



Date: July 24, 2006

CD-06-08-S--Rowena Thin

DECISION MEMO and CONSISTENCY DETERMINATION for the THINNING OF 580 ACRES OF FIRE REGIME I, CONDITION CLASS 2 &3 TREE STANDS NEAR ROWENA IN WASCO COUNTY, OREGON

USDA Forest Service, CRGNSA NATIONAL SCENIC AREA

Diana Ross, Project Manager

PROPOSED ACTION

The Columbia River Gorge National Scenic Area proposes to thin oak/pine or pine/oak/Douglas-fir tree stands and pile slash by hand or mechanically. The planning area includes approximately 580 acres of Fire Regime I, condition class 2 and 3 tree stands in the Wildland-Urban Interface near Rowena in Wasco County, Oregon.

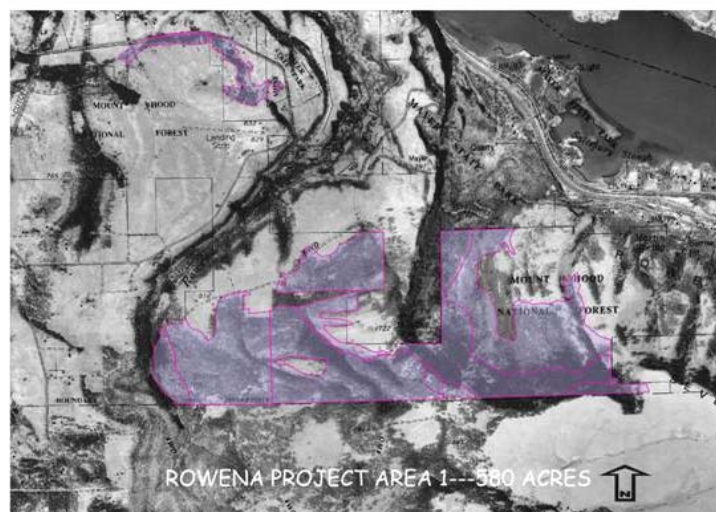
Scheduling of treatments will be based on treatment priority and the results of monitoring the stands treated in 2006. Maintenance of the thinning over time is planned to be accomplished either through prescribed underburning or by mechanical means.

Thinning will be “from below” meaning that the smallest--mostly understory trees in the stands will be removed. Access will be provided on existing roads or tracks. After the thinning is complete, temporary access will be treated to encourage revegetation by native grasses and wildflowers while minimizing erosion and encroachment of invasive species. The project implementation window for thinning and slash treatment activities is July 1 to February 28. See enclosure 2, Rowena Thin Project Description (July 5, 2006) for specific stand prescriptions and more information.

LOCATION

The project is located in 2 North, Range 12 East, Sections 3, 4, 9, & 10 as depicted on the following maps:

Vicinity Map:



PURPOSE AND NEED

PURPOSE

Fire Resilience

The Rowena collaborative planning team adopted the following objective for fire resilience:

- Wildfires will, as far as can be predicted, be surface fires that stay close to the ground under the majority of conditions. Maintenance underburns will be possible.

Ecosystem restoration

The Rowena collaborative planning team adopted the following objective for ecosystem restoration:

- Restore, as much as possible, the natural fire regime and associated habitats while protecting threatened, endangered or sensitive species and species such as the western gray squirrel.

NEED

Fire Resilience

Citizens in the Rowena area have contacted the Forest Service over the years indicating interest in reducing the fire hazards in the area. The CRGNSA Fire Suppression Department has also indicated that Rowena is a wildland-urban interface where homes and National Forest System lands are intermixed. In addition, Seven-mile Hill connects with state-owned forests leading directly to The Dalles, a population center within a very dry landscape.

In 2004, the CRGNSA conducted an analysis and documented in the 5-year Action Plan for Improving Forest Resiliency priorities for the treatment of fire dependent landscapes. These treatments were proposed in order to improve fire resilience for the objective of ecosystem health and the protection of adjacent properties. The Rowena area was determined to be a high priority because of its location near development and because past land management activities and fire suppression have left the pine-oak woodland with higher stem densities susceptible to wildfires of greater severity than typical of the natural fire regime.

Fire regimes describe the historic frequency and severity of wildland fires. Under the natural fire regime in Rowena, fires occurred at a frequency (0-35 years) repetitive enough to kill younger trees and brush. This repetitive burning reduced the fuel loading (including ladder fuels) for the next fire. Thus, under the natural fire regime, fires tended to burn at the ground surface rather than in the tree crowns. Fire suppression and the resulting exclusion altered this regime by removing an important pattern of disturbance and renewal.

Condition class is an expression of the difference between the current condition of vegetation types and the condition during the historic fire regime. It is used as a proxy for the probability of severe fire effects. (e.g., the loss of key ecosystem components - soil, vegetation structure, species; or alteration of key ecosystem processes - nutrient cycles, hydrologic regimes). Condition class is useful as an index of ecosystem risks attributable to an occurrence of wildland fire under the current regime of fire suppression.

Three condition classes have been developed to describe existing stands in fire-dependent landscapes as to the degree of alteration from the historic fire regime, and the relative risk of fire-caused losses of key components of the ecosystem:

- **Condition Class 1**-Minimally altered fire regime, moderate risk for losing key ecosystem components, little change to pattern, size, frequency, or severity of fires.
- **Condition Class 2**-Moderately altered fire regime, moderate risk for losing key ecosystem components, moderate change to pattern, size, frequency, or severity of fires.
- **Condition Class 3**-Significantly altered fire regime, high risk for losing key ecosystem components, dramatic change to pattern, size, frequency, or severity of fires.

The stands in the Rowena area were considered by the CRGNSA ecologist and fuels specialist to be in Condition Classes 1 and 2—requiring thinning and/or underburning in order to reduce the severity of wildland fires and the risk of losing ecosystem components that would not have been lost under a more natural frequent fire regime.

Ecosystem restoration

The Rowena area and the Columbia River Gorge in general are ecologically diverse. The Rowena area occupies a transitional location between the wetter western forests and the drier eastern grassland. The pine-oak woodland of the Rowena area shelter many native and sensitive species such as the Lewis' woodpecker and the western gray squirrel. Oregon white oak provides food and cover for wildlife. Acorns are important fall and early winter food for many species of wildlife including woodpeckers, western gray squirrels, and deer. Many woodpeckers and other birds eat insects and insect eggs found in the wood or fissured bark of living and dead Oregon white oak. Oak leaves are a fair-to-good quality deer browse.

Many wildlife species nest in oak cavities or use them to avoid inclement weather or predators. Open-form oak tend to provide more cavities than closed-form oak. Good habitat for both deer and turkey would be composed of diverse woodlands with both dense areas for cover, as well as open meadows. Also important is the maintenance or retention of contiguous and undisturbed areas with large mast producers (Ponderosa pine and oaks). However, with fire exclusion many oak woodlands are dense, even-aged thickets with tall slender trees competing for sunlight. These stands range from clumps of young "closed-form" oaks to scattered older, non-reproductive trees, and dying oaks being overtopped by Douglas-fir ingrowth. The presence of pine beetle stressed ponderosa pine trees in the area indicate that root competition for sparse water reserves during drought has occurred.

North-facing slopes with moisture-retaining shade currently contain the highest concentrations of younger Douglas-fir trees growing around the much older ponderosa pine, oak, and large Douglas-fir. Under a natural fire regime, the seedlings and saplings of the fir ingrowth would be periodically removed by frequent fires. Removal of these excess stems provides the opportunity for the remaining oak and pine to more effectively use the limited soil moisture and grow larger. The current conditions indicate that these cooler areas in the past contained much larger oak, pine, and Douglas-fir. Wider spacing caused by the constant disturbance of fire allowed trees more moisture and space to grow large.

Five of the fifteen endemic species of wildflower found in the Columbia River Gorge are found in the pine-oak woodlands of this transitional location. Some areas of the herbaceous understory in Rowena are relatively intact—especially at the higher elevations on Seven-mile Hill. However, as a result of past human activities such as livestock production, invasive plant infestations are fairly common. Noxious weeds such as knapweeds can be found throughout the area. Yellow star thistle is not yet as prevalent as it is on the Washington side of the Columbia River. Other significant weeds include Hound's tongue (*Cynoglossum officinale*) and Rush skeletonweed (*Chondrilla juncea*), among others. Wasco County conducts an active program to control these state listed noxious weed species. Since native plants evolved under a frequent fire regime, it can be deduced that the herbaceous understory has changed because of grazing, fire exclusion and other other human activities.

DECISION

I have decided not to implement the proposed action on low priority stands M7, M8, and M9 in order to invest Forest Service resources on high priority areas elsewhere. I have also decided to approve the remainder of the proposed action using the following adaptive management approach to implement the thinning prescriptions:

1. Implement the high priority stand thinning prescriptions but limit to thinning trees no larger than 9 inches DBH for M4, M13, M8N, M3
2. Implement Demonstration Stands as per prescription.
3. Conduct implementation and effectiveness monitoring of #1 & 2 above. If monitoring by the Forest Service in cooperation with the collaboration team and other interested public leads to the conclusion that the prescriptions are meeting project objectives, implement the second phase:
4. Thin medium priority stands M2, M5, and M6 as per prescription.
5. Implement thinning of >9" diameter thinning for M4, M13, M8N if economically feasible.
6. Conduct implementation and effectiveness monitoring of #4 & 5 above.

The rationale for my decision is based on: 1) the proposed action fully meeting the purpose and need; 2) consistency with the Mt. Hood NF Forest Plan and the CRGNSA Management Plan; 3) review of the enclosed findings-of-fact and project description; 4) review of the proceedings from public collaboration meetings; 5) review of the public comments on the project, and 6) review of the Biological Evaluation (BE).

