

# CHAPTER 1. PURPOSE AND NEED FOR ACTION

## Document Structure

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The Forest Service has prepared this Final Environmental Impact Statement (FEIS) in compliance with the National Environmental Policy Act (NEPA) and other relevant Federal and State laws and regulations. This Final Environmental Impact Statement discloses the direct, indirect and cumulative environmental impacts that would result from the proposed action and alternatives. The document is organized into four chapters.

- *Chapter 1. Purpose of and Need for Action:* This chapter includes information on the history of the project proposal, the purpose and need for the project, and the agency's proposal for achieving that purpose and need. This section also details how the Forest Service informed the public of the proposal and how the public responded.
- *Chapter 2. Alternatives, Including the Proposed Action:* This chapter provides a more detailed description of the agency's proposed action, as well as alternative methods for achieving the stated purpose. These alternatives were developed based on significant issues raised by the public and other agencies. This discussion also includes mitigation measures. Finally, this section provides a summary table of the environmental consequences associated with each alternative.
- *Chapter 3. Affected Environment and Environmental Consequences:* This chapter describes the environmental effects of implementing the proposed action and other alternatives. This analysis is organized by resource area.
- *Chapter 4. Consultation and Coordination:* This chapter provides a list of preparers and agencies consulted during the development of the Final Environmental Impact Statement.
- *Appendices:* The appendices provide more detailed information to support the analyses presented in the Final Environmental Impact Statement. These include tabular listing by alternative for the type of harvest activity (Appendix A), a road listing and road closures by alternative (Appendix B), the Aquatic Species Biological Evaluation (Appendix C), the Wildlife Biological Evaluation (Appendix D), the Plant Biological Evaluation (Appendix E), the public comments on the DEIS and the responses (Appendix F), and the Malheur Post Fire Grazing Guidelines (Appendix G).
- *Glossary:* This chapter is a glossary of terms used in this Final Environmental Impact Statement.
- *References Cited and Reviewed:* This chapter lists literature cited during the development of the Final Environmental Impact Statement. This chapter also lists literature reviewed but not used in the analysis.
- *Index:* The index provides page numbers by document topic.

Additional documentation, including more detailed analyses of project-area resources, may be found in the project planning record located at the Prairie City Ranger District office.

All the numbers included in the description of site conditions and the proposed action are approximate, as they have been generated from several sources. Some were generated from electronic sources, i.e., queries of GIS spatial data while others were generated from field surveys. Importantly, they do provide accurate display of effects or trends.

## Changes between the Draft and Final EIS

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The following changes were made between the Draft and Final EIS. This listing does not include corrections, explanations, or edits to grammar and spelling. Some of the changes resulted from comments made to the DEIS.

1. The purpose and need rationale for fuel treatment was clarified. The update includes desired fuel loading information and emphasizes the need to meet this desired fuel loading by removing the standing dead trees.
2. The proposed action was modified to reflect field information gathered during the summer. Field information revealed that fire damaged stands in the low to moderate burn damage category contained higher tree mortality than originally estimated. The number of acres of proposed commercial thinning and precommercial thinning in resiliency treatments were reduced (75%). Field observations revealed higher tree mortality in these stands making salvage treatment the reasonable treatment.  
The location and size of salvage and resiliency harvest treatments were modified to reflect field conditions. The total harvest acres were reduced approximately 11%. The majority of these changes occurred in areas with low standing dead tree density that would not economically support removal with a helicopter.
3. Salvage harvest in the portion of the RHCA below the confluence of Camp Creek and the Little Malheur River was changed to no harvest. Field data revealed there is a lack of large woody debris in this stream reach of the Little Malheur.

## Background

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On July 12, 2002, a series of large thunderstorms passed through the Blue Mountains of Eastern Oregon and ignited numerous fires on the Malheur National Forest, including the Monument Fire in the Little Malheur River basin. Several days of high daytime temperatures with strong northerly winds increased fire activity and expansion of the fire into the Little Malheur River basin. By July 14<sup>th</sup>, the fire had grown and spread onto the Unity Ranger District on the Wallowa-Whitman National Forest.

The Monument Fire was declared contained on September 9, 2002, and controlled on December 31, 2002. Approximately 24,525 total acres burned in the Monument Fire, 20,186 acres (82%) on the Prairie City Ranger District, Malheur National Forest, 3,711 acres (15%) on the Unity Ranger District, Wallowa-Whitman National Forest, and 628 acres (3%) on private land.

