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Bureau of Land Management**

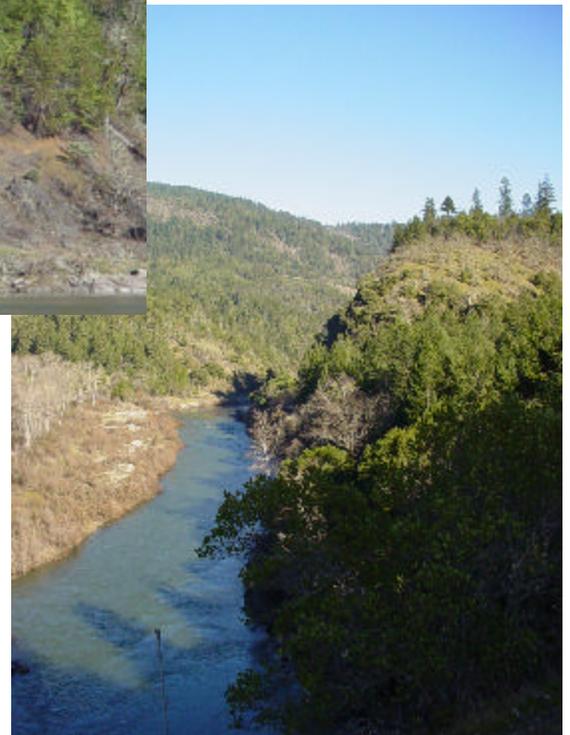
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August 2003



**Rogue National Wild and Scenic River
Hellgate Recreation Section**

Hazardous Fuel Reduction Project



**Environmental
Assessment**
(EA # OR-110-03-14)

1.0 Introduction

1.1 Project Area

The project area (8,657 acres) for this fuel hazard reduction project coincides with the congressionally designated boundary of the Hellgate Recreational River Area of the Rogue National Wild and Scenic River in southwestern Oregon (Map 1 in Appendix A). Almost half (3,853 acres) of the project area is within a National Fire Plan designated Community-at-Risk (CAR) (www.fireplan.gov/index.cfm). Three areas (57 acres) are wildland urban interface (WUI) areas outside of a CAR (see Maps 17A&B). Within the project area, land ownership is mixed: BLM (5,090 acres), State of Oregon, Josephine County and more than 180 private parcels (3,567 acres) (Maps 2A&B). The BLM also holds 166 scenic easements (1,914 acres) on privately owned parcels within the project area. Through these easements the BLM owns or controls the trees and other vegetation on the private property.

The project area is divided into two river reaches: the Applegate reach (12.8 miles) upstream of Hog Creek and the Dunn reach (14.5 miles) below Hog Creek. Rural residential sites are most common in the Applegate Reach where the terrain is flat to rolling and the river channel averages approximately 400 feet wide. In this reach, the surrounding landscape consists of even-textured agricultural fields on the floodplains with a backdrop of mixed conifer forests on rolling hills creating a partial enclosure of the view. The Dunn reach is much more confined first by the near vertical bluffs of Hellgate Canyon then opening to long vistas of dense forest on steep, rugged mountain slopes.

1.2 Project Planning Process

The BLM is proposing to make fuels treatment decisions for the project area by using a two-step planning process. First, is the preparation of a Hellgate section fuels treatment plan, which is addressed in this Environmental Assessment (EA) and supporting documents. The decisions made as a result of this analysis will provide the sideboards and framework for the second step in this process, which is the development and implementation of site-specific fuels treatments agreed to in neighborhood plans. Neighborhood plans would be developed in partnership with residents and property owners for small portions of the river corridor where there is a common neighborhood focus and interest in addressing the fuel reduction issues specific to that neighborhood. Delineated neighborhoods would be kept small to expedite collaborative planning and implementation. Twenty to 30 neighborhood plans are anticipated. All proposed neighborhood treatments would comply with the decisions made in step one of the planning process. All neighborhood actions would tier to this analysis and would comply with the National Environmental Policy Act (NEPA) and other regulatory compliance requirements.

The decisions to be made as a result of this EA and the current project area wide proposals and analysis include: the overall extent and intensity of fuel hazard reduction in the project area (3 action alternatives are analyzed); the vegetation / fuel reduction prescriptions that will be the basis for neighborhood plans; and the project design features (PDFs) that will be used as appropriate in each neighborhood plan. The analysis provides the basis for cumulative effects across the full project area. Future fuel reduction proposals outside of the project area but within the watershed are anticipated but specifics are not currently known. The NEPA analysis for these future projects will include a consideration of watershed level cumulative effects as appropriate. Foreseeable actions in currently existing plans have been addressed in the present analysis.

1.3 Related Plans and NEPA Documentation

This EA is consistent with the plans / decisions and is tiered to the NEPA documents listed below :

1. The *Medford District Record of Decision and Resource Management Plan* (June 1995) (RMP), which provides management direction and resource allocations for all aspects of management in the district including: land use allocations (p. 24), Wild and Scenic Rivers (p. 68-68), riparian reserves, special status and survey and management species (p. 53-55, 135-147), smoke management (p. 40),

aquatic conservation strategy (p. 22, 154), cultural resource management (p. 71), rural interface areas (p. 88), fire management (p. 89), and visual resource management (p. 70). Also the *Medford District Proposed Resource Management Plan and Final Environmental Impact Statement* (September 1994).

2. The *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl, and Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl* (April 1994), (aka the Northwest Forest Plan) (NFP) and its subsequent *Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (January 2001), which provides management direction and resource allocations for, in part: land allocations (p. A-4), aquatic conservation strategy objectives (p. B-11), survey and manage species management, and management in riparian reserves (p. B-12, C-30). Also the *Final Supplemental Environmental Impact Statement on Management of Habitat for Late-successional and Old-growth Forest Related Species Within the Range of the Northern Spotted Owl* (February 1994) and the *Final Supplemental Environmental Impact Statement for Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines* (November 2000).

3. The *Rogue National Wild and Scenic River: Hellgate Recreation Area Proposed Recreation Area Management Plan and Final Environmental Impact Statement* (March 2003) (RAMP), which identifies (p. 3-10) the need for a fuels hazard reduction plan in the Hellgate Recreation Section.

2.0 Purpose of and Need for the Proposal

2.1 Existing Condition and Need for Action

This project is needed because the fire hazard within the Hellgate Recreation Section of the Rogue National Wild and Scenic River has been increasing for many years due to fire exclusion and natural vegetation growth (USDI 2003). Fire risk is high due to extensive residential and recreation use. Property and Wild and Scenic river values are high and would be significantly and adversely impacted if a high intensity, high severity wildfire occurred.

Current conditions driving the need for action include: a) a mix of private and government ownership including 180+ residential sites, b) a highly diverse mosaic of vegetation and fuel conditions, c) more than 50% of the land is in a fire condition class 3 and more than 25% in class 2 which indicates that the vegetation and fire regimes are significantly or moderately altered from their historic ranges (see Glossary in Appendix H), d) more than 95% of the project area is in a high or moderate fuel hazard condition, and e) there are high values at risk in terms of residential property as well as the recreational and scenic Wild and Scenic River values.

2.2 Purpose of and Need for the Project / Desired Future Condition

The desired future condition (DFC) along the Hellgate Section of the Rogue Wild and Scenic River corridor is a mosaic of vegetation and fuel conditions that reduces the potential for a severe wildfire, increases potential fire suppression safety and effectiveness, and maintains the river's Outstandingly Remarkable Values (ORVs). ORVs are those values which caused the river to be designated as a component of the national wild and scenic river system (see Glossary). For the Rogue River they are the fisheries, the diverse recreation opportunities and the natural scenic qualities.