SCOPING AND PUBLIC INVOLVEMENT

As part of a continuing collaborative effort, the CRGNSA sent an invitation letter dated March 22, 2006 to interested parties and placed it on the CRGNSA website. The letter requested participation in the design of a forest restoration project in Rowena that would meet the objectives described in the purpose and need section of this document.

From April 12 to June 2, the working group met every Thursday. The following individuals and organizations were involved:

1. 6 Private landowners or interested parties
2. Rowena Homeowners Association
3. Friends of the Columbia Gorge
4. Gifford Pinchot Task Force
5. Oregon Department of Forestry
6. Oregon State Parks and Recreation
7. Oregon Department of Transportation
8. USDA, Forest Service

The team visited many representative stands in the field every week after agreeing on the objectives. We also agreed to use the Rowena Open Space Plan as a guide for desired conditions concerning:

- **Descriptions of Attributes:** Description of the character of the overstory tree layer, understory tree layer, shrub/herbaceous layer, and openings that would be present as a result of a more natural fire regime.
- **Species Composition and Canopy Closure:** On average, what percent of the sky would be covered by the canopy of trees and how much each type of tree should contribute to this.
- **Average Tree Size (Size Composition):** Plot trees are measured at breast height (in inches) and averaged.

Prescriptions and implementation requirements: After determining the desired future conditions of each stand type, the team determined the pathway for reaching those conditions starting with a thinning in 2006.

The project description and application for scenic area review were noticed in the Oregonian, placed on the CRGNSA website and sent to the working group, the four CRGNSA tribes, the Gorge Commission, and other interested parties on June 2, 2006 for a 30-day public comment period. Five substantive comment letters were received during the comment period.

All substantive comments received during the comment period are summarized and addressed in the enclosed Findings of Fact. Each comment letter was read fully as received and were considered in this decision.

REASONS FOR CATEGORICAL EXCLUSION

The Council on Environmental Quality (CEQ) regulations at 40 CFR 1507.3 provide that agencies may, after notice and comment, adopt categories of actions that do not normally have significant impacts on the human environment and that do not require preparation of an environmental assessment (EA) or an environmental impact statement (EIS). It is my determination that this action may be categorically excluded from documentation in an EA or EIS as it is within July 6, 2004 Forest Service Handbook (FSH) 1909.15, Section 31.2, category 10:

10. Hazardous fuels reduction activities using prescribed fire, not to exceed 4,500 acres, and mechanical methods for crushing, piling, thinning, pruning, cutting, chipping, mulching, and mowing, not to exceed 1,000 acres. Such activities:

a. Shall be limited to areas:

(1) In the wildland-urban interface; or

The project area forms a boundary to private lands in Rowena, Oregon, an at-risk community identified in the Federal Register at Vol. 66 No. 160.

(2) Condition Classes 2 or 3 in Fire Regime Groups I, II, or III, outside the wildland-urban interface;

The stands proposed for treatment are defined by the project description and by the CRGNSA 5-Year Plan for Fire resilient Landscapes as Fire Regime I, condition class 2 or 3.

b. Shall be identified through a collaborative framework as described in “A Collaborative Approach for Reducing Wildland Fire Risks to Communities and Environment 10-Year Comprehensive Strategy Implementation Plan”;

On March 22, 2006, the CRGNSA Area Manger sent a letter to interested parties requesting participation in a collaborative effort to design a vegetation management project in Rowena to meet the objectives described

in the purpose and need section of this document. From April 12 to June 2, the working group met every Thursday and developed the project description elements discussed under Scoping and Public Involvement above. The project is supported by the Wasco County and is compatible with the Community Wildfire Protection Plan. It has also been coordinated with state forestry treatments on adjacent lands.

c. Shall be conducted consistent with agency and Departmental procedures and applicable land and resource management plans;

The project is consistent with the applicable procedures and plans are discussed on page 5 of this document.

d. Shall not be conducted in wilderness areas or impair the suitability of wilderness study areas for preservation as wilderness; and

No wilderness areas or wilderness study areas are located in the project area.

e. Shall not include the use of herbicides or pesticides or the construction of new permanent roads or other new permanent infrastructure; and may include the sale of vegetative material if the primary purpose of the activity is hazardous fuels reduction.

The project does not include the use of herbicides. Herbicide use in invasive plant treatment is covered in a separate EIS.

Considering the above findings, the project fits Category 10.

EXTRAORDINARY CIRCUMSTANCES

After review of the Biological Evaluation document in the project file, and specialist reports, I have determined that the proposed action is consistent with the Forest Plan and CRGNSA Management Plan and that there are no extraordinary circumstances that indicate a presence of possible significant effects.

a. Federally listed threatened or endangered species or their designated critical or essential habitat.

The CRGNSA Wildlife Biologist and Botanist/Ecologist evaluated the proposed action with regard to the Endangered Species Act as documented in the Biological Evaluation. It was determined that this project would have no adverse effects on any federally listed wildlife or plant populations.

b. Species proposed for federal listing or proposed critical habitat or Forest Service sensitive species.

No species proposed for listing or Forest Service sensitive species are expected to be affected by this project. While a few individuals of a sensitive species may be impacted, this action, as a result of design criteria and implementation requirements, was determined to not contribute towards listing of any species.

c. Floodplains, wetlands, or municipal watersheds.

Site review by the CRGNSA Hydrologist and Botanist/Ecologist confirmed the project area is not located in, or will not affect any floodplain or wetland as discussed in the enclosed Findings of Fact.

d. Congressionally designated areas, such as wilderness, wilderness study areas, or National Recreation Areas.

The proposed project is located within the Columbia Gorge National Scenic Area. The project has been found to be consistent with the CRGNSA Act and Management Plan as indicated by the enclosed Findings of Fact.

e. Inventoried roadless areas.

The proposed project site is not located within any inventoried roadless areas.

f. Research Natural Areas.

No Research Natural Areas are part of this project.

g. American Indian and Alaska Native religious or cultural sites, archaeological sites, or historic properties or areas.

A cultural resource overview and field survey was completed for this project. Archaeological sites will be located outside of the boundaries for treatment. No known religious/cultural sites are located within the area proposed for treatments.

MT. HOOD NATIONAL FOREST LAND AND RESOURCE MANAGEMENT PLAN and the COLUMBIA RIVER GORGE NATIONAL SCENIC AREA ACT AND MANAGEMENT PLAN.

Based on the enclosed Findings of Fact, I also find that this project is consistent with the Columbia River Gorge National Scenic Area Act and Management Plan and the Mt. Hood Forest Plan as amended by the Northwest Forest Plan provided that it is implemented as described in the enclosed project description as modified by the CRGNSA Consistency Determination Findings of Fact, referenced as CD-06-08-S, and that the following conditions are applied:

1. Follow the implementation requirements 1-38 listed in the July 5 Project Description pages 19-21.
2. The archeological sites shall be identified in the field and taken out of the ground-disturbing treatment boundaries, including the appropriate buffers.
3. should any historic or prehistoric cultural resources be uncovered during project activities, the applicant shall cease work and immediately notify the CRGNSA office and the Oregon State Historic Preservation Office. The applicant should also notify the Indian Tribal governments within 24 hours if the resources are prehistoric or otherwise associated with Native American Indians.
4. Existing dead and down large woody material shall remain.
5. The treatment areas be reviewed for snag creation needs as part of this project.
6. Monitoring of the project soil disturbing activities shall take place after implementation and any disturbed soil seeded with vegetation native to the area at the start of the following wet season.

FINDINGS REQUIRED BY OTHER LAWS

National Historic Preservation Act: No cultural resources would be adversely affected by the proposed action. Cultural resources have been surveyed and site-specific mitigation (avoidance) has been applied. If further sites are identified during project implementation, activity would cease and the CRGNSA Archaeologist would be consulted.

Endangered Species Act: The CRGNSA Wildlife Biologist and Botanist/Ecologist evaluated the proposed action with regard to the Endangered Species Act as documented in the Biological Evaluation. It was determined that this project would have no adverse effects on any federally listed wildlife or plant populations. No species proposed for listing or Forest Service sensitive species are expected to be affected

by this project. While a few individuals of a sensitive species may be impacted, this action, as a result of design criteria and implementation requirements, was determined to not contribute towards listing of any species.

National Forest Management Act Requirements for Vegetation Manipulation: The National Forest Management Act and accompanying regulations require that several specific findings be documented at the project level. All proposals that involve vegetation manipulation of tree cover for any purpose must comply with the requirements found in 36 CFR (Code of Federal Regulations) 219.27(b). The proposed activity complies with NFMA (refer to the NFMA Consistency document in the project file).

Clean Water Act and State Water Quality Laws: The CRGNSA fisheries biologist and hydrologist have determined that this project complies with the Clean Water Act, state water quality laws, and would protect beneficial uses.

Environmental Justice: I assessed the proposed action to determine whether it would disproportionately impact minority or low-income populations, in accordance with Executive Order 12898. No impacts to minority or low-income populations were identified during scoping or the effects analysis.

Migratory Bird Treaty Act: I find that there are no known substantial losses of migratory bird habitat expected from the implementation of this proposal (refer to the BE in the project file). For other migratory birds that may use the project area, the proposed action **will not cause a trend toward federal listing or loss of population viability** within the CRGNSA.

Appeal Opportunities: A written request for review of the Consistency Determination, with reasons to support the request, must be received within 20 days of the date shown with the Area Manager signature below. Requests for review are addressed to: Regional Forester, P.O. Box 3623, Portland, OR 97208.