The Monument Fire Recovery Project Area refers to approximately 8,588 acres of the Monument Fire that burned on the Prairie City Ranger District outside the Monument Rock Wilderness, Malheur National Forest (see figures 1 and 2, Map Section)..

The project area is located within the Little Malheur River (94%) and Upper North Fork Malheur (6%) watersheds. The six major drainages in the project area are Little Malheur River, Camp Creek, Hunter Creek, Fopian Creek, Spring Creek, and Elk Flat Creek.

The project area is approximately 23 miles southeast of Prairie City, Oregon in portions of T.14S. R.36E., T.14S. R.35½E., and T.15S. R.36E, Willamette Meridian, Grant and Baker Counties, Oregon. Vicinity maps can be found in the map section at the end of this document (see figures 1 and 2, Map Section).

## Fire Suppression Activities, Completed Fire Rehabilitation and Ongoing Fire Recovery Projects

Table 1-1. Monument Fire Suppression Lines - Malheur NF portion

Subwatershed	Total miles interior and exterior fire line	Total miles of cross-country dozer fire line	Number of stream crossings (Handlines and Dozer)		
			Fish bearing	Perennial	Intermittent
Upper Little Malheur	10.3	5.8	2	0	3
Swamp Creek	11.5	9.5	0	0	4
Total	21.8	15.3	2	0	7

About 21.8 miles of fire line was utilized on the Prairie City RD portion of the fire for containment and control.<sup>1</sup> Approximately 15.3 miles of fire line were built with dozers. Fire fighting and support vehicles traveled cross-country creating unclassified extensions of roads. As identified in Table 1-1, there were six fireline stream crossings. One dozer line crossed Category 4 tributary of Spring Creek (perennial stream) and a dozer crossed<sup>2</sup> Hunter Creek (fish bearing). The figures displayed in table 1-1 include fire line built outside the project area<sup>3</sup> as contingency line (in case fire lines did not hold). The information was derived from the July 31, 2002, Monument Fire shift plan map at a scale of 1:24000 (see project record).

Rehabilitation of fire lines occurred on roads opened to create fire lines and dozer control lines built cross-country. On previously-closed roads that were opened to develop fire lines, rehabilitation included keeping the roadbed intact and reinstalling gate closure devices and installing water bars as needed. Rehabilitation on cross-country dozer lines consisted of knocking down berms, water barring, and scattering slash, logs, large rocks and other debris on fire lines to both reduce potential for sediment movement and blend the fire lines with the landscape.

Rehabilitation work was completed on all fire lines before fall precipitation. Recent observation of the rehabilitation measures indicates they are providing expected resource protection. Areas of concern in or near draws and seeps and perennial crossings are being monitored.

<sup>1</sup> Miles of fire line include fire lines both inside and outside the boundary of the project area. Fire lines consisted of open and closed roads, geographic barriers, blasted line, dozer line, and hand line.

<sup>2</sup> No fire line was constructed through the stream channel.

<sup>3</sup> Line built outside the fire area includes line built of private land.

Other fire suppression related actions included aerial water and retardant drops. The amount of fire retardant applied to the Monument Fire was limited and applied in upland areas. During filed review, there was no evidence that streams were impacted by the retardant application. There were no safety zones constructed during fire suppression activities. The fire camp was located at the high school in Unity and later at Summit Prairie.

The Burned Area Emergency Rehabilitation (BAER) team evaluated the fire for resource condition and the need to take action to prevent or reduce additional resource damage caused by the fire and not by suppression (USDA Forest Service 2002, BAER Report). The BAER team made the determination that emergency rehabilitation of stream channels, and roads/trails was needed. The rehabilitation needs include instream channel felling and placement in Category 1 stream channels, Camp Creek and Little Malheur River.

Much of the road maintenance items identified by the BAER team have been completed. The drainage structures were cleaned, these included drain dips, ditches, culverts and catch basins. The road surface on some of the roads has also been graded. This work was started in the fall 2002 and completed in summer of 2003.

Ground cover seeding was not recommended since it was felt that natural revegetation would be adequate. Monitoring of noxious or invasive weeds was completed during the summer of 2003 to see if they are expanding their distribution or invading from outside sources.