This corridor-wide plan is needed to set a framework for site-specific projects that would proactively reduce and manage the wildfire fuel hazard within the Hellgate Recreation Section. The project area includes 8,657 acres of public and private land along this section of river (Maps 2A&B). The proactive reduction and management of wildfire fuels would meet the desired fuel hazard condition while staying within Visual Resource Management (VRM) Class I guidelines, which are to preserve the existing character of the landscape and to limit changes to very low levels which do not to attract the attention of the causal observer

(see Glossary). Broadly speaking, this corridor-wide plan will set the framework for site-specific, neighborhood fuels treatment plans and projects that will: a) identify the site specific DFC in the neighborhood based on existing resource conditions, neighborhood preferences and pertinent management considerations; b) carefully and selectively thin forest stands and forest vegetation to reduce potential wildfire intensity and severity; c) reduce the number of high risk fire days; d) thin forest stands to promote tree and stand vigor into the future; e) dispose of the thinned materials to reduce fuel hazard; f) create more effective wildfire defensible spaces around residential, business and developed recreation sites; and g) reduce vegetation along points of residential ingress and egress to improve access safety should a wildfire occur.

3.0 Description of Proposed Action and Alternatives

The corridor-wide proposed action and the two action alternatives apply only to BLM managed lands (see Maps 2A&B) and, with landowner concurrence, to the private parcels where the BLM holds a scenic easement right. Treatments on private, county and state property would be considered during the site-specific, neighborhood plans only if the landowner chooses to participate. Private landowner participation will be encouraged, but not required.

The BLM is proposing to reduce the wildfire fuel hazard in the project area by altering key determinants of wildfire intensity: surface fuel loading, ladder fuel presence and profiles, and crown bulk density (Evers 2001). Reducing fuel loading, ladder fuels and crown bulk density will create vegetation and fuel conditions that lower potential wildfire severity, increase fire suppression effectiveness, and, in turn, provide for better protection of property and resource values in the project area (See section 2.2). Design of the action alternatives primarily focuses on how best to move toward meeting the desired river corridor vegetation/fuels condition while meeting the VRM Class I guidelines. Potential fuel treatment impact on visual quality and the outstandingly remarkable scenic value was identified through public involvement and by agency staff as the primary planning issue to be resolved. As such, the proposed action and two action alternatives reflect three different levels of fuel hazard reduction.

The design of the proposed and two action alternatives is based on four strategic fire management zones described below (USDA 2001). Attention is centered on residential and business structures or developed recreation sites for the first three zones. The fourth zone makes up the remainder of the project area. All three action alternatives place a primary emphasis on the creation of defensible space immediately around homes, businesses and developed recreation sites. Outside the home ignition zone, each alternative treats surface fuels, ladder fuels and tree canopy fuels to different degrees.

The **home ignition zone** (defensible space) is centered on residences, businesses, and important structures and extends outward for 50 – 200' depending on topography and adjacent vegetation type. Fuel treatments are most intense in this zone with the objective of creating fuel conditions that allow firefighters to safely and effectively defend the structure from a wildfire, to increase the chance that the structure can survive a wildfire on its own, or to keep a structure fire from igniting the adjacent forest vegetation. Many firefighting agencies have publications describing treatments to accomplish this goal (see Appendix C2). Providing safe ingress and egress to structures is also a key element in meeting this goal. Creating a defensible space is largely dependent on a home owner's willingness to address fuel hazard around their property. These areas cannot currently be mapped but involve an estimated 500 acres plus 57 acres of mapped WUI areas outside of a CAR.

The **defense zone** extends outward from structures for approximately 0.25 mile or until it reaches the project area boundary. The fuel treatment objective is to protect loss of life and property by creating defensible space. Due to the home density within the communities at risk (Maps 17A&B), all land in the project area within a mapped community at risk will be considered to be within the defense zone. This zone totals approximately 4,876 acres.

The **threat zone** extends beyond the defense zone approximately 1.25 miles for a total of 1.5 miles (approximately 2,567 acres). Fuel treatments in this zone would be strategically located to interrupt fire spread and reduce fire intensity. Treatments would be designed to modify wildfire behavior as it approaches the defense zone, thereby allowing firefighters to take advantage of reduced spotting, lower spread rates and intensity, and to more effectively contain the fire in the defense zone.

The **general forest zone** encompasses the remainder of the project area (approximately 657 acres). Vegetation and fuel treatments in this zone would be primarily to provide some protection to the adjacent forest lands from fires initiated in the corridor.

The proposed action and the two action alternatives are described in Table 3-1 (p. 6). Each of these alternatives is designed to reduce surface fuels in a substantive way, although to different degrees. All action alternatives treat most intensively in the home ignition zone (the areas of highest property values), and with lower intensities in the other zones. Alternative 2 does not treat the General Forest Zone while Alternatives 3 and 4 treat up to 50% of it. Alternative 3 and 4 differ in the tree diameter ranges within which thinning would occur. Alternative 4's thinning of larger diameter trees will provide for a greater reduction of crown bulk density and thus crown fire potential and intensity. All alternatives would retain large fire resistant trees.

The proposed vegetation/fuel treatment prescriptions and forest and stand health prescriptions common to the three action alternatives are described in Appendices C-1 and C-2. These prescriptions are specific to each of the primary vegetation series in the project area (Maps 5A&B) and would be refined and applied at the site-specific level during neighborhood planning and treatment implementation. If during the preparation of individual neighborhood plans it becomes clear that protection of a structure or special value requires minor extension of the home ignition or defense zone project work outside of the congressionally designated river boundary, the project area may be expanded to include it. Where this occurs, all vegetation / fuel treatment activities would be consistent with those described in this EA.

The proposed action and two action alternatives also include specific project design features (PDFs) to ensure consistency with the management direction of the NFP and the RMP for the following resources: fisheries and recreation ORVs, riparian reserves, endangered and sensitive species, wildlife, vegetation, soils, water, and cultural resources. PDFs are described in Appendix B and are, by reference, incorporated in their entirety into the proposed action and the two action alternatives. They will be incorporated into neighborhood plans as appropriate on a site-specific basis. It should be noted that multiple fuel treatment entries with smaller incremental changes in the scenic landscape may be needed in all action alternatives to meet VRM standards. The degree of acceptable change depends upon whether the treatment area is within a seen area (see Maps 4A&B) or a seldom seen area (from the perspective of casual observers on the river, at recreation sites or on main roads) and the degree to which a particular location is a focal point.

The purpose of each action alternative is described below. They reflect different levels of fuel reduction treatments while meeting VRM guidelines. Alternatives 2, 3 and 4 reflect progressively more fuel hazard reduction treatment.

Alternative 1 (No Action): This alternative is the continuation of the current relatively small scale fuel hazard / fire hazard work that some individual private property owners conduct. Under current management, the BLM would not implement any fuel hazard reduction work. The emphasis on prompt fire suppression would continue. Other ongoing management activities (e.g., noxious weed control, recreation site maintenance, river bank cleanup, scenic easement administration) would continue and would be common to all alternatives.

Alternative 2: Fuel hazard reduction to alter surface fire intensity and behavior. Dead and down fuels on the ground surface and some smaller diameter ladder fuels would be treated. All work could be done, although would not have to be done, manually.

Alternative 3 (Proposed Action): Fuel hazard reduction to alter: a) surface fire intensity and behavior, b) crown fire initiation potential, and c) stand characteristics to improve residual stand vigor and forest health. Dead and down fuels and more of the ladder fuels would be treated than under Alternative 2. Most of the work could be done manually, but heavy equipment (e.g., tractors, skidders, loaders) would be needed to handle the larger size material, which may have commercial product value.