The NEPA portion of this decision is subject to appeal pursuant to Forest Service regulations at 36 CFR 215. Any individual or organization that submitted substantive comments during the comment period may appeal. Any appeal of this decision must be in writing and fully consistent with the content requirements described in 36 CFR 215.14.

The Appeal Deciding Officer is Linda Goodman, Regional Forester. An appeal should be addressed to the Regional Forester at any of the following addresses. Postal: ATTN.: 1570 APPEALS, P.O. Box 3623, Portland, OR 97208-3623; Street location for hand delivery: 333 SW 1 5t Ave, Portland, OR (office hours: 84:30 M-F); fax: 503-808-2255.

Appeals can also be filed electronically at: appealspacificnorthwest-regional-office@fs.fed.us. Electronic appeals must be submitted as part of the actual e-mail message, or as an attachment in Microsoft Word (.doc), rich text format (.rtf), or portable document format (.pdf) only. E-mails submitted to email addresses other than the one listed above, or in formats other than those listed, or containing viruses, will be rejected. It is the responsibility of the appellant to confirm receipt of appeals submitted by electronic mail. The Appeal, including attachments, must be postmarked or received by the Appeal Deciding Officer within 45 days of the date that the legal notice of this decision was published in the Oregonian. The Appeal is due by September 7, 2006.

Implementation Date: This project may begin 5 business days after the last day of the appeal period as long as it complies with the conditions as described in items 1-6 on page 7 and no appeals are on file.

Contact Person: The Columbia River Gorge National Scenic Area staff prepared an analysis file in conjunction with this project. For further information, contact Diana Ross at the Columbia River Gorge National Scenic Area, 541.308.1716, e-mail: dlross@fs.fed.us.

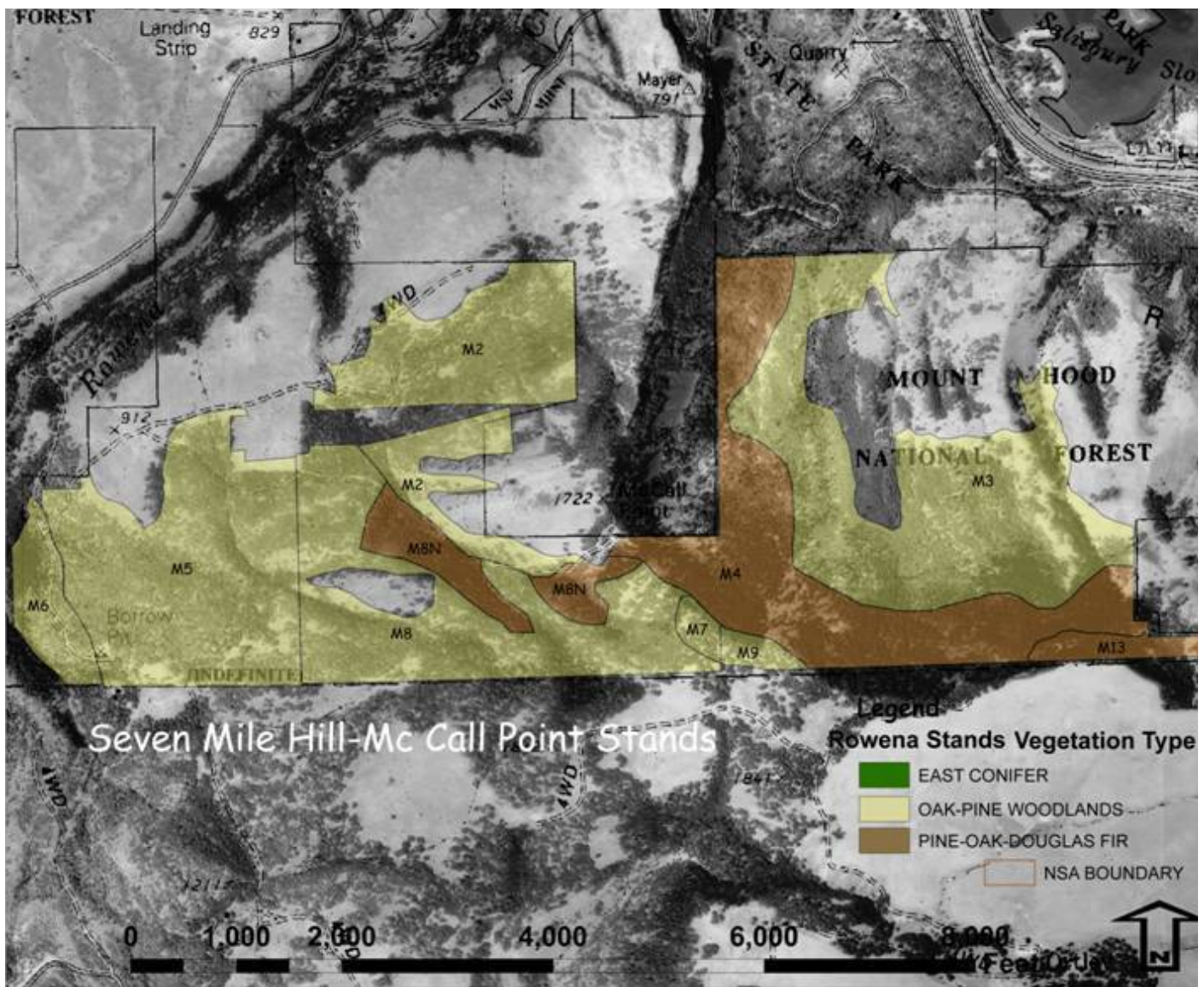
DANIEL T. HARKENRIDER
Area Manager

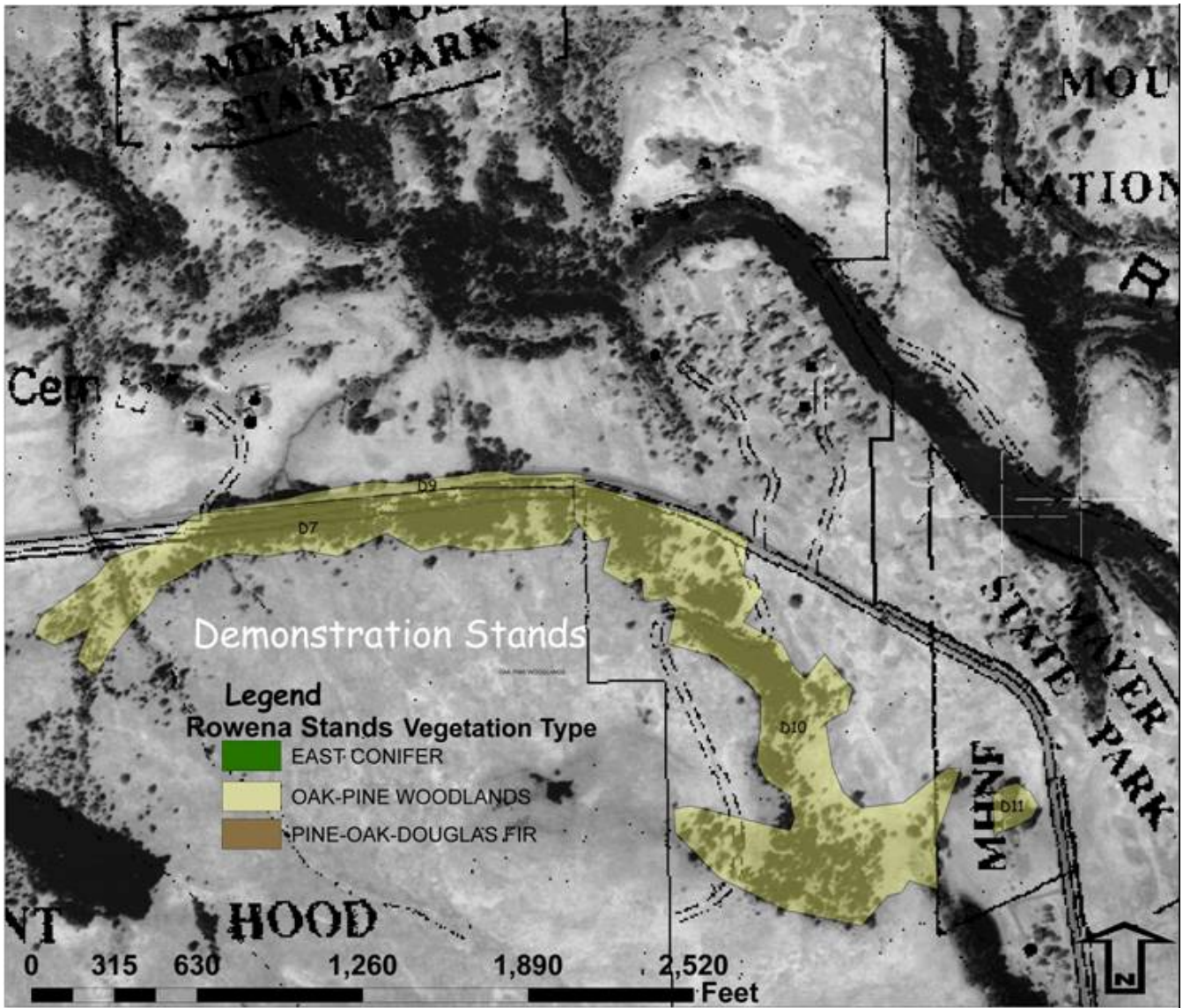
Date: July 24, 2006

cc: Acting Executive Director, Columbia River Gorge Commission
Rowena Collaborative Team and other commenters

FINDINGS OF FACT

LANDOWNER:	USDA Forest Service
TITLE PROPOSED ACTION:	Rowena Forest Restoration CD-06-08-S Treatment (Thinning from below) and/or underburning of 580 acres of Fire Regime I, Condition Class 2& 3 tree stands in the Rowena area.
LOCATION:	2 North, Range 12 East, Sections 3, 4, 9, & 10
NATIONAL SCENIC AREA DESIGNATION:	Special Management Area (SMA) (some GMA on 7-mile hill)
LAND USE DESIGNATIONS:	Open Space and Agriculture
LANDSCAPE SETTING:	Oak-Pine Woodland and Gorge Walls, Canyonlands, Wildlands





Introduction

The following findings of fact contain the applicable standards and guidelines from the CRGNSA Management Plan. The CRGNSA Management Plan standards and guidelines are displayed in **bold type**. The findings are displayed in regular type.