The BAER team did determine that there were specific emergencies related to public safety. As a result of the analysis, hazard warning signs were posted in fire areas, and falling and removing hazard trees around roads and trails was completed. Hazard tree removal around the roads occurred in fall of 2002 and additional cutting of hazard trees in the spring of 2003.

### *Monument Fire Recovery Project - Whitman Unit*

A fire recovery projects is also proposed on the Wallowa - Whitman National Forest, Unity Ranger District portion of the Monument Fire. The project name is the Monument Fire Recovery Project / Whitman Unit.

The two project areas are separated by the political, National Forest/County boundary and hydrologic watershed boundary (see figure 2, Map Section). The type and design of recovery projects for the two projects are very similar; both projects include salvage harvest, conifer planting and road restoration. The main actions proposed in the Whitman Unit project include commercial salvage (approx. 779 acres, 9.0 MMBF), access management projects (road maintenance and road closures), and conifer/riparian planting (1205 acres conifer and 292 acres riparian).

The relationship of the cumulative effects between the projects was analyzed throughout Chapter 3 within each resource section.

### *Ongoing Fire Recovery Projects*

Additional fire recovery projects are planned or have been implemented (see Actions Outside of this Final EIS to Address Recovery Needs), or are being implemented in the Monument Fire project area. The following projects are being implemented or are completed in the project area.

**Hardwood Planting and Protection**

In the spring of 2003, hardwood trees or shrubs were planted along the Little Malheur River and Camp Creek. There is additional planting scheduled in 2005.

**Roadside Hazard Tree Cutting**

Approximately 50 trees along Forest Service roads were determined to be a safety hazard to motorized vehicle traffic. During the spring of 2003, the trees were cut and left in place.

**Noxious Weed Monitoring**

During the summer of 2003, a noxious weed field survey was completed around the fire perimeter. Noxious weed locations were mapped by species and densities.<sup>4</sup>

**Conifer Planting**

Approximately 21 acres were planted in old timber harvest areas. These areas were previously planted following timber harvest and the fire killed the majority of seedlings.

**Malheur Forest Plan Direction***Relationship to the Forest Plan*

This Final Environmental Impact Statement (FEIS) tiers to and relies upon the analyses for the Malheur National Forest Land and Resource Management Plan (Forest Plan), as amended. Amendments include, but are not limited to the Regional Forester Eastside Forest Plans Amendment 2 (1995) and the Inland Native Fish Strategy (INFISH)<sup>5</sup>. The Forest Plan, as amended, contains both Forest-Wide Standards and Guidelines as well as Standards and Guidelines for specific management areas (such as MA-1 General Forest). These Standards and Guidelines are identified in Chapter 3 in each resource section.

*Management Areas***Malheur Forest Plan Allocations within the Monument Project Area**

Lands within the project area fall within five Forest Plan management allocations (see figure 3, Map Section). The Standards and Guidelines for each management allocation (MA) are identified in each resource section of Chapter 3. No activities are proposed in the Monument Rock Wilderness (MA 6B) and are not included in the description below. Management goals in MAs are:

MA 1 General Forest – Emphasize timber production on a sustained-yield basis while providing for other resource values. Develop equal distribution of age classes to optimize sustained-yield timber production. Manage levels and intensities consistent with the schedule described in the Malheur Forest Plan, to provide for multiple uses and resources.

MA 2 Rangeland – Emphasize forage production on non-forested areas on a sustained-yield basis, while providing for other resources and values.

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<sup>4</sup> A summary of this information can be found in Chapter 3 of the FEIS in the noxious weed section and the Monument file Noxious Weed Range specialist report.

<sup>5</sup> These analyses are documented in the Final Environmental Impact Statement and Record of Decision for the Forest Plan, and the environmental assessments for the Inland Native Fish Strategy and the Interim Management Direction Establishing Riparian Ecosystem and Wildlife Standards for Timber Sales (Eastside Forest Plan Amendment #2), and other related documents.

MA 4A Big Game Winter Range – Maintain or enhance the quality of the winter-range habitat for deer and elk through timber harvesting, prescribed burning, and other management practices. Manage for elk habitat by balancing cover quality, cover spacing, forage, and open road densities.

MA 13 Dedicated Old Growth – Provide suitable habitat for old-growth-dependent wildlife species, ecosystem diversity, and preservation of aesthetic qualities.