Alternative 4: Fuel hazard reduction to alter: a) surface fire intensity and behavior, b) crown fire initiation potential, c) crown bulk density and thus crown fire sustainability, and d) stand characteristics to improve residual stand vigor and forest health. Some of the work could be done manually, but heavy equipment would be required to handle the larger size material, which will have commercial product value.

The methods that are proposed for cutting and vegetation / fuel disposal are the same under Alternatives 2 through 4. They include: chainsaw cutting, thinning, and pruning; handpiling and burning; chipping; chopping / grinding (e.g., slashbuster), yarding of material for off site disposal (e.g., cable, horse, tractor, ATV, helicopter), and underburning or broadcast burning. The specific methods to be used on any given site would be selected during neighborhood planning based on forest conditions, VRM considerations, the preferences of the neighborhood plan collaborators, and the neighborhood's desired future condition (DFC). Multiple treatment entries may be necessary due to current fuel loads and VRM Class I considerations. Neighborhood plans will identify where this is necessary. The cutting and disposal methods used may also vary with each entry depending on the vegetation / fuel conditions at the time of treatment (specific methods will be identified in neighborhood plans). A slashbuster, for example, may be the recommended method in the first treatment entry only, while future treatments could preclude the slashbuster and rely heavily on underburning. The specifics of each treatment would be determined following development of each neighborhood plan. The methods employed would be selected and implemented in accordance with the PDFs (Appendix B).

4.0 Environmental Impacts of the Proposed Action and Alternatives

This section summarizes the potential environmental impacts resource specialists expect from implementing the proposed action and alternatives with all of the PDFs. Table 4-1 (p. 7) provides a comparative summary of the alternatives' impacts. Tables A-1 and A-2 (Appendix A) provide a summary of acres for different project area parameters to describe the scale and intensity contexts appropriate to evaluating potential effects. A supporting analysis and documentation of environmental consequences report (Appendix I available on the Medford District's web site (www.or.blm.gov/medford/rr_fuel_project), is incorporated by reference. The background and basis for the findings summarized in this section can be found in this report.

The no action alternative analysis considers two scenarios: with a wildfire and without a wildfire. The existing vegetation and fuels conditions strongly suggest that a wildfire will occur within the project area. Because of the great importance of the scenic ORV, a Visual Resources Background Report is also included (Appendix D).

The primary issues for planning and analysis were: a) insure that the Rogue River's identified Outstandingly Remarkable Values (ORVs) are protected and enhanced, particularly the scenic quality, and b) reducing the fuel hazard to a level that reduces the potential for a high severity wildfire in the project area. The analysis found that none of the action alternatives would impact the fisheries or the recreation ORVs. The analysis found that Alternatives 2 and 3 (Proposed Action) would protect and enhance the scenic ORV. It was found that Alternative 4 could exceed permissible levels of scenic change at some localized sites but that this could be precluded with careful site specific adjustments during neighborhood plan preparation. The analysis found that all action alternatives would reduce the fuel hazard although each to a different degree.

Analysis has not identified any impacts to the following BLM critical elements: areas of critical environmental concern (there are no ACECs in the project area); Native American religious concerns; prime or unique farmlands; floodplains; wilderness or wilderness study areas; issues of environmental justice; and energy development, production, supply or distribution. The project is not located within the Oregon State

Coastal Management Zone (CMZ) nor has it been identified by the State of Oregon's Land Conservation Development Commission (LCDC) as a project outside of the CMZ but still needing a consistency review.

TABLE 3-1: Rogue River Fuel Hazard Reduction Project: Description of Alternatives

Alternative	Treatment Zone	Vegetation Treatment Diameter Range (DBH) ⁴	Seen Areas Maximum Treatment Level per entry ¹		Seldom Seen Areas Total Potential Treatment Level ¹	
			Overstory Canopy Treatment ² (% Disturbance)	Understory Treatment ³ (% Disturbance)	Overstory Canopy Treatment ² (% Disturbance)	Understory Treatment ³ (% Disturbance)
Alternative 1 (No Action)	N/A	No Treatment ⁵	0%	0%	0%	0%
Alternative 2	Home Ignition	See Appendix B – 2				
	Defense	0 – 8”	= 15%	=50%	=40%	=80%
	Threat	0 – 8”	=10%	=40%	=30%	=60%
	General Forest	No Treatment	0%	0%	0%	0%
Alternative 3 (Proposed Action)	Home Ignition	See Appendix B – 2				
	Defense	0 – 12”	=20%	=60%	=50%	=90%
	Threat	0 – 8”	=20%	=50%	=40%	=80%
	General Forest	0 – 8”	=15%	=40%	=30%	=50%
Alternative 4	Home Ignition	See Appendix B – 2				
	Defense	0 – 21”	=20%	=60%	=50%	=90%
	Threat	0 – 12”	=20%	=50%	=50%	=80%
	General Forest	0 – 8”	=20%	=40%	=40%	=50%

1. Treatment levels –The final target silvicultural / fuel hazard stand conditions (and the resultant potential wildfire behavior characteristics, fire suppression opportunities and potential structure survivability) are the same for similar vegetation types in both the seen and the seldom seen areas. The target canopy closure, regardless of the number of entries needed, would be 30+% for ponderosa pine stands and 40+% for Douglas-fir dominated stands to meet fuel hazard reduction and silvicultural / forest health conditions. Other management objectives (e.g., Aquatic Conservation Strategy, wildlife considerations, special status species, etc.) may, in some situations, mandate that the target total minimum crown canopy closure be greater than the 30 - 40% minimum levels. This could be the case with regard to understory treatments as well. An "entry" is an individual treatment action on a particular piece of ground.

Multiple entries may be needed to reach the target conditions because the level of change that the VRM I management “character of the landscape” standard would permit at each entry varies depending on whether a site is within the seen or the seldom seen area.

Seen areas – Incremental entries would be necessary to meet the visual resource management objectives (VRM Class 1). The maximum treatment level per entry indicates the percent of change to the condition that exists at the time of entry that would be permissible for that entry. Multiple (2-3+) entries may be necessary to incrementally move current fuel hazard conditions to a desired site-specific silvicultural / fuel hazard stand condition.

Seldom seen areas - The degree of per entry change to the current condition is much greater within seldom seen areas than within the seen area. A single entry that moves the current condition to the desired site-specific silvicultural / fire hazard stand conditions may be acceptable.

Individual stand treatment silvicultural / fuel treatment prescriptions would be prepared for each entry based on the stand conditions at the time of entry and the silvicultural / fuel treatment prescriptions in Appendix B - 1. Entries would occur at intervals based on considerations of vegetation type, vegetation / fuel conditions, vegetation response characteristics, and the permissible level of disturbance for the site.

Measuring or quantifying the level of change / percent disturbance would be indexed by, for example, canopy density, canopy cover, number of stems, or visual transparency of the stand being treated.

Multiple or staged entries will also provide opportunities for adaptive changes of the silvicultural / fuel treatment prescriptions. Adjustment of prescriptions would come from BLM’s Visual Contrast Rating methods to insure that VRM Class 1 standards are met.

- 2. Overstory Canopy Treatment** – Upper limit of the percent decrease in the overstory canopy (i.e., % disturbance) that exists at the time of treatment. The overstory is the upper level in a 2-storied stand or upper 2 levels in 3 and 4-storied stands.
- 3. Understory Treatment** – Upper limit of the percent of surface area treated on the ground per entry.
- 4. Vegetation Treatment Diameter range** - Vegetation cut would be restricted to within the specified DBH range. (Surface fuels would be reduced as needed in all cases.)
- 5.** The current relatively small scale fuel hazard reduction work that some private property owners currently conduct would continue.