Management Plan policy requires that projects on National Forest lands also be consistent with the Land and Resource Management Plans of the adjacent National Forest. The Forest Service applies the more protective standard of either the CRGNSA Plan or the Land and Resource Management Plan. Where standards of the Mt. Hood National Forest Land and Resource Management Plan are more protective than the CRGNSA Plan, they are included for review.

A. Public Comment

A total of 5 public comment letters were received during comment period. The full text of the comments and supporting documentation are available on request. Specific substantive comments are discussed under the appropriate resource in the findings of fact. The following summarizes the comments received.

1. On June 8, we received a comment from Jonathan Soll of the Nature Conservancy who expressed the following concerns which were also shared in a June 28 letter from another interested party:

- *Disturbance to the understory leading to increase in invasive plants such as cheatgrass.*
- *Area is too large for a trial.*
- *Understory in the area is in too good a condition to test new approaches.*
- *Use of heavy machinery and “temporary roads.”*
- *Annual grasses increase fire risk.*

2. On June 20 we received a letter from a resident of Lyle whose main concerns are:

- *Cutting small diameter oak causes re-sprouting of the oak more than cutting large oaks.*
- *Elk sedge is effective against invasives but is sensitive to disturbance by machinery.*
- *Roots of Oregon white oak should not be subjected to herbicide to control sprouts or death of the whole tree will result.*

3. On June 28, we received comment from an individual whose concerns were the same as those under June 8 above as well as the following:

- *Drop the project or set aside units M7, M8, M9 and part of M5 because of risk of damage to the ecosystem.*
- *Good understory is rarer than good oaks.*
- *Rowena understory is in good condition and should not be risked to create good oaks.*
- *Oaks will dominate regardless of treatment due to low rainfall, wind, and soil conditions.*
- *Soil disturbance from cutting trees, oak sprouts, fire line ,haul routes, burn piles, new roads, and spring burning.*
- *Unwanted effects from prescribed underburning.*
- *Exotic species introduction and lack of remedies.*
- *Opening oak stand may make them more flammable.*
- *Oak stands already fire resilient enough.*
- *Cutting small diameter oaks may be cutting old growth oaks*
- *Keep “no cutting” on oak mounds.*
- *Disease spread by going from one oak to another.*
- *Lack of evidence for assumptions about oak woodlands on Seven-Mile Hill.*
- *Current oak growth on Seven-Mile Hill is natural.*
- *Sprouting will cause smaller trees rather than larger trees.*
- *No evidence of regular burning by Native Americans in this area.*
- *No evidence than thinning oaks makes them grow bigger.*
- *Do these kind of projects in areas of higher rainfall not here where the understory stays open naturally.*

4. On June 29, we received comment from Friends of the Columbia Gorge. Friends reviewed the applicable Management Plan guidelines. These will be reviewed in the following Findings of Fact sections C-G. The substantive concerns were:

- *Twin Tunnel area must be covered with the rest of Rowena as one action under NEPA.*
- *Fire regime data not from local area.*
- *Concerned about visible haul routes and slash piles.*
- *Risk of invasive weeds as a result of project activities.*
- *Use of mechanized equipment and soil disturbance.*
- *Protect plant growth, bird nesting, and gray squirrel nesting.*
- *Presence of sensitive plants in the planning area.*
- *Soil compaction and disturbance from hauling and/or haul route construction.*

5. On June 30, we received comment from a resident of Hood River whose main concerns were:

- *Concerned that FS is preparing to alter an area that does not need it.*
- *Pine is in trouble on Seven-mile hill.*
- *Too much pine and oak in the desired condition for M4.*
- *Do not remove fir to plant oak and pine.*
- *Let fire occurrences rather than mechanical treatments thin the oaks.*
- *Oak mounds are unique.*
- *Concerned about effects of this project on islands of Douglas-fir on adjacent land.*

B. Project Proposal

Starting in 2006, the Columbia River Gorge National Scenic Area proposes to thin and underburn the Rowena Project Area which is approximately 580 acres of Fire Regime I, condition class 2 and 3 tree stands in the Wildland-Urban Interface in near Rowena in Wasco County, Oregon.

- Thinning will be “from below” meaning that the smallest--mostly understory trees in the stands will be selectively removed to achieve the prescribed canopy closure, species preference and size classes after treatment.
- Stands will be considered for inclusion into a maintenance underburning schedule after thinning or will be underburned without thinning if objectives can be met. Oak sprouts will be managed mechanically for a period of two years if not controlled by underburning. Planting of selected native species will be considered where needed to meet desired conditions.
- Slash will be machine or hand piled and burned or chipped. Stands will require a 2.5-3ft. wide fire line around treatment areas before burning where no other fuel break exists.
- Post-activity for monitoring for invasive plants is planned. Invasives will be treated pursuant to currently approved invasive plant and noxious weed management strategies.
- Haul routes will be on existing roads or tracks.
- All newly disturbed temporary access and fire line will be seeded with native grasses and wildflowers.
- The project implementation window for thinning and slash treatment activities is July 1 to February 28.
- The implementation window for prescribed underburns will vary according to conditions at the specific site. The project manager will confer with CRGNSA resource specialists

on a burn plan before proceeding with a prescribed burn. Fall is the preferred season. The desired condition is to underburn on a 5-year rotation.

See enclosure 2, Rowena Thin Project Description (July 5, 2006) for specific stand prescriptions and more information.

Friends of the Columbia River Gorge (Friends) stated in a comment letter on June 29, 2006 that the Forest Service must consider the Twin Tunnels area in this document. Jill Dufour, the FS Regional NEPA specialist stated in a meeting with Diana Ross, CRGNSA NEPA coordinator, that the area is different in character, in a different watershed, over 5 miles from Rowena Dell and Seven-mile Hill, and, as discussed within the working group, has different issues. Therefore, it is appropriate to analyze that area at a later date.

C. Land Use Designations

1. The Management Plan, Part II, Chapter 1 (Agricultural Land) SMA Guidelines, and Chapter 3 (Open Space) Review Uses state:

1. **The following uses may be allowed on lands designated Large-Scale or Small-Scale Agriculture subject to compliance with guidelines for the protection of scenic, cultural, natural, and recreation resources:**
 - M. **Resource enhancement projects for the purpose of enhancing scenic, cultural, recreation and/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...**
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.**
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 and/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...**

Findings: The eastern half of the Seven-mile hill area lies within the Open Space land use designation. The remainder of the project area is within the Agriculture land use designation. The western-most stands on Seven-mile hill are designated GMA Agriculture. The Forest Service will follow the SMA forest practices guidelines for all areas. The CRGNSA completed an Open Space Plan for the area in 2005. The Rowena Working Group used the Desired Conditions described in the plan for stands in the project area.

The Management Plan defines a forest practice as “Any activity conducted on or directly pertaining to forested land and relating to forest ecosystem management including but not

limited to growing, thinning, or removing live or dead forest tree or shrub species, road and trail construction, reforestation, fertilizing, brush control, prevention of wildfire, and suppression of diseases and insects...”

According to the project description, the objectives for the forest practice (including prescribed underburns) are to restore, as much as possible, the natural fire regime and associated habitats while protecting threatened, endangered or sensitive species and species such as the western gray squirrel. Wildfires after treatment would, as far as can be predicted, be surface fires that stay close to the ground under the majority of conditions. Maintenance underburns will be possible. This would be accomplished by thinning trees so that the stands will be open enough to allow prescribed burning to maintain resiliency and restore the habitats associated with a more frequent, surface fire regime.

Therefore, the project is a resource enhancement project as defined and is an allowed use in Open Space designations.

D. Scenic Resources

- 1a. The Management Plan, Part II, Chapter 2 (Forest Land) SMA Guidelines, states:
 - (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.