MA 14 Visual Corridors – Manage corridor viewsheds with primary consideration given to their scenic quality and the growth of large diameter trees.

### **Regional Forester's Forest Plan Amendments**

The Regional Forester's Eastside Forest Plan Amendment #2 (1995) consists of Forest-Wide Standards and Guidelines that contain direction for the development of timber sales. Amendment #2 changed standards for harvest of live trees, snag and down logs, goshawk habitat, connectivity of old forest, and riparian habitat. The salvage of dead trees is exempt from the ecosystem standards, but riparian and wildlife standards still apply. The ecosystem standards do apply for the harvest of live trees prescribed in resiliency treatments.

RHCA – INFISH (1995) has amended the Malheur Forest Plan standards and guidelines for this management area by creating Riparian Habitat Conservation Areas (RHCAs). Riparian-dependent resources receive primary emphasis in all RHCAs. These RHCAs include traditional riparian corridors, wetlands, intermittent streams, and other areas that help maintain the integrity of aquatic ecosystems. These areas will be managed to maintain or restore water quality, stream channel integrity, channel processes, sediment regimes, instream flows, diversity and productivity of plant communities in riparian zones, and riparian and aquatic habitats, to foster unique genetic fish stocks that evolved within the specific region. There are no anadromous fish streams within the project area.

## **Purpose and Need for Action**

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The primary need for action is compliance with the Malheur Forest Plan (Malheur Land and Resource Management Plan as amended, FEIS, May 1990). The Forest Plan guides all natural resource management activities and establishes management standards for lands administered by the Malheur National Forest. The purpose of and need for the project is to initiate recovery actions that will move the Monument Fire Recovery Project Area towards vegetation, water quality, and wildlife habitat recovery, while reducing the threat of future wildfires and capturing the economic value of the dead material.

The purposes for activities are to:

- **Reduce levels of dead and dying standing and down fuel** to reduce the potential for future high-severity fires and restore a low-intensity/ frequent-fire regime.
- **Improve forest vegetation resilience** to insects, disease, wildfire, and other disturbances; restore ecologically appropriate structural and compositional characteristics of upland and riparian vegetation.
- **Restore tree vegetation** for wildlife habitat, stream shade, and a source of future timber products.

- **Replace dedicated old-growth (DOG) and replacement old-growth (ROG) areas** that burned and are no longer in suitable old-growth condition. Re-delineate an additional dedicated old-growth area and replacement old-growth area affected by the fire, to bring them in compliance and direction with the Malheur Forest Plan.
- **Improve watershed condition and reduce road-related impacts.** Recommendations from the Monument Roads Analysis report include (1) decommissioning specific roads and old skid trails that are contributing sediment and concentrating flows, resulting in adverse impacts to water quality and native fish habitat, and (2) reducing road densities where deer and elk security habitat has been affected by the fire.
- **Capture the economic value** of those trees that are surplus to other resource needs, and to provide raw materials and jobs to aid in community stability.

The needs for the proposed action are derived from the differences between current conditions and desired conditions. Desired conditions are based on Forest Plan direction and management objectives. The proposed action is designed to move resource conditions closer to the desired conditions, and address the management direction provided by the Malheur Land and Resource Management Plan as amended.

The two broad categories of purpose for the project are the acceleration of ecosystem restoration, and timely commodity extraction. Each of the existing and desired conditions relevant to providing improved conditions and accomplishing commodity extraction for jobs and income can be linked to the purpose for the proposed action.

The purpose and need for an action is the difference between the existing and desired condition. The proposed action is developed early in the planning process to address the differences between the existing and desired conditions.

## The Need to Reduce Potential High Fuel Levels

The Monument Fire Recovery Project Area, historically, was a short-interval, fire-adapted ecosystem. Frequent, low-intensity fires that swept the forest floor maintained this condition. High-severity fires did occur, but on a much smaller scale than the Monument Fire. Prior to the Monument Fire, the composition of stands in the hot dry and warm dry forests, once dominated by ponderosa pine, started to change. Fire suppression, grazing, and timber harvest of fire-tolerant species, which began in the early 1900s, were major factors in expanding multistrata understories of fire-intolerant tree species. Changes in the structure of ponderosa pine-dominated stands in the hot dry and warm dry forests increased the risk of high-intensity fires. Due to these changes, the historic high-frequency/low-severity fire regime changed to a moderate- to high-severity fire regime (Brown, Coarse Woody Debris: Managing Benefits and Fire Hazard in the Recovering Forest, pg. 6).