Table 4.1: Environmental Impacts: Comparative Summary of Alternatives

Resource Element		Alternative 1 (No Action)	Alternative 2	Alternative 3 (Proposed Action)	Alternative 4
Potential Treatment Acres	General Fuels Treatment	0	3,320	4,189	4,189
	Broadcast / Underburn	0	1,326	1,702	1,702
	Slashbuster Use	0	1,257	1,257	1,257
FIRE AND FUELS (See Supporting Analysis Document (pp. 2-12))	% High Hazard Acres	69% (currently)	45% (post treatment)	37% (post treatment)	37% (post treatment)
	% Mod. Hazard Acres	29% (currently)	28% (post treatment)	30% (post treatment)	30% (post treatment)
	% Low Hazard Acres	2% (currently)	27% (post treatment)	33% (post treatment)	33% (post treatment)
	Surface Fuels	Will continue to increase over time.	Reduced on all treated areas.	Reduced on all treated.	Reduced on all treated areas.
	Ladder Fuels	Will continue to increase over time.	Reduced on all treated areas.	Reduced on all treated areas.	Reduced on all treated areas.
	Canopy Bulk Density	Will continue to increase over time.	Approximately 20% canopy reduction, except in the General Forest Zone.	Approximately 30% canopy reduction. All zones treated.	Approximately 40% canopy reduction; crown fire may stop spreading but not necessarily torching. All zones are treated.
	Estimated # of days/year with Potential Crown Fire Activity	87 days	55 days	44 days	33 days
	Fire Condition Class & Fire Behavior	<p><i>w/o wildfire</i> - Acres of fire condition class 3 would continue to increase; high fuel hazard would continue to increase.</p> <p><i>w/ wildfire</i> - It would be progressively more difficult to meet initial attack suppression goals of ≤ 10 acre fire size. The potential for a fire to develop into a large fire would continue to increase. Large fires (>100 acres) typically result in a mix of burn severities: 60-70% unburned to low severity and 30 - 40% moderate to high severity. Upwards of 50% of the burned area might have 75 - 100% canopy mortality.</p>	<p>Limited increase in fire condition class 1 acreage where the high fuel hazard would be reduced. In treated forest stands, surface flame length objectives would be met.</p> <p>High fuel hazard acreage would be reduced from 69% to approximately 45%, with a corresponding increase in low hazard acres from approximately 2% to 27% of the project area.</p> <p>This alternative would not change the number of days of passive crown fire activity, but would reduce the number of days of potential active crown fire activity by an estimated 35-40%.</p>	<p>Some potential for increasing fire condition class 1 acreage due to some treatment of canopy bulk density. T treats up to 50% of the General Forest Zone. In treated forest stands, surface flame length objectives would be met.</p> <p>Canopy base height would be increased. Would reduce high hazard acres from 69% to approximately 37% with a corresponding increase of low hazard acres to 33% of the project area.</p>	<p>Greatest potential for increasing acreage of fire condition class 1 due to high levels of canopy density reduction. This alternative treats up to 50% of the General Forest Zone. In treated forest stands, surface flame length objectives would be met. Canopy base height be increased and there would be a consequent reduction in the potential for crown fire initiation. This alternative would reduce canopy bulk density to the greatest extent.</p> <p>Reduces high hazard acres from 69% to approximately 37%, with a corresponding increase of low hazard acres to 33% of the project area. Potential passive and active crown fire days would be reduced by an estimated 60-65%.</p> <p>This alternative would result in the greatest reduction in potential fire intensity and severity and the greatest increase in public and firefighter safety.</p>
	<ul style="list-style-type: none"> - All action alternatives would retain large fire resistant trees. - The progressively greater levels of fuel hazard reduction of Alternatives 2 through 4 would result in progressively more fire-resilient forests. - All alternatives would result in safer and more effective fire suppression actions, increased public ingress/egress safety, and increased property protection. The degree of improvement would be in proportion to the extent of fuel hazard reduction each alternative presents. The strategic reduction of crown and surface fuels could greatly reduce wildfire intensity and spread rates. Treating areas that are strategically important for fire suppression actions (e.g., roadways, higher areas) increases the options for safe and effective firefighting. 				

Table 4.1: Environmental Impacts: Comparative Summary of Alternatives

Resource Element	Alternative 1 (No Action)	Alternative 2	Alternative 3 (Proposed Action)	Alternative 4	
Wild & Scenic River- Outstandingly Remarkable Values (See Supporting Analysis Document (pp. 13 – 21) and VRM Background Report in Appendix D)	Fisheries	Analysis did not identify any impacts to the river’s fisheries ORV. The ORV was based upon a robust salmon and steelhead fishery. (See Fisheries / Aquatic element below.)			
	Recreation	<p><i>w/o wildfire</i> – There would be no change to the recreational diversity.</p> <p><i>w/ wildfire</i> – Diversity could be diminished if facilities were damaged. The desirability or quality of some recreation opportunities would be diminished by a large or severe wildfire.</p>	Analysis did not identify any impacts to the river’s recreation ORV. The ORV was based on the diversity and quality of certain types of recreation that caused the river to be designated as a National Wild and Scenic River. This diversity includes whitewater float trips, salmon and steelhead fishing, hunting, swimming, hiking, boating, picnicking, camping and sightseeing. The action alternatives would not affect the opportunities for any of these activities.		
	Scenic	<p><i>w/o wildfire</i>- Vegetation would not be change, altered or managed and the existing character of the landscape and the over-stocked vegetation density of the forest would remain. Visibility through the forest would continue to be limited by the dense vegetation, and opacity of the forest would continue to be dark and dense. There would be no change to the characteristic landscape.</p> <p><i>w/ wildfire</i>- Visual resource characteristics (form, line, color, and texture) of existing vegetative character could change dramatically, depending on fire location, intensity, timing and suppression/containment response. The level of change to the characteristic landscape could be very low and not attract attention, or it could be very high and attract much attention, depending on fire characteristics.</p>	<p><i>w/o wildfire</i> - The level of change to the characteristic landscape and landscape character that would result from this alternative would be very low and would not attract attention of the casual observer.</p> <p><i>w/ wildfire</i> - Existing vegetative character could change dramatically. The level of change to the characteristic landscape and landscape character could be low or high depending on fire location, intensity and extent. (A lower severe wildfire probability than in Alt. 1.)</p>	<p><i>w/o wildfire</i> – The level of change to the characteristic landscape and landscape character that would result from this alternative would be low and would not attract attention of the casual observer.</p> <p><i>w/ wildfire</i> - Existing vegetative character could change dramatically with a wildfire. The level of change to the characteristic landscape and landscape character could be low or high depending on fire location, intensity and extent. (A lower severe wildfire probability than in Alt. 1 or 2.)</p>	<p><i>w/o wildfire</i>: Level of change to the characteristic landscape / landscape character in the Threat and General Forest Zones would be low and would not attract attention of the casual observer. In the Defense Zone, the level of change could be moderate and could attract attention of the casual observer. Vegetative change meets VRM 1 standards in most situations, although it could in the short term exceed standards in some situations. Adjustments through neighborhood planning could preclude this.</p> <p><i>w/ wildfire</i> - Existing vegetative character could change dramatically. The level of change to the characteristic landscape / landscape character could be low or high depending on fire location, intensity and extent. (A lower severe wildfire probability than Alt. 1, 2 or 3.)</p>
<ul style="list-style-type: none"> - There would be no change to the landform, rockform or waterform. The vegetation would be changed to different degrees. The proposed action and alternatives, with the PDFs, insure consistency with VRM Class I management objectives. - Vegetative screening of structures, per BLM scenic easements and State Scenic Waterways Act requirements and objectives (see references section), would be safeguarded to protect or enhance the scenic view of the landscape as seen from upon or directly adjacent to the river or the backcountry byway. - In seen areas, percentage limitations on crown canopy changes would limit effects on natural scenic quality (ORV) so that the level of change to the characteristic landscape would be very low and would not attract attention. Phased treatments and multiple entries with minimal crown canopy changes during each entry, spaced approximately two to three years apart in seen areas, would gradually create open, park-like stands of trees. This would gradually decrease forest opacity and increase forest transparency. Color contrasts created in one phase would be greened-up before another phase, so minimal visual contrast would be created during any phase. - Re-creation of open, park-like stands of trees would increase forest transparency, reduce forest opacity, move toward a similarity to historic landscape conditions (pre-wildfire suppression era). - The 50’ strip of vegetation left untreated next to the Rogue River and along certain recreation roads (the Merlin -Galice Road, Robertson Bridge Road and Lower River Road) would help visually screen ground disturbance activities (See Map 18). - Directional falling of trees would lessen damage to residual trees and shrubs, and thereby, reduce visual impacts. - In seldom seen areas, fuel treatments would not be visible, and therefore, would have no short term or long term visual effect. - PDFs for other resources also aid visual resources, e.g., scattered un-entered patches of 1/10th to 3 acres throughout the project area to maintain diversity and for wildlife habitat; dense thickets of trees would be thinned to density levels that would improve stand growth and individual tree vigor; larger hardwoods and scattered large conifer trees would be reserved for the future large stand growth component; and stream buffers and sensitive plant zones would remain untouched. These PDFs would maintain a natural mosaic of visual diversity and the natural scenic quality (ORV). 					