1b. The Management Plan, Part I, Chapter 1, Scenic Resources, states:

SMA Guidelines

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

REQUIRED SMA SCENIC STANDARDS		
LANDSCAPE SETTING	LAND USE DESIGNATION	SCENIC STANDARD
Gorge Walls, Canyonlands, Wildlands, Oak-Pine Woodland	Forest (National Forest Lands), Open Space	Not Visually Evident
Oak-Pine Woodland	Agriculture	Visually Subordinate

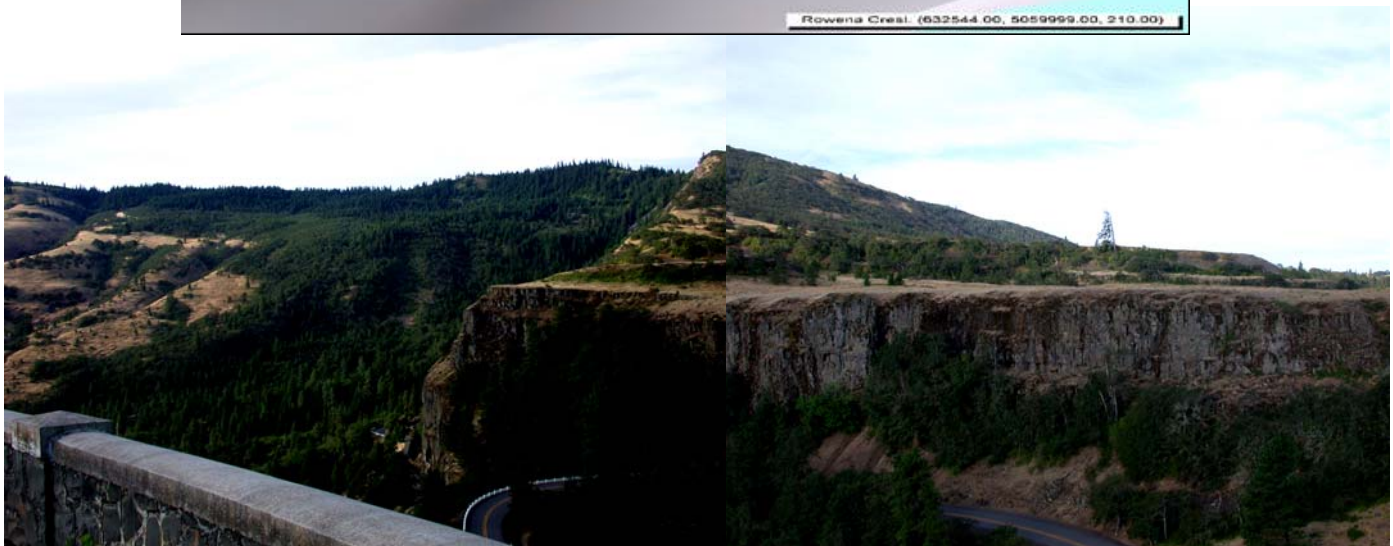
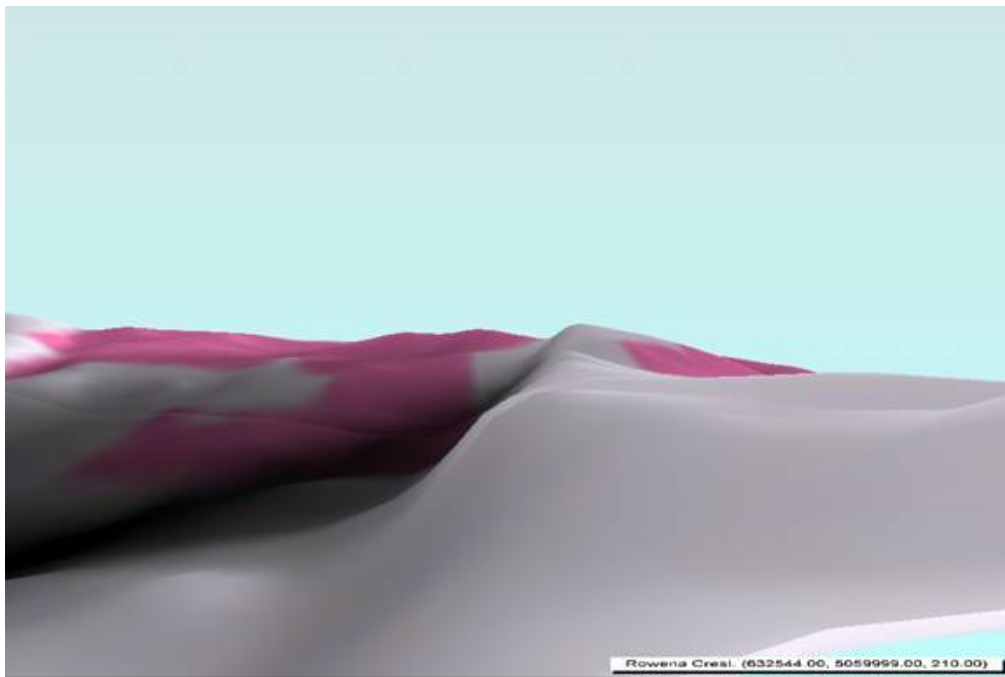
Findings: The project area is located in the Oak-pine Woodland or Wildlands landscape setting and the Open Space land use designation. The scenic standard that the project must meet is visually not evident from Key Viewing Areas (KVAs) which is defined as “**a visual quality standard that provides for development or uses that are not visually noticeable to the casual visitor. Developments or uses shall only repeat form, line, color, and texture that are frequently found in the natural landscape, while changes in their qualities of size, amount, intensity, direction, pattern, etc., shall not be noticeable**”. The project area is also located in the Oak-pine Woodland landscape setting and Agriculture land use designation. The scenic standard for the Demonstration Stands area and the western side of Seven-mile hill is visually subordinate from Key Viewing Areas (KVAs) which is defined as “A description of the relative visibility of a structure or use where that structure or use does not noticeably contrast with the surrounding landscape...**Visually subordinate forest**”

practices in the SMA shall repeat form, line, color, or texture common to the natural landscape, while changes in their qualities of size, amount, intensity, direction, pattern, etc., shall not dominate the natural landscape.”

Diana Ross, CRGNSA landscape architect provided the following scenic analysis:

Key Viewing Areas: The project is topographically visible from the Columbia River, I-84, Tom McCall Point, the Historic Columbia River Highway(HCRH) at the Rowena Crest Viewpoint near Rowena Dell, and SR-14. The viewpoints selected for detailed analysis were the HCRH viewpoints and Tom Mc Call point because they are within the foreground or close middleground distance zones. The project will meet the required scenic standard without mitigation from the rest of the KVAs from which it is visible due to distance, the degree of the thinning, and the location of the treatment areas.

The photo panorama below was taken from Rowena Crest Viewpoint and the illustration above the photo shows the project area in pink:



Form, Line, Color, or Texture Common to the Natural Landscape

Findings: The following chart summarizes findings concerning the elements described in the definition of visual subordination for forest practices. The short-term negative factors require mitigation in order to be visually subordinate and not dominate--especially the foreground views:

LANDSCAPE ELEMENTS From KVA'S	NATURAL	EXISTING	AFTER TREATMENT	DEGREE CHANGE (From Natural)
LANDSCAPE PATTERN (Form/Line)	MOSAIC	MOSAIC (fewer openings)	MOSAIC (no change from existing although some existing openings may be more visible)	MINIMAL (due to existing conditions rather than treatments)
LANDSCAPE STRUCTURE (Form, Line, Color)	Large Trees Park-like or Cathedral-like Orange bark visible on large pines.	Smaller Trees Not park-like Except at very low elevation. Not Cathedral-like Few visible large pines	Larger Trees more visible but not big Enough for Cathedral-like Park-like possible More large pine may be visible. Fewer trees visible over oaks. Short-term effects from prescribed fire red needles, etc. are common to the natural landscape.	Short Term: MEDIUM (but caused by existing condition more than by treatment) Long Term: MINIMAL, Prescribed fire would help create park-like, cathedral conditions.
GROUND PLANE (Color, Texture)	Grasses Wildflowers Short Shrubs	Many areas grass and wildflower layer shaded out. Shrubs overgrown.	Short Term: Disturbed ground, stumps, slash, spindly trees, boundary marks, Long-term: Improved layer of Grasses, Wildflowers, Short Shrubs	Short Term: MEDIUM Long Term: MINIMAL Concern for Foregrounds only

Friends of the Columbia Gorge commented that there is a concern about visible haul routes. Off-highway haul routes will all be on existing roads and will not be visible from KVAs except from the top of Tom McCall Point where the route may be already visible. All soil disturbance is required to be re-seeded to avoid invasive plant infestation. This will also provide mitigation for scenic resources.

The project description also stipulates the following requirements to meet scenic standards:

- Visible stumps within the near Foreground (200 ft.) of the Historic Columbia River Highway shall be flush cut and covered with duff or chipped slash. No slash will be piled where visible from within the near foreground of the HCRH, Tom Mc Call point, or on trails. In these locations, slash shall be chipped and used to help cover stumps.
- Leave islands (if necessary for scenic resources) will be combined with leave islands for natural resources where possible.
- A CRGNSA landscape architect shall be consulted during cut tree marking, or training thinning crews for stands adjacent to the Historic Columbia River Highway (HCRH).
- No permanent tree marking shall be used except the marking of boundary trees near the base of each tree. No marking shall be visible from the HCRH.

With these requirements, the project will meet scenic standards.

2. Created Opening Chapter 2 (Forest Land) SMA Guidelines Review uses, **1.X.(4) b-g**

Findings: The Management Plan discusses two vegetation types for the area: East Conifer and Ponderosa Pine/Oregon Oak. The working group used more finely described vegetation types in order to be more precise about desired conditions and silvicultural prescriptions. The Oak/pine woodlands vegetation type is the same as the Management Plan Ponderosa Pine/Oregon Oak type. The Pine/Oak/Douglas-fir type described by the working group is “between” East Conifer and Ponderosa Pine/Oregon Oak and contains some characteristics of both.

The Management Plan defines a created opening as an 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."

No created openings are proposed and no created openings will result from this project. Prescriptions for the east conifer and oak/pine vegetation types require average canopy closures that fall within the desired limits required by the Management Plan as indicated below with an excerpt from the Desired Forest Pattern and Structure table below:

<u>Vegetation Type#</u>	<u>Forest Structure</u> (Average % total canopy closure (cc))*
<u>Ponderosa Pine/ Oregon Oak</u>	25-60% canopy closure PROPOSED: 30-70% PINE/OAK DF PROPOSED: 25-60% OAK-PINE WOODLANDS Understory layer greater than 25% of total cc.