Generally, the Monument Fire consumed the thick litter layers and most, of the understory vegetation throughout the moderate and severely burned areas. A dead and dying standing fuel component remains within this low-intensity fire regime area. Up to 10 years following the Monument Fire, a high-intensity fire is unlikely, because fuel will still be accumulating as dead trees rot and fall down, and will not have decomposed enough to support prolonged smoldering combustion. However, concentrations of light, woody fuels (0-3 inches diameter) could support moderate to high fire intensity.

Approximately 10 to 30 years following the Monument Fire, accumulated fuel will have decomposed enough to support prolonged burning. Minimal duff will have accumulated, thus high burn severity would primarily occur where fuel is lying on or close to the ground. Roughly 30 years and beyond, large wood will have considerable rot, and a litter and duff layer will be established, resulting in high burn severity due to prolonged burning of this layer. Additionally, existence of a conifer overstory could support a crown fire, which would eliminate vegetation recovery. The development of vegetative communities could be altered, perpetuating the departure from a high-frequency to a low-intensity fire regime. Reintroduction of fire for resource benefit, by application of prescribed burns or wildland fires, is a foreseeable action, 20 to 30 years in the future (Brown, Coarse Woody Debris: Managing Benefits and Fire Hazard in the Recovering Forest, Pg 9).

The following table (1-2) displays the potential fuel loading of the standing, dead trees currently within the area of the proposed action.

**Table 1-2. Existing and Desired Fuel Loading within the Project Area**

Areas	*Tons/Acre Existing	*Tons/Acre Desired
Camp Creek RHCA	87	5 - 15
Little Malheur River RHCA	60	5 - 15
Little Malheur River Uplands	31	5 - 15
North Fork Malheur River Uplands	33	5 - 15

\*Sampling was limited to trees greater than 8 inches in diameter at breast height (>8” DBH); data was produced by calculating weight of standing, dead trees existing on site. Desired tons/acre was taken from Brown, Coarse Woody Debris: Managing Benefits and Fire Hazard in the Recovering Forest, Pg. 7.)

There is a need to remove large standing dead trees that will eventually fall and add to ground fuel loading. The salvage of the standing dead and dying would reduce future burn duration, reducing fire severity of future prescribed or wildfire events. Reduction of potential high fuel levels will meet forest plan standards for residue management (Malheur N.F., Land Use Mgt. Plan, Ch. IV, Pg. 45, Forest Wide Standard #181).

### **The Need to Improve the Appropriate Forest Vegetation Structural Characteristics**

The warm dry and hot dry forests are the most common forest types or biophysical environments occurring across the Monument Fire Recovery Project Area. These forest types comprise 6,385 acres or 74% of the project area (table 1-3). Prior to the Monument Fire, the structural character of the warm dry and hot dry forests was affected by a variety

of factors including fire suppression, grazing, past harvest activities which removed trees in larger diameter classes only, natural climate, and insect and disease cycles. In warm dry and hot dry forests, with high stocking levels, multiple canopy layers, and with shade-tolerant species (such as grand fir) increases the response to these factors. These biophysical changes greatly reduced the resilience of these forests to withstand the Monument Fire, and contributed to a stand-replacement fire occurrence over a larger area. These warm dry/hot dry forest biophysical environments were not historically shaped by large stand-replacement fires, but were more adapted to high-frequency/low-intensity fire regimes in the past. These historic, open park-like stands were ecologically stable and sustainable forest structures. These conditions are most prevalent in the hot dry biophysical environment but some stands of warm dry biophysical environments are also suited to open park-like structures. It is desirable to recreate these forest structures and return the stands to a more sustainable condition where feasible.