Table 4.1: Environmental Impacts: Comparative Summary of Alternatives

Resource Element	Alternative 1 (No Action)	Alternative 2	Alternative 3 (Proposed Action)	Alternative 4
		<p>Crown canopy vegetation would not be altered noticeably. Overall visual effects of ground-cover disturbance would be slightly noticeable in the short term (1 to 2 yrs.), and negligible in the long term. Overall landscape character would not change dramatically. Existing vegetation would remain with medium-coarse textures. The level of change to the characteristic landscape would be very low and would not attract attention.</p>	<p>Crown canopy vegetation would be altered slightly, creating coarser textures and more open canopies in the Defense and Threat Zones. Overall visual effects of ground cover disturbance would be similar to Alt. 2. Re-creation of open, park-like stands of trees would increase forest transparency, similar to historic landscapes. The level of change to the characteristic landscape would be low and would not attract attention.</p>	<p>- Crown canopy vegetation would be most altered of any alternative, creating coarser visual textures with more spacing between tree crowns. Removal of some large trees in the areas closest to human occupancy (CARs, WUI and Defense Zones), as compared to Alternatives 2 or 3 (Proposed Action), would have the greatest potential impact to visual resources. Overall visual effects of ground cover disturbance would be similar to Alternatives 2 and 3 (Proposed Action). Re-creation of open, park-like stands of trees would increase forest transparency, similar to historic landscapes. The level of change to the characteristic landscape in the Defense Zone could be moderate and could potentially attract attention. The level of change to the characteristic landscape in the Threat and General Forest Zones would be low and would not attract attention.</p>
	<p>VRM Summary / Conclusions</p>	<p>Because of the effectiveness of PDFs and considering the existing diversity of landscapes within the Hellgate corridor, impacts to visual resources would be minimal. Areas treated would meet VRM Class I objectives, and added to untreated areas that are left for biological and watershed buffers, would add to scenic diversity and natural scenic quality (ORV). Phased implementation in seen areas would further lessen psychological impacts to changes in natural scenic quality (ORV).</p>		<p>Removal of some large trees in the areas closest to human occupancy (CARs, WUI and Defense Zones) would have the greatest potential impacts to visual resources. The level of change to the characteristic landscape in the Defense Zone could be moderate and could potentially attract attention. The level of change to the characteristic landscape in the Threat and General Forest Zones would be low and would not attract attention.</p>
<p>SOIL / WATER</p> <p>(See Supporting Analysis Document (pp. 26 – 29))</p>	<p>Soils</p>	<p><i>w/o fire</i> - No Change. <i>w/ wildfire</i> - Higher potential for increase soil erosion; soil productivity decline if fire severity is high. In a wildfire, 1/3 of the burned area typically experiences a high intensity / high severity burn. In these areas, surface litter, duff and soil organic matter would be lost and surface roots killed. Susceptibility to erosion would increase and soil stability would decrease, especially on steeper slopes. Ash would provide a quick flush of available plant nutrients following a fire.</p>	<p>There would be no substantive impacts to the soils resource. Any increases in erosion would be localized with little, if any, transfer of sediment to stream channels due to filtering in the untreated areas of riparian reserves and the PDFs that serve to minimize the extent of soil surface disturbance. Some minimal increase in compaction due to heavy equipment could occur but it would be localized and negligible due to the PDFs that constrain the use of heavy equipment.</p> <p>Compared to the no action alternative, the action alternatives would result in lower fire intensities and potential fire severity and with a consequent decline in potential for soil damage due to fire. A minimal increase in overall soil productivity would occur.</p>	
	<p>Water Quality</p>	<p><i>w/o fire</i> - No Change. <i>w/ wildfire</i> - Higher potential for sedimentation.</p>	<p>Water quality and quantity would remain the same for all 303(d) listing parameters.</p>	<p>Water quality and quantity would remain the same for all 303(d) listing parameters. Potentially a small amount of water yield increase due to reduced overstory density.</p>