E. Cultural Resources

1. The Management Plan, Part I, Chapter 2, Cultural Resources, states:

- 1. **SMA Policies**
- 2. **New developments or land uses shall not adversely affect significant cultural resources.**
- 7. **The Forest Service shall be responsible for performing steps 1 through 5 under guideline 4 for forest practices and National Forest system lands.**
- 8. **The Forest Service shall consult with the Indian tribal governments and other consulting parties in performing steps 1 through 5 under guideline 4.**

Finding: Marge Dryden, CRGNSA archeologist stated in a June 20, 2006 memo that “I have completed my review of the Rowena Restoration Project areas in the Seven-mile Hill vicinity. There is one archaeological site that will need to be avoided. It was my finding that, with exclusion of the area encompassing this site, historic properties will be avoided and that no further consultation is necessary.”

In order to avoid adverse effects, Marge Dryden recommended that a condition be placed requiring that the archeological sites be identified in the field and taken out of the ground-

disturbing treatment boundaries, including the appropriate buffers. Thinning, piling and burning the project area outside of the archaeological sites will have no effect on any significant prehistoric or early historic cultural resources, according to Ms. Dryden.

An additional condition should be placed stating that should any historic or prehistoric cultural resources be uncovered during project activities, the applicant shall cease work and immediately notify the CRGNSA office and the Oregon State Historic Preservation Office. The applicant should also notify the Indian Tribal governments within 24 hours if the resources are prehistoric or otherwise associated with Native American Indians.

F. Natural Resources

1. The Management Plan, Part II, Chapter 2 (Forest Land) SMA Guidelines, states:

(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.

Findings:

Fire Resilience

In 2004, the CRGNSA conducted an analysis and documented in the 5-year Action Plan for Improving Forest Resiliency priorities for the treatment of fire dependent landscapes. These treatments were proposed in order to improve fire resilience for the objective of ecosystem health.

Fire regimes describe the historic frequency and severity of wildland fires. Under the natural fire regime in Rowena, fires occurred at a frequency (0-35 years) repetitive enough to kill younger trees and brush. This repetitive burning reduced the fuel loading (including ladder fuels) for the next fire. Thus, under the natural fire regime, fires tended to burn at the ground surface rather than in the tree crowns. Fire suppression and the resulting exclusion altered this regime by removing an important pattern of disturbance and renewal.

Condition class is an expression of the difference between the current condition of vegetation types and the condition during the historic fire regime. It is used as a proxy for the probability of severe fire effects. (e.g., the loss of key ecosystem components - soil, vegetation structure, species; or alteration of key ecosystem processes - nutrient cycles, hydrologic regimes). Condition class is useful as an index of ecosystem risks attributable to an occurrence of wildland fire under the current regime of fire suppression.

Three condition classes have been developed to describe existing stands in fire-dependent landscapes as to the degree of alteration from the historic fire regime, and the relative risk of fire-caused losses of key components of the ecosystem:

- **Condition Class 1**-Minimally altered fire regime, moderate risk for losing key ecosystem components, little change to pattern, size, frequency, or severity of fires.
- **Condition Class 2**-Moderately altered fire regime, moderate risk for losing key ecosystem components, moderate change to pattern, size, frequency, or severity of fires.
- **Condition Class 3**-Significantly altered fire regime, high risk for losing key ecosystem components, dramatic change to pattern, size, frequency, or severity of fires.

There were public comments concerning the reliability of the fire regime classifications and the impact of relatively current fire history on the stands proposed for treatment in Rowena. The stands in the Rowena area were considered by the CRGNSA ecologist and fuels specialist to be in Condition Classes 1 and 2—requiring thinning and/or underburning in order to reduce the severity of wildland fires and the risk of losing the ecosystem components that would not have been lost under a more natural regime.

The fire statistics review included in the Rowena Open Space Plan included fires from 1992 through 2004. Those statistics included some 34 fires which had burned within the planning unit. These statistical fires were all human caused and ranged in source from fireworks and cigarettes to railroad, farm equipment and power lines. Of the 34 fires 9 fires were classified as significant (based on size and/or complexity). Given aggressive fire suppression action the vast majority of these fires, approximately 25, burned less than one acre. With the exception of the *Rowena Fire*, the remainder of these fires burned between 1 and 15 acres. None of these 9 fires burned on federally managed land currently proposed for treatment.

The largest fire reviewed was the *Rowena Fire* which burned in 1998. This fire consumed some 1200 acres of grass, oak and ponderosa pine to the east of the proposed treatment area. Drawing on the institutional memory of the fire community it appears that that same piece of ground burned in the mid 1960's, likely 1964. Very little, if any, of the area currently proposed for treatment has burned in the last 12 years. It is likely that with the exception of the two significant Rowena fires (1964 & 1998) little, if any, of the federally managed ground currently proposed for treatment has burned (at the least) in over 40 years. This is also why it is not logical to rely on future fire occurrences to improve conditions. The risk of a large fire is always present, but the frequency at which they will occur will not create results comparable to the historic regime. The severity will increase as frequency decreases.

According to the CRGNSA fuels specialist, the application of the fire regime classifications to current plant communities is the best known way to reconstruct the likely past fire history. These regimes were developed using fire scar and other direct data. For example, according to fire ecology data, Oregon white oak was subjected to a fire regime of low severity surface fires occurring every few years. A study in Oregon white oak woodlands of Humboldt Redwoods State Park revealed a history of fire every 7.5 to 13.3 years during the pre-settlement era.

There was also concern that opening oak stands may make them more flammable and that they are currently fire resilient enough. According to the CRGNSA fuels specialist, although thickly stocked oak stands pose less of a risk during the entire calendar year than conifer stands, when they are driest and most flammable, they are a risk to adjacent property and themselves in that the fires will not stay on the ground but will consume the oak crowns which provide important forage for wildlife.

According to Bill McArthur, the Forest Service regional silviculturist and recent research, the reduction in fire risk is directly connected to periodic maintenance of the reduction of fuels. The CRGNSA 5-year Action Plan for Improving Forest Resiliency includes prescribed fire at approximately 5 year intervals as the method for maintenance.

Ecosystem restoration

The Rowena area and the Columbia River Gorge in general are very ecologically diverse. The Rowena area occupies a transitional location between the wetter western forests and the drier eastern grassland. The pine-oak woodland of the Rowena area shelter many native and sensitive species such as the Lewis' woodpecker and the western gray squirrel. Oregon white oak provides food and cover for wildlife. Acorns are important fall and early winter food for many species of wildlife including woodpeckers, western gray squirrels, and deer. Many woodpeckers and other birds eat insects and insect eggs found in the wood or fissured bark of living and dead Oregon white oak. Oak leaves are a fair-to-good quality deer browse.

Many wildlife species nest in oak cavities or use them to avoid inclement weather or predators. Open-form oak tend to provide more cavities than closed-form oak. Good habitat for both deer and turkey would be composed of diverse woodlands with both dense areas for cover, as well as open meadows. Also important is the maintenance or retention of contiguous and undisturbed areas with large mast producers (Ponderosa pine and oaks). However, with fire exclusion many oak woodlands are dense, even-aged thickets with tall slender trees competing for sunlight. These stands range from clumps of young "closed-form" oaks to scattered older, non-reproductive trees, and dying oaks being overtopped by Douglas-fir ingrowth. The presence of pine beetle stressed ponderosa pine trees in the area indicate that root competition for sparse water reserves during drought has occurred.

North-facing slopes with moisture-retaining shade currently contain the highest concentrations of younger Douglas-fir trees growing around the much older and/or larger ponderosa pine, oak, and stumps of large old trees. Under a natural fire regime, this ingrowth would not have survived. The thicker growth is not as sustainable over time as larger trees growing further apart because there is a greater risk that wildfire will climb into the crowns and kill the whole stand. Also, all of the younger trees are competing for limited moisture. The current conditions indicate that these cooler areas in the past contained much larger oak, pine, and Douglas-fir. Wider spacing caused by the constant disturbance of fire allowed trees more moisture and space to grow large.

Five of the fifteen endemic species of wildflower found in the Columbia River Gorge are found in the pine-oak woodlands of this transitional location. Some areas of the herbaceous understory in Rowena are relatively intact—especially at the higher elevations on Seven-mile Hill. However, as a result of past human activities such as livestock production, invasive plant infestations are fairly common. Noxious weeds such as knapweeds can be found throughout the

area. Yellow star thistle is not yet as prevalent as it is on the Washington side of the Columbia River. Other significant weeds include Hound's tongue (*Cynoglossum officiale*) and Rush skeletonweed (*Chondrilla juncea*), among others. Wasco County conducts an active program to control these state listed noxious weed species. Since native plants evolved under a frequent fire regime it is assumed that the herbaceous understory has changed because of fire exclusion although it is difficult to judge these changes because the plant species composition has been altered over the years.

According to the CRGNSA vegetation team leader and the CRGNSA ecologist, the prescriptions in the project description are intended to accomplish the following toward meeting the restoration objectives.

1. Remove the ingrowth of small trees that have accumulated over the years of fire suppression in order to
 - Remove root and moisture competition from existing large Oregon oak, Ponderosa pine and Douglas-fir.
 - Reduce the incidence of mortality from Ponderosa pine beetle by reducing the root and moisture deficits for Ponderosa pine.
 - Remove ladder fuels from below the larger trees to reduce the risk of losing whole stands of trees.
 - Improve spacing between trees to reduce fire spread.
 - Allow prescribed underburning to maintain this more open forest without danger of losing the overstory canopy.
 - Allow sunlight into the stands to produce new Ponderosa pine seedlings and to improve the health of the herbaceous understory.
 - Allow sunlight into the stands to improve the shrub and wildflower component of the herbaceous understory.
2. Thin smaller trees where large trees are currently missing in the landscape in order to replace the large tree character in the landscape for wildlife habitats.
3. Convert some of the small-diameter clumpy oak forms with clumps of fewer trunks with larger diameters.
4. Allow the application of a more natural fire regime than the regime of general suppression.

