4 mile of undeveloped land (excluding trails, pathways, or access roads).

Finding: The proposed project area is within lands designated as Recreation Intensity Class (RIC) 1 (Very Low Intensity). On SMA lands designated as RIC1, the emphasis is to provide opportunities for semi-primitive recreation. No recreation facilities are proposed.

6. New development and reconstruction of scenic routes shall include provisions for bicycle lanes.

Finding: This guideline is not applicable. No new development or reconstruction of scenic routes is proposed.

7. A local government may grant a variance of up to 10 percent to the guidelines of Recreation Intensity Class 4 for parking and campground units upon demonstration that all of the following conditions exist:

A. Demand and use levels for the proposed activity(s), particularly in the area where the site is proposed, are high and expected to remain so or increase. Statewide Comprehensive Outdoor Recreation Plan (SCORP) data and data from the National Visitor Use Monitoring Program shall be relied upon to meet the criterion in the absence of current applicable studies.

B. The proposed use is dependent on resources present at the site.

C. Reasonable alternative sites offering similar opportunities, including those in urban areas, have been evaluated, and it has been demonstrated that the proposed use cannot be adequately accommodated elsewhere.

D. The proposed use is consistent with the goals, objectives, and policies in this chapter.

E. Through site design and mitigation measures, the proposed use can be implemented without adversely affecting scenic, natural, or cultural resources and adjacent land uses.

F. Through site design and mitigation measures, the proposed use can be implemented without affecting or modifying treaty rights.

Finding: This guideline is not applicable. The project area is within lands designated as RIC1 and no variance is proposed.

8. Proposals to change the Recreation Intensity Class of an area shall require a Management Plan amendment pursuant to policies 1 through 4 in "Amendment of the Management Plan" (Part IV, Chapter 1: Gorge Commission Role).

Finding: This guideline is not applicable. Project area is within lands designated as RIC1 and no variance is proposed.

9. The Recreation Intensity Classes are designed to protect recreation resources by limiting land development and land uses.

Finding: No developments or land uses are proposed that will affect recreation resources. Because no development will occur, the Recreation Intensity Classes do not apply.

Conclusion

The proposed Legacy Pine Stand and Wildlife Habitat Improvement Project is consistent with the National Scenic Area Management Plan Policy and Guidelines provided they meet the criteria and conditions listed in the Findings of Fact and Consistency Determination.

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Appendix A. Desired Forest Structure and Pattern

Forest practices are subject to the Management Plan Part II, Chapter 2 Forest Land, SMA Guidelines. This includes Review Use (X)(5)(c) which states that snag and down wood requirements shall be maintained or created as listed in the Desired Forest Structure and Pattern Table (see below) for each vegetation type.

Desired Forest Structure and Pattern Table

Vegetation Type*	**Forest Structure** (Average percent total canopy closure (cc))**	**Typical Forest Openings Size** (Disturbance caused)		**Percent (%) Openings at One Time**		**Leave Trees** Includes all available remnant old forest	**Average Down Wood** Pieces 30 feet long per acre (scattered)	**Average Snags** Number of conifers per acre Snags are 20-40 feet in height
		Historic (Natural)	**Desired**	**Historic (Natural)**	**Desired**			
West Conifer	60 to 80% canopy closure. Understory layer variable (0 to 60% of total cc).	Variable sizes with mosaic pattern, irregular shapes. Mosaic fire 1-100 acres. Catastrophic fire over 100 acres.	Retain forested character. Allow openings up to 15 acres (up to 5 acres in the foreground of KVAs). All openings 1 acre or less on National Forest land and all Open Space LUD. Openings retain 15 to 40% canopy closure.	10% (mosaic fire) up to 55% (catastrophic fire). Intense fire return interval is 300 years.	Not to exceed 8% for West Coniferous Woodland Landscape Setting and not to exceed 4% for Gorge Walls, Canyons and Wildlands Landscape Setting. Widely dispersed, variable sized mosaic of irregular shapes blending with existing openings.	Leave 15% of existing trees per acre throughout opening and in clumps. Include 3 trees per acre of the largest size trees available.	18 to 25 pieces greater than 20 inches diameter at breast height (dbh).	10 snags at 10 to 20 inches dbh, and 7 snags greater than 20 inches dbh.
East Conifer (Ponderosa Pine/Douglas fir)	40 to 80% canopy closure. Understory layer less than 25% of total cc.	Few openings due to low intensity fires 1/4 to 2 acres.	Openings less than 1 acre. Openings have 0 to 40% canopy closure. Openings widely dispersed	1 to 10%	1 to 10% (% by vegetation type)	No leave trees required	3 to 6 pieces greater than 20 inches dbh.	5 snags at 10 to 20 inches dbh and 3 snags greater than 20 inches dbh.

Vegetation Type*	Forest Structure (Average percent total canopy closure (cc))**	Typical Forest Openings Size (Disturbance caused)		Percent (%) Openings at One Time		Leave Trees Includes all available remnant old forest	Average Down Wood Pieces 30 feet long per acre (scattered)	Average Snags Number of conifers per acre Snags are 20-40 feet in height
		Historic (Natural)	Desired	Historic (Natural)	Desired			
Ponderosa Pine/ Oregon Oak	25 to 60% canopy closure. Understory layer greater than 25% of total cc.	Most natural openings due to poor soil. Disturbance openings few.	Openings less than 1 acre. Openings have 0 to 25% canopy closure. Openings widely dispersed.	1 to 10%	1 to 10% (% by vegetation type)	No leave trees required	1 to 3 pieces greater than 20 inches dbh.	5 snags at 10 to 20 inches dbh and 3 snags greater than 20 inches dbh. Oak snags can be counted if already dead or partially dead

* Map available at the Forest Service, National Scenic Area Office, Hood River, Oregon.

** Does not apply to openings.