Table 4.1: Environmental Impacts: Comparative Summary of Alternatives

Resource Element	Alternative 1 (No Action)	Alternative 2	Alternative 3 (Proposed Action)	Alternative 4
<p>FISHERIES / AQUATIC</p> <p>(See Supporting Analysis Document (pp. 29 – 31))</p>	<p>Fisheries Habitat Conditions</p> <p>ESA Listed Species (See Biological Assessment and Letter of Concurrence – Appendix F)</p>	<p><i>w/o wildfire</i> - Wildfire risk would remain at high levels in the riparian reserves. High stand densities in riparian reserves would continue to limit tree growth and development of a future large woody debris (>24"DBH) recruitment pool. Stream shade would continue at current levels and rates of recovery from past disturbance. Salmonid production and survival would continue to be limited by limited large woody debris, the associated low stream complexity, and high summer water temperatures.</p> <p><i>w/ wildfire</i> – High severity wildfire in riparian reserves could reduce stream shading, reduce the future coarse wood recruitment pool, with a decline in fisheries habitat quality. Increased runoff could increase the potential for erosion and sedimentation adversely impacting salmonid survival in the egg to fry stage. Increased sediment and the resultant turbidity would indirectly decrease juvenile salmonids survival due to gill scour and associated mortality from disease. At-risk slopes / stream banks would be more likely to fail resulting in debris flows into streams filling pools and burying riffles and degrading spawning gravels and pool rearing habitat, with a consequent decrease of salmonids survival in the egg, fry, and juvenile stages. Shade would be reduced, potentially increasing stream temperature. Even short term temperature increases would be likely to adversely effect currently depressed local salmon populations. Elevated summer temperatures in tributaries and the mainstem adversely affect juvenile salmonids, which depend on cool water for rearing. A stand destroying riparian reserve wildfire would retard the development of late-successional forest conditions decreasing in-stream large woody debris recruitment in the long term. Large wood debris is key to creating habitat complexity for juvenile salmonids and for cover for migrating adults and thus stream productivity.</p>	<p>Any effects to fish and aquatic resources from work within the riparian reserve would be highly localized, negligible and short term at the project level and 7th, 6th and 5th field watershed levels. Long term impacts are anticipated to be beneficial due to the reduction in potential for high intensity wildfire.</p> <p>Coho salmon are an effective indicator species for the health of the aquatic ecosystems in the project area. They require complex pools and off-channel habitat as well as the habitat requirements of the other salmonids present. The potential impacts on coho / coho habitat are addressed in the project’s fisheries biological assessment (Appendix E). Any potential effects to fish and aquatic resources from fuel hazard reduction within the riparian reserves are anticipated to be highly localized, negligible, and short term at both the project level (6th and 7th field scales) and at the 5th field scale.</p> <p>The effects to coho or coho critical habitat are not likely to be adverse due to PDFs that retain shade, provide for future large woody debris (LWD) recruitment and eliminate sediment delivery mechanisms. Indirect effects from the proposed vegetative / fuels treatments would be beneficial in the long term by reducing the potential for high intensity wildfire in the riparian and upland areas. These long term beneficial effects would maintain tributary stream habitat and salmonid productivity throughout the system.</p> <p>ESA listed species – The Biological Assessment (BA) and Letter of Concurrence (Appendix F) concluded that the project’s road maintenance, upland prescribed burning and skid trail restoration may affect, but would not likely adversely affect (NLAA) coho / coho critical habitat. NOAA – Fisheries has concurred with this determination for these types of actions (Programmatic BA/BO). The BA also concluded that the mechanical fuel treatments would not have a direct effect on coho. The BA determined that the use of prescribed fire in the riparian reserves and the potential need for new skid trails may affect, but is not likely to adversely affect (NLAA) the Southern Oregon/Northern California (SONC) coho. NOAA - Fisheries indicated its agreement with this determination in its July 30, 2003 letter of concurrence.</p> <p>Essential Fish Habitat- The Magnuson-Stevens Act designates Essential Fish Habitat (EFH) for coho and chinook salmon. The Rogue mainstem and the tributaries used by coho are designated as EFH. Actions that have the most potential to produce adverse effects are associated with underburning. The PDFs and best management practices (RMP p. 149) would mitigate or eliminate the potential adverse effects to EFH. NOAA – Fisheries has concurred with the determination that the project will not adversely affect EFH.</p>	

Table 4.1: Environmental Impacts: Comparative Summary of Alternatives

Resource Element		Alternative 1 (No Action)	Alternative 2	Alternative 3 (Proposed Action)	Alternative 4	
		Diminished future large wood recruitment streams would remove the possibility for recovery of properly functioning aquatic systems.				
AQUATIC CONSERVATION STRATEGY		The Aquatic Conservation Strategy consistency review (Appendix F) concluded that all of the alternatives would be consistent with the ACS objectives.				
VEGETATION / SILVICULTURE (See Supporting Analysis Document (pp. 22 – 25))		Stand density would continue to increase per the trend of the past 80– 100 years due to fire suppression. Density levels would continue at levels not sustainable over time. The ecological consequence of this, in concert with extended drought, will be reduced stand vigor, increased stand mortality and increased potential for severe wildfire.	Least impact on declining stand vigor because it reduces only a portion of the lower stand layers.	Due to the increased treatment diameter range, it will result in greater stand density reduction in the lower stand layers. It will result in canopy gaps and individual large trees will benefit from increase growing space and reduced competition. It will have an intermediate impact on reversing declining stand vigor / health.	Greatest degree of stand vigor / health improvement due to density reduction in all canopy layers. Will create a pattern of forest canopy layers where individual trees and total stand growth is increased. More growing space for large diameter tree classes will accelerate moving the forest landscape to one dominated by large trees. It provides the greatest potential for site specific treatment prescriptions / plans.	
		All action alternatives would improve stand and forest health and resiliency by removing density induced stress factors but to different degrees. Each alternative would result in distribution, abundance, and species composition more closely approximating the dynamic forest ecosystems existing prior to fire exclusion. The untreated areas intermixed with treated areas would maintain landscape diversity and habitats. The alternatives would all produce poles or fuelwood products. Alternatives 3 and 4 would produce commercially-valued trees (trees cut in order to meet hazardous fuel reduction objectives). All three alternatives would reduce wildfire hazard at the stand and at broader scales. They would reduce the potential for extensive loss due to fire and insects. The amount of reduction would directly translate to the level of forest health improvement that each of the alternatives would provide. All action alternatives would re-introduce prescribed fire into the ecosystem to some degree.				
BOTANY (See Supporting Analysis Document (pp. 31 – 36))		<p><i>w/o wildfire</i> – Successional / habitat changes would favor some species and lead to a decline of others.</p> <p><i>w/ wildfire</i>: Damage to above and below ground plant structures could lead to mortality due to high intensity fire with potentially adverse impact on population viability. General habitat and vegetation successional changes cause some special status and survey and manage species to flourish while others decline. In the event of a high severity wildfire, underground and above ground plant structures would be damaged and plants killed. Viability of individual populations may be jeopardized. High intensity fire could threaten dormant <i>Cypripedium</i> (USDA / USDI 1998) and Gentner’s Fritillary. Special status or Survey and Manage lichen species growing in the shrub or forest canopy could be threatened by the high flame lengths and canopy fire that can occur in fire condition class 2 and 3 areas.</p>	<p><i>ESA listed species</i> - None of the action alternatives are likely to adversely affect local populations of the federally listed Gentner’s Fritillary due to the protective buffers that will be implemented if the species is located in treatment areas and specific attention to maintain in appropriate habitat in the treatment areas. Thus, the species as a whole would not be adversely impacted (see Biological Assessment and Letter of Concurrence, App. E).</p> <p><i>Special status and S&M species</i> - The botanical protection PDFs should preclude short term, direct effects to special status species in all three alternatives. They would maintain species diversity across the landscape as treatments would retain a mosaic of habitats across the landscape. Long term effects would be similar for all alternatives as they are primarily related to the use of heavy equipment.</p>	<p>This alternative would produce the least amount of direct, short term effects on an acreage basis. Temporally, however, long term effects of treatments in the seen areas could be compounded by the staging of entries (estimated to be at least three). Long term effects related to heavy equipment could alter habitat and introduce species competing with natives. Because this alternative has the least amount of treatment prescribed per entry, botanical resources could be affected the most by the high wildfire potential that would continue.</p>	<p>This alternative would result in more direct short term effects than Alt 2 because the acreage disturbed is greater due to treatment in the general forest zone. The potential for disturbing special status species and habitats would be greater. The short term direct effects at the local site level would not be appreciably different from Alt. 2. Long term effects slightly higher than Alt. 2 due to increased acreage for potential non-native species invasion.</p>	<p>Of the three action alternatives, this alternative has the greatest potential to impact botanical resources. It treats the same acreage as Alt 3 but it will change the canopy to a greater extent with consequent reduction in shade and moist micro sites. It has the potential to reduce local non-vascular species diversity due to large tree removal. With the greatest fuel hazard reduction it would reduce the potential for high severity wildfire and the consequent impact on botanical species.</p>