Effects of Treatment on Oaks and Oak Herbaceous Understory

Herbaceous Understory

According to the CRGNSA specialists, the effect of thinning and underburning on the herbaceous understory will be to directly benefit it as described above under ecosystem restoration. There were some public comments concerning the condition of the understory on Seven-mile hill---that it is too good to risk. The CRGNSA specialists noted the following:

- The understory is variable and some areas have fewer invasives than others, however, none of it is pristine due to introduced grasses and a lack of native bunchgrasses.
- The wildfire on the far eastern ridge visited by the working group caused improvement of the understory.
- There was no indication that the disturbance caused invasive weeds.
- There are many small Douglas-firs that will further shade the understory over the years. It will not remain static.

The project description by the working group includes implementation requirements in order to mitigate the risk of invasive plant introduction because of soil disturbance during treatments. Please refer to the Wildlife and Plants findings on page 19.

Oak mounds, Oak release, oak thinning, and oak sprouting

There were several public comments concerning the ecology of the oak-pine woodlands. There were concerns that the oaks would not respond to the treatment or that the treatment will cause even smaller oaks due to sprouts, that herbicides would kill oak trees, or that the existing conditions of the oaks are currently at desired conditions. There was a special concern about the windy higher elevations on Seven-mile hill where the best herbaceous understory is located and where the oak mound form is found. According to the CRGNSA ecologist, the proposed treatments assume the following:

- The oaks are not a desired condition due to fir encroachment and over-topping, trees per acre, and average diameter.
- Oregon oaks in Rowena will release from being shaded by taller trees in a manner similar to those studied in other parts of Oregon. This assumption is based on a long history of plant research and on the fact that they are the same species of oak.
- Thinned oaks will respond like all other trees respond when thinned. They will grow in diameter and in crown spread. This is based on a long history of tree growth research and on specific research on oaks in eastern forests where they are raised as a crop tree.
- The presence of small Douglas-fir where few or no old large Douglas-fir exist indicates encroachment over the historic range, less frequent fire, and more moisture due to shade.
- The oak clumps on Seven-mile hill are not unique. They are growing in a single cohort due to disturbance—either stand-replacing fire browsing, or grazing.
- The larger oaks interspersed with much smaller oaks generally represent the historic tree spacing.
- Cutting oaks will initiate sprouts. These sprouts will be suppressed by deer, underburning, and the shade from the remaining oaks.
- No herbicides will be used on oak sprouts.
- The cause of the “oak mounds” is unknown. The working group agreed not to treat these oak clumps. The prescription for Oak-pine woodlands requires this.
- If the reintroduction of fire can occur without thinning in some stands, then prescribed fire will thin the oaks in a more natural manner.
- The project will be monitored for effectiveness and implementation accuracy.

The working group made the higher elevation stands a low priority for treatment as a means to balance the different perspectives. They are not scheduled for treatment in 2006.

Effects of the Proposed Treatments on Pine

According to the Regional Forest Health specialist, the thinning portion of this project will help reduce the stress on Ponderosa pine evident on Seven-mile hill due to drought stress which is complicated by competition from the ingrowth of smaller Douglas-fir and oak. The underburning portion of this project may kill some stressed Ponderosa pine in the short term, but will favor the reproduction and survival of pine in the long term.

Effects of the Proposed Treatments of Douglas-fir

Douglas-fir will remain the major overstory component on the north-facing slopes on Seven-mile Hill. There was a public comment concerning the composition of the desired condition for stand M-4. This stand's type was changed during the working group's analysis from East Conifer to Pine/Oak/Douglas-fir because of its location so far east of most East Conifer stands. According to the CRGNSA vegetation team leader, regardless of the classification, the stand's desired conditions include a major component of fir and the prescription will favor an overstory of fir because there are very few surviving pine. Continued prescribed fire (over many many years) will finally slightly favor pine over Douglas-fir survival. The commenter also was concerned that the Forest Service will remove fir in order to plant pine. According to the applicant, the fir removal is not for the purpose of planting fir. It is intended to restore the spacing necessary for underburning and to promote larger tree sizes.

Management Plan Desired Forest Pattern and Structure

The Oak/pine woodlands vegetation type is the same as the Management Plan Ponderosa Pine/Oregon Oak type. The Pine/Oak/Douglas-fir type described by the working group is "between" East Conifer and Ponderosa Pine/Oregon Oak and contains some characteristics of both.

Oak/pine woodlands—The Management Plan requires a total canopy of between 25-60% with the understory layer (oaks) greater than 25% of the canopy. The project desired condition calls for total canopy of 25-60% and oaks would be from 50-75% of that canopy.

The post treatment canopies will be more closed than required by the Management Plan. It will take more than 100 years to reach the desired conditions. Prescribed fire is needed to complete the stand restoration.

Pine/Oak/Douglas-fir— The Pine/Oak/Douglas-fir type described by the working group is "between" the East Conifer and Ponderosa Pine/Oregon Oak Management Plan descriptions and contains some characteristics of both. The Management Plan requires a total average canopy closure of 25-60% for Ponderosa Pine/Oregon Oak and 40-80% for East Conifer. The project desired condition calls for total canopy of 30-70% which shows that it is a gradation between the two stand types.

The Working group developed a project prescription calling for total canopy of 30-70% with an overall average of 30% where large overstory pine and releasable oak are present in the stand.

Conclusion: These descriptions follow the guidelines in the Management Plan. The project is designed to improve forest resiliency and ecosystem function.

- (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 Uses 1.Y.(4)(f).**

Finding: No created openings are proposed. See findings under scenic resources above.

- (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 project does not include removal of any existing dead and down material in the size classes discussed in the Management Plan. No existing trees greater than 20” are proposed for removal to create new down wood. A condition should be placed requiring that existing dead and down large woody material remain. A condition should be placed requiring that the treatment areas be reviewed for snag creation needs as part of this project.

2. The Management Plan, Part I, Chapter 3, Natural Resources, SMA Policy 12 requires that air quality be protected and enhanced.

Finding: The project description lists the following for protection of air quality:

- Minimize the amount of material burned by making it available for other uses such as firewood and habitat restoration projects as a first priority.
- When necessary, excess material shall be burned only when weather conditions minimize impacts from smoke. These include: burning on cloudy days when residual smoke cannot be seen; burn during low visitor time periods; and burning during periods of atmospheric instability for better some dispersal. Generally these conditions exist or a window can be found in all seasons. It is the most difficult from December to March when inversions are common.

3. The Management Plan, Part I, Chapter 3, Natural Resources, states:

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.

Finding: A Mitigation Plan has been completed and is located in the project description. The mitigations are listed below:

Natural Resources

- Off road equipment shall be minimized to the maximum extent possible to minimize impacts to resources.
- The alignment, all design features, and post-project treatments of any haul routes will be pre-designated and agreed to by the CRGNSA hydrologist, engineer, and ecologist prior to use.
- Track-mounted piling equipment or other low-impact equipment shall operate on top of slash to minimize soil disturbance where possible.
- Ground based slash piling methods will not be allowed on slopes steeper than 30%. These steeper areas will be hand piled if fuel reduction is necessary.
- Scenic Area Management Plan standards for soil productivity will be met in the project area. These state that not more than 15% of an activity area will be detrimentally disturbed. This includes compaction, displacement, puddling and removal of organic layers exposing mineral soil.

- The main access road for unit M4 will have pre and post-project maintenance that will correct safety problems on the road.
- Mechanized equipment will not be allowed to operate within 20' of intermittent or ephemeral channels except to cross them at designated crossings.
- Activities within 50 feet of any stream shall be carefully monitored to ensure that the integrity of the immediate buffer area is not compromised. Treatment should be kept to a minimum in this zone.
- All wetland-dependent vegetation will be left undisturbed.
- Haul route crossings of intermittent or ephemeral draws will have culverts installed if the trail is to stay in place over the winter. This will allow any runoff to pass through the crossing unimpeded. All fill material in draws will be removed from the ephemeral draw crossings after hauling is completed.
- All invasive plant infestations will be located and avoided to forestall potential spread until eradicated.
- Clean equipment before entering National Forest System lands and before moving to each treatment area in a manner that will ensure that it is not contributing to the spread of invasives.
- Snags and large woody debris shall be provided or preserved as per the CRGNSA Management Plan.
- Treatment areas shall be reviewed for snag creation needs as part of this project.
- Snags and down wood shall not be taken for firewood. Firewood permits and signs at cutting areas shall state this prohibition and encourage compliance.
- Any snags cut for worker safety shall remain on the ground.
- Project activities will occur outside of the growing season of plants and the general nesting/rearing season for birds, grey squirrel and other wildlife species (March 1 to June 30).
- If the scenic area or state wildlife biologist determines that the area is needed as winter range (such as due to harsh winter weather), no mechanized equipment (including chainsaws) will be used between December 15 to March 31 to reduce cumulative disturbance to deer/elk on their designated winter range.
- If any sensitive wildlife or flora is located during the project, the Scenic Area wildlife biologist or ecologist shall be notified and appropriate measures taken to ensure protection.
- Areas where post treatment field surveys indicate that a majority of the vegetation was removed and slow vegetation recovery is expected will be seeded with a native seed mixture to reduce the chance of surface erosion.
- Opportunities exist to enhance habitat for native wildlife species after treatment by re-vegetating all disturbed areas with desired native bunch grass, forb and shrub species. Appropriate forage species include bluebunch wheatgrass (*Agropyron spicatum*), Idaho fescue (*Festuca idahoensis*), Serviceberry (*Amelanchier alnifolia*), arrowleaf balsamroot (*Balsamorhiza sagittata*), deerbrush (*Ceanothus integerrimus*), and others.
- Open grassy meadows will be disturbed as little as possible (CRGNSA Botanist will help identify potential slash burn pile locations).
- Known sites of sensitive plant species shall be protected by a buffer (200 ft) around each site within which no pile burning or mechanized equipment (except chain saws) shall be allowed. Any newly found sites will be given similar protection.