Table 4.1: Environmental Impacts: Comparative Summary of Alternatives

Resource Element		Alternative 1 (No Action)	Alternative 2	Alternative 3 (Proposed Action)	Alternative 4																																																
	Noxious Weeds	w/o wildfire – No impact. w/ wildfire – Noxious weeds could increase depending upon wildfire severity and disturbance.	<p><i>Noxious weeds</i> - The entire project area has a moderate to high probability of noxious weed invasion. Linear weed dispersal corridors (e.g., roads) are common in the project area. The river is a dispersal corridor due to flooding or movement of weed seed by recreationists. Douglas-fir series and white oak series (40% of the area) have the highest potential for weeds and weed invasion. Other series have a moderate probability for weed invasion. Heavy equipment use and multiple entries on a site increase the potential for weed invasions as well as displace native species. Multiple entries would encourage noxious weed invasion making restoration with native grasses difficult. The more ground disturbance the higher the potential for noxious weed invasion. PDFs (e.g., equipment cleaning, native grass seeding, eradication) will reduce the potential for this noxious weed spread.</p>																																																		
WILDLIFE	ESA Listed Species: <i>Northern Spotted Owl, Bald Eagles, Marbled Murrelet</i> (See Biological Assessment and Letter of Concurrence in Appendix E.)	<p>w/o wildfire - Habitat extent and quality would remain essentially unchanged.</p> <p>w/ wildfire - Habitats could be degraded or lost if a wildfire were to degrade the 136 acres of suitable spotted owl nesting habitat and the designated critical habitat unit (CHU), or eagle nest trees.</p>	<p><i>Northern Spotted Owl (NSO)</i> - “May affect, Not likely to adversely effect.” (ESA). Project PDFs for all alternatives would retain a minimum of 60% canopy closure within the USFWS’s designated NSO critical habitat in the General Forest Zone. Suitable nesting habitat quality would be retained. The table below summarizes potential NSO habitat changes in the project area. It differentiates between areas within the CHU and late-successional reserve (LSR), and areas outside. (The area west of the river within CHU (#OR-65) is also within a Late Successional Reserve (LSR).)</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="7">Changes in Northern Spotted Owl Habitat - Alternatives 2, 3, and 4</th> </tr> <tr> <th rowspan="2">Land Designation</th> <th colspan="3">Current Habitat Acres</th> <th colspan="3">Post-Project Habitat Acres</th> </tr> <tr> <th>Suitable Nesting</th> <th>Foraging</th> <th>Dispersal</th> <th>Suitable Nesting</th> <th>Foraging</th> <th>Dispersal</th> </tr> </thead> <tbody> <tr> <td>Within CHU Only</td> <td>0</td> <td>415</td> <td>0</td> <td>0</td> <td>0</td> <td>415</td> </tr> <tr> <td>Within CHU & LSR</td> <td>136</td> <td>0</td> <td>0</td> <td>136</td> <td>0</td> <td></td> </tr> <tr> <td>Within CHU or LSR</td> <td>0</td> <td>0</td> <td>1,215</td> <td>0</td> <td>0</td> <td>1,215</td> </tr> <tr> <td>Outside CHU & LSR</td> <td>0</td> <td>639</td> <td>0</td> <td>0</td> <td>0</td> <td>639</td> </tr> </tbody> </table> <p>The current 136 acres of suitable nesting habitat would remain of suitable nesting quality, although it would be degraded slightly by the action alternatives. The Biological Assessment (BA) (Appendix E) has determined that the project may affect, but is not likely to adversely affect the NSO, a determination concurred with by the USFWS (Letter of concurrence in Appendix E).</p> <p><i>Bald Eagles</i>: “No effect” (ESA). PDFs include protection measures (e.g., canopy closure, seasonal operating restrictions, noise buffers) for the three active nest sites within the corridor. All alternatives would create a defensible space around nest and roost trees and potential nest trees within ½ mile of nests. All alternatives would result in minimal effects to the bald eagles, and there may be beneficial effects. The project’s BA has concluded that the project is a “no effect” to bald eagles.</p> <p><i>Marbled Murrelet</i>: “No effect” (ESA). The project area is within 50 miles of the coast and may include murrelet nest trees. However, the probability of them being in the area and of their being impacted by the proposed actions is very low. No special measures are required per the <i>Rogue River/South Coast Biological Assessment</i> (USDA and USDI 1996). This species has been included in the ESA consultation with the USFWS.</p> <p>Based on the June 2002 Northwest National Fire Plan Consultation Process (USDA / USDI 2003), activities that conform to accepted practices for T&E species (e.g., habitat retention, seasonal restrictions) and other specific project design criteria, effects to T&E species is expected to be non-substantive. This project conforms to these practices. The USFWS has been consulted on the potential effects to the bald eagle following the Northwest National Fire Plan Consultation Process. Guidelines have not been set up for the northern spotted owl or the marbled murrelet and the vernal pool fairy shrimp through this process, so the standard consultation process was followed for these species.</p>			Changes in Northern Spotted Owl Habitat - Alternatives 2, 3, and 4							Land Designation	Current Habitat Acres			Post-Project Habitat Acres			Suitable Nesting	Foraging	Dispersal	Suitable Nesting	Foraging	Dispersal	Within CHU Only	0	415	0	0	0	415	Within CHU & LSR	136	0	0	136	0		Within CHU or LSR	0	0	1,215	0	0	1,215	Outside CHU & LSR	0	639	0	0	0	639
Changes in Northern Spotted Owl Habitat - Alternatives 2, 3, and 4																																																					
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Table 4.1: Environmental Impacts: Comparative Summary of Alternatives

Resource Element	Alternative 1 (No Action)	Alternative 2	Alternative 3 (Proposed Action)	Alternative 4
	<p>Sensitive Species Habitats</p> <p><i>w/o wildfire</i> - Habitat quality would remain essentially unchanged, except for a continual decline in meadow and oak woodland habitats as conifers encroach.</p> <p><i>w/ wildfire</i> - Habitats would be degraded or lost if a severe wildfire occurs. Effects would depend on fire severity. A moderate surface fire may benefit late-successional forest habitat by creating canopy gaps, encouraging shade intolerant tree species and increasing forest complexity. A severe fire may result in loss of habitat diversity (type and extent) and the possible localized extirpation of species dependent upon mature forests. Species associated with snags and down wood (e.g., woodpeckers) would benefit from the increase in habitat.</p>		<p>PDFs, especially the many buffers and the highly variable pre- and post-treatment conditions, would mean minimal impact on sensitive species habitats across the landscape. Effective refugia and migration corridors would be retained. Early seral, as well as mature forest habitats, would remain after all treatments.</p>	
<p>CULTURAL / HISTORIC RESOURCES</p>	<p><i>w/o wildfire</i> - No change.</p> <p><i>w/ wildfire</i> - Cultural and historic features could be lost due to direct burning or due to loss of ground cover that presently shields the sites from potential removal. The National Historic Register Sites could be burned in the event of a wildfire.</p>		<p>The progressive reduction of the high intensity wildfire potential that the three action alternatives would result in a progressive reduction in the potential for direct damage and loss of cultural and historic features. All three action alternatives include the creation of home ignition zones around the Rand and Speeds Place National Historic Sites' structures. This would increase their defensibility during a wildfire. Cultural surveys will be conducted for neighborhood plans in accordance with the Protocol for Managing Cultural Resources on lands administered by the Bureau of Land Management in Oregon, BLM's agreement with Oregon's SHPO for managing cultural resources.</p>	
<p>Cumulative Effects Related to the Action Alternatives</p> <p>(See Supporting Analysis Document)</p>	<p>Fire & Fuels – Three other BLM fuel reduction projects (Maple Syrup, Stratton Hog, and Pickett Snake) are in progress in the 5th field watershed. They involve approximately 2,660 acres within 1.5 miles of the Rogue River. The present project would compliment these three projects because it is located at the lower positions on the slope. The canyon bottom position would help protect the upper elevations because fire typically travels upslope at greater rates than down slope. Thus, the current project area, which is the area with the highest risk, would have a reduced fuel hazard. The potential for a large fire to occur would thus be reduced.</p> <p>Visual and Scenic Quality - Within the Rogue River's viewshed, yet outside the designated Wild and Scenic River boundary, there are several recent BLM timber sale areas. These timber sales were designed and planned by the BLM to meet VRM Class II standards, wherein visual changes can be evident, but should not attract the attention of the casual observer. Where thinning has been completed, there has been no impact to the visual resources / scenic quality. Harvest units are not noticeable. Thus, all of the projects meet the VRM guidelines / objectives and there would be no cumulative adverse impact arising from the present project in conjunction with others.</p> <p>Vegetation / Silviculture- At the project area scale, the vegetative diversity, both plant series and stand conditions, would continue to be high. Overall forest health and resiliency would be greater across the project area with a decreased potential for the stand density induced mortality. The potential for forest loss due to severe wildfire would be diminished. Species representation across the project area would be better maintained into the future by increasing forest resiliency throughout the corridor. When considered with other BLM landscape management projects in the 5th field watershed, they would collectively promote a greater degree of vegetation and forest structure / habitat diversity and forest stand resiliency across that scale.</p> <p>Soils and Water - This project would not increase road density or early seral stage vegetation. It would not reduce stream shading. It may result in a negligible increase in compacted area (estimated at 0.01% to the 5th field watershed), however, the 5th field watershed would remain at an overall moderate compaction level (USDI 1999). The proposed alternatives would not affect Rogue River pH values or summer fecal coliform counts and would, therefore, not contribute to water quality limits for 303(d) listed streams this watershed.</p> <p>Fish - The fisheries analysis determined that the project may affect, but is not likely to adversely affect coho salmon due to certain elements of the project. No potentially substantive cumulative impacts have been identified. Consultation with NOAA – Fisheries would include a review and consideration of potential cumulative effects. No substantive impacts are anticipated.</p>			