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.

There are three intermittent non-fish bearing streams in the project area.

In addition to the CRGNSA water resource buffer requirements, the streams are subject to the requirements of the Mt. Hood Forest Plan, as amended by the Northwest Forest Plan. The buffer width requirement for intermittent non-fish bearing streams is 100'. Fish and wildlife habitat restoration and enhancement activities are allowed in riparian reserves.

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: Any seeding of disturbed soil will use vegetation native to the area.

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

(1) The proposed use must have no practicable alternative as determined by the practicable alternative test.

Finding: A Practicable Alternatives Test has been completed:

The proposal is an enhancement project and the enhancement activities are desirable and needed within the buffer zones of the intermittent streams. Therefore, entry into these buffers is required and there is no practicable alternative if the buffer zones are to be treated. The need to accomplish this work relates to enhancing the oak/pine woodlands and requires entry into the intermittent buffer zones, and those of other sensitive resources, such that the enhancement efforts can be accomplished within those selected areas. The intermittent or ephemeral streams have more in common with an upland vegetation zone than riparian. The amount of work within the buffer will be kept to as little as required to get the project completed in a satisfactory manner as proposed in the natural resources mitigation plan (such as limiting entry by equipment). The need to treat these buffers outweighs the benefits of leaving them untreated.

WILDLIFE AND PLANTS

A. Protection of sensitive wildlife/plant areas and sites shall begin when proposed new developments or uses are within 1000 ft of a sensitive wildlife/plant site and/or area.

Finding: Forest Service botanist Robin Dobson determined that no sensitive flora are recorded for the area during surveys in 1997. Additional surveys to verify the locations and locate additional populations were conducted in 2005 and 2006. The natural resource mitigation plan includes a stipulation for protection if plants are found during project implementation. The sensitive plants mentioned in the Rowena Open Space Plan are outside of the project area.

Effects of the Proposal on Plants

The proposed activities are expected to have a positive effect on the herbaceous understory in the following ways:

- Allow sunlight into the stands to improve the herbaceous wildflower component of the understory.
- Rejuvenate the shrub layer by burning off decadent growth.
- Rejuvenate plants with fire-dependent evolutionary traits.

Invasive Plants

There were public comments indicating a concern that the soil disturbance of project activity would provide a seedbed for invasive plants. The project description mitigates the risk of invasive spread with the following project design criteria and implementation requirements:

- All invasive plant infestations will be located and avoided to forestall potential spread until eradicated.
- Clean equipment before entering National Forest System lands and before moving to each treatment area in a manner that will ensure that it is not contributing to the spread of invasives.
- The implementation window for prescribed underburns will vary according to conditions at the specific site. The project manager will confer with CRGNSA resource specialists on a burn plan before proceeding with a prescribed burn. Fall is the preferred season.
- The Forest Service shall conduct implementation and effectiveness monitoring of the proposed activities using the permanent plots set by the stand exam program and any monitoring necessary to accomplish the above implementation requirements.
- The Forest Service shall also encourage public participation and interested researchers to conduct more extensive programs that would monitor all work sites at least once a year invasive plants, herbaceous layer development, effects of underburning and/or other issues as agreed upon between the participants and the Forest Service.

Effects of the Proposal on Wildlife

Biological Evaluation Conclusion of Effects:

The CRGNSA Wildlife Biologist and Botanist/Ecologist evaluated the proposed action with regard to the Endangered Species Act as documented in the Biological Evaluation. It was determined that this project would have no adverse effects on any federally listed wildlife or plant populations.

No sensitive wildlife species are expected to be adversely affected by this project largely due to a seasonal restriction of implementation outside of the nesting/rearing season as well as the small area of treatment per year in the larger context of the untreated surrounding habitat. Haul routes shall be on existing roads or wheel tracks. Temporary skid trails shall be used only on side slopes less than 30% and erosion control measures will be employed. These activities will take place only in stand M4 and M8 North as the other stands should not require entry with equipment other than chain saws.

Prescribed fire effects to faunal populations are anticipated to be positive, as animals native to areas with centuries of fire history can persist and thrive in habitat shaped by fires. Prescribed underburns to the planning area will be completed in the fall season to reduce potential impacts

ground as well as shrub nesting birds and small mammals. In the unlikely event that a fall underburn would not be safe to perform, a spring burn may be considered as a last option.

No action in the project area will continue the decline of large trees and/or the more open habitat required by species such as the pileated woodpecker, purple martin, Lewis woodpecker, and western grey squirrel.

Sensitive Wildlife Areas are those areas depicted in the wildlife inventory ... including all Priority Habitats listed in this Chapter. The approximate locations of sensitive wildlife and/or plant areas and sites are shown in the wildlife and rare plant inventory.

Findings: The chart below list the priority habitats found in the planning area:

PRIORITY HABITATS FOUND IN THE BURDOIN PROJECT AREA	
Priority Habitats	Criteria
Oregon white oak woodlands	Comparatively high fish and wildlife density, species diversity, declining availability, high vulnerability
Snags and logs	High fish and wildlife density, species diversity, limited availability, high vulnerability, dependent species.
Talus	Limited availability, unique and dependent species, high vulnerability.
Cliffs	Significant breeding habitat, limited availability, dependent species.

C. The Forest Service wildlife biologists and/or botanists, in consultation with the appropriate state biologists, shall review the site plan and their field survey records. Guidelines (1)-(4)

Finding: The wildlife biologist and botanist conducted field surveys in 1997, 2005, and 2006.

D. The local government, in consultation with the State and federal wildlife biologists and/or botanists, shall use the following criteria in reviewing and evaluating the site plan to ensure that the proposed developments or uses do not compromise the integrity and function of or result in adverse affects to the wildlife or plant area or site: Guidelines (1)-(9)

Findings: Published guidelines- The CRGNSA wildlife biologist Chuti Fiedler and Ecologist/Botanist Robin Dobson coordinated with state experts and reviewed published guidelines and new guidelines for the management of the western grey squirrel.

History and Physical characteristics, existing condition, habitat components-The interdisciplinary team reviewed research literature, the Catherine-Major Watershed Analysis, and conferred with the working group in order to develop a good understand of the area's characteristics.

Disturbance-The project description limits thinning and slash treatment implementation to a window of time between July 1 to February 28 to avoid disturbance to wildlife and plants.

Fish and wildlife passage-There are no fish bearing streams in the project area and the project will not impede wildlife passage.

Maintain, protect, and enhance the integrity and function of Priority Habitats-The project is intended as restoration for the priority habitats present in the area. The natural resource mitigation plan includes protection for these areas.

SOIL PRODUCTIVITY

A. Soil productivity shall be protected using the following guidelines (1)-(4)

Findings: The project calls for the use of existing roads and wheel tracks for haul routes. The natural resource mitigation plan stipulates the following for protection of soil:

- Off road equipment shall be minimized to the maximum extent possible to minimize impacts to resources.
- The alignment, all design features, and post-project treatments of the reconstruction any haul routes will be pre-designated and agreed to by the CRGNSA hydrologist, engineer, and ecologist prior to use.
- Track-mounted piling equipment or other low-impact equipment shall operate on top of slash to minimize soil disturbance where possible.
- Ground based slash piling methods will not be allowed on slopes steeper than 30%. These steeper areas will be hand piled if fuel reduction is necessary.
- Scenic Area Management Plan standards for soil productivity will be met in the project area. These state that not more than 15% of an activity area will be detrimentally disturbed. This includes compaction, displacement, puddling and removal of organic layers exposing mineral soil.

With these stipulations, the soil guidelines will be met. A condition should be placed requiring monitoring of the project after implementation and any disturbed soil seeded with vegetation native to the area at the start of the following wet season.

G. Recreation Resources

1. The Management Plan, Chapter 4, Recreation Resources, SMA Guidelines, states:

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

Finding: The Rowena Open Space Plan describes the recreation in the area: Developed recreation activities (camping, picnicking etc) and sightseeing occurs mainly during the summer months as is the trend throughout the Gorge. The majority of activity tends to be day use in nature, such as sight seeing, picnicking, day hiking, fishing, wind surfing, etc. Recreation activity is generally confined to established recreation sites and travel corridors such as the HCRH. There are limited opportunities for dispersed activities such as hunting away from these sites and corridors. The high concentration of private lands limits the general public from hunting in the watershed; however, hunting by invitation and permission on private land occurs. Participation in day hiking is somewhat lower than sight-seeing Gorge wide, but it is significant with nearly 47% of all users participating. The majority of hiking in the watershed occurs on informal trails in the Rowena area and the managed trail system in Tom McCall Preserve. The project implementation requirements stipulate the following:

- Trail users, residents and the general public will be notified of thinning and underburning activities by posting warning signs at key trail intersections.
- Develop and distribute press release/key messages to local press and web site.
- Before project commences, pursue necessary agreements with landowners for access.
- Firewood will be made available to the public only on roads where public access is allowed rather than on roads owned by others where the Forest Service is allowed access for administrative purposes only.

Therefore, with these requirements, the project will neither overly disturb nor displace the existing recreation use.

H. Conclusion

The proposed tree stand thinning and prescribed underburning as described above for the Columbia River Gorge National Scenic Area, 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.