Table 4.1: Environmental Impacts: Comparative Summary of Alternatives

Resource Element	Alternative 1 (No Action)	Alternative 2	Alternative 3 (Proposed Action)	Alternative 4
	<p>Botany - This project and other activities in the watershed could contribute to the potential for individual populations of special status species to be extirpated from local sites. This is not expected to be substantive at the watershed scale due to the diversity of landscape conditions that would be maintained into the future. Fuel reduction treatments should reduce the risk of extirpation due to severe wildfire.</p> <p>Wildlife - This project would not result in any additional adverse impact to late-successional forests within the watershed. Changes in habitats would occur from all projects in the watershed. None of the present project's alternatives would have an additional impact on overall species persistence or dispersal patterns in the watershed. A high level of vegetation and habitat diversity would continue. This project, with others in the watershed, would not adversely impact any listed species or cause any species to become listed.</p>			

5.0 Agencies and Persons Consulted

Project scoping involved the public via a February 6, 2003 mailing to 479 landowners within or contiguous to the Hellgate Recreation Section and individuals or organizations who have requested to be informed of the proposed project or have a standing request for all scoping notifications. These individuals or organizations include local, state and congressional elected officials and local Tribal entities. Two scoping open houses were held in February 2003, providing opportunities for information exchange and discussion between the BLM and the public. One open house was held in Galice (approximately 40 attendees) and the other in Grants Pass (20 attendees). Project scoping discussions were also held with Congressional delegations and with Josephine County commissioners. Written responses were received from the individuals and organizations listed below. The letters are on file at the Medford District Office.

State Representative Floyd Prozanski
Lianne Siart (Oregon Natural Resources Council)
Joe Serres (Friends of Living Oregon Water)
George Sexton (Klamath Siskiyou Wildlands Center)
Martin Desmond (Northwest Forestry Contractors Association)
Wellington Ewen Warren Troy Joe Salisbury
Helen Scott Ron Thomas Joan Kostelnik
Lloyd Stiewig Cliff McKeen Jacque and Harry Harvey
Two respondents not listed requested name / address confidentiality.

In addition, citizens consulted during the scoping meetings, the following agencies, government officials and organizations have, to date, been contacted regarding the corridor-wide planning process:

Federal: Congressmen Peter DeFazio and Greg Wyden
 Senator Gordon Smith
 Department of the Interior Fish and Wildlife Service
 Department of Commerce, National Marine Fisheries Service
State: Oregon Department of Forestry
 State of Oregon Scenic Waterways
County: Josephine County Commissioners
Organizations: Riverhawks
 Siskiyou Project
 Klamath Siskiyou Wildlands Center
 Headwaters

The key planning issues and concerns identified through the scoping process and by the BLM's interdisciplinary project planning team are identified below. These issues and concerns were addressed through the PDFs and through the range of alternatives proposed and analyzed.

- Protection of the Outstandingly Remarkable Values (natural scenic quality, fisheries and recreational opportunities) of the Hellgate Recreational Section of the Rogue National Wild & Scenic River.
- Consistency with BLM's Visual Resource Management (VRM) Class 1 guidelines and standards.
- Impact on Endangered Species Act listed species and BLM special status species.
- Current forest vegetation conditions are generally outside of historic density ranges resulting in increased wildfire fuel hazard. Stand compositions are changing and tree and stand vigor is declining.
- The rapid resprouting characteristic of many native tree and shrub species in most of the project area vegetation types and the potential for this to create, if vegetation treatments are not done carefully, substantial long term maintenance needs and diminished fuel hazard reduction effectiveness.

References Cited

- Evers, L. 2001. *Effects of fuels treatments on habitat elements important to survey and manage species*. Bureau of Land Management. Portland, OR. p. 18.
- USDA. 2001. *Record of Decision: Sierra Nevada Forest Plan Amendment Environmental Impact Statement*. (<http://www.fs.fed.us/r5/snfpa/library/archives/rod/rod.pdf>)
- USDA / USDI. 1994a. *Final supplemental environmental impact statement on management of habitat for late-successional and old-growth forest related species within the range of the northern spotted owl*. US Department of Agriculture, US Forest Service and US Department of Interior, Bureau of Land Management, Portland, OR.
- USDA / USDI. 1994b. *Record of decision for amendments to Forest Service and Bureau of Land Management planning documents within the range of the northern spotted owl. Standards and guidelines for management of habitat for late-successional and old-growth forest related species within the range of the northern spotted owl*. US Department of Agriculture, US Forest Service and US Department of Interior, Bureau of Land Management, Portland, OR.. October 1994.
- USDA / USDI. 2000. *Final Supplemental Environmental Impact Statement for Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines*. US Department of Agriculture, US Forest Service and US Department of Interior, Bureau of Land Management. Portland, OR. November 2000.
- USDA / USDI. 2001. *Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines*. US Department of Agriculture, US Forest Service and US Department of Interior, Bureau of Land Management. Portland, OR.
- USDA / USDI. 2003. *Northwest National Fire Plan Consultation Process*. US Department of Agriculture and US Department of Interior. (http://www.or.blm.gov/fcp/docs/NWNFP_intro_v2.pdf)
- USDI. 1994. *Medford District Proposed Resource Management Plan and Final Environmental Impact Statement*. . US Department of Interior, Bureau of Land Management, Medford, OR. October 1994.
- USDI. 1995. *Medford District Record of Decision and Resource Management Plan*. US Department of the Interior, Bureau of Land Management, Medford, OR. June 1995.
- USDI. 2003. *Rogue National Wild and Scenic River: Hellgate Recreation Area Proposed Recreation Area Management Plan and Final Environmental Impact Statement*. US Department of Interior, Bureau of Land Management, Medford, OR.
- WGA. 2001. *A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-year Comprehensive Strategy Implementation Plan*. Western Governor's Association. 27 pp.

Other References

Healthy Forests Initiative: www.whitehouse.gov/infocus/healthyforests

Living with Fire: www.or.blm.gov/nwfire/docs/Livingwithfire.pdf

Oregon State Scenic Waterways Homeowners Guide: www.prd.state.or.us/images/pdf/sww_log.pdf