**Table 1-3. Existing Monument Project Area Biophysical Types:**

<b>Biophysical Environment</b>	<b>Acres</b>	<b>Percentage of Area</b>
Warm Dry	6,015	70%
Hot Dry	370	4%
Cool Moist	640	8%
Cold Dry	715	8%
Warm Moist	75	1%
Grassland/Shrubland/Woodland	720	8%
Non-Forest (rock, streams, etc.)	53	<1%
<b>Total Acres</b>	<b>8,588 Acres</b>	<b>100%</b>

Areas that burned severely and at the higher end of the moderate-burn severity generally resulted in a stand-replacement fire, with very few trees expected to survive the fire. The Monument Fire resulted in a major change in structural characteristics over a large landscape, with most of the higher-severity burned areas being set back to stand-initiation or understory-reinitiation structures. Within the fire area, there are few areas remaining in an old-forest structural condition. Many decades will pass before areas that burned with high severities can regenerate and develop into older forests with large trees.

Some areas within the fire perimeter burned with light to lower-end moderate burn severities. The probability rating for tree survival in these areas ranges from moderate to high (Scott 2002). Live canopy structures are mixed with fire-killed trees, creating varied stand structures. Areas remaining in dense forest conditions as either a young forest multistory structure (YFMS) or old forest multistory structure (OFMS), will remain susceptible to secondary insect disturbances over the next couple of years due to increased stress on individual trees. Areas with dense multiple canopy structures, especially in the warm dry biophysical environments, will remain susceptible to insect, disease, and fire disturbances into the future. This resiliency treatments would meet Forest Plan standards by maintaining stand vigor with stocking level control to minimize losses due to insects and disease. (Malheur Forest Plan, standard 98, IV-37).

Thinning would also restore ecologically appropriate and resilient stocking, structures, and compositions in warm dry/hot dry forests, stand densities and shade-tolerant species that still remain alive after the fire. By reducing stand densities through thinning live trees, growth of residual trees will be enhanced and large diameter trees will be developed sooner. Due to the lack of old-forest structures within the Monument Fire Area, we need to emphasize restoration activities that will accelerate development of large trees and future old-forest structures, and maintain existing old-forest structures in either an old-forest multistory (mostly warm dry biophysical environments) or an old-forest single-story condition (mostly hot dry or warmer end of warm dry biophysical environments).

## **The Need to Implement Reforestation Activities in the Project Area**

Approximately 2,963 (34%) acres burned severely in the Monument Fire Recovery Project Area. Very few trees are expected to survive the fire in these intensely burned areas. Areas with a remaining seed source are expected to take decades` to regenerate under natural conditions. Areas, such as Camp Creek, which burned severely over a large landscape area, lack live trees for a seed source to naturally regenerate may take several decades to regenerate.

Also, approximately 3,442 acres (40%) burned with moderate severity in the same area. Several of these moderately burned stands also lack sufficient live trees to provide adequate seed source. Areas isolated from a seed source may take decades to naturally regenerate. There is a need to plant conifers to restore these stands sooner than would occur naturally. This will help re-establish big-game winter-range habitat cover as desired in the Forest Plan (Forest Plan, IV-69, standard #4) where habitat was lost, primarily in old-growth habitat, such as Camp Creek and the Little Malheur drainage. We need to re-establish big-game summer-range habitat cover, where hiding and escapement cover was lost throughout both drainages.

Many streams, especially those in the Little Malheur and Camp Creek drainages, burned with moderate and severe burn severities, which killed many of the trees in the riparian habitat conservation areas (RHCAs). We need to plant conifers in riparian areas especially where there is severe fire damage. The likelihood of natural regeneration is limited due to a lack of seed source. The planting will promote soil and streambank stability, shade along streams, and hiding cover for wildlife.

## **The Need to Replace and Update Dedicated Old Growth and Associated Designated Habitats Impacted by the Monument Fire**

The old-growth network on the Malheur National Forest was first established in the early 1980s. Since then, various levels of field validation and modification of those dedicated areas has occurred, as associated activities and other factors have allowed better information about those habitats to become available. The Monument Fire impacted dedicated old-growth (DOG) and/or replacement old-growth (ROG) habitats within the fire perimeter. One DOG and two ROG habitat areas were impacted. These dedicated habitats are identified as pine marten and pileated woodpecker old-growth habitats. In addition, boundary adjustments to ROGs that were impacted by the fire are needed, to make this designation consistent with Malheur Forest Plan direction. Initial

reconnaissance and review by team members identified a need to replace DOG 04334PP and its associated ROG, which were completely consumed in the Monument Fire. These habitats will no longer function for pine marten or pileated woodpecker in the short to mid-term. Further reconnaissance and review also identified the need to assess the impacts of the partial consumption of ROG 04345PP (associated with DOG 04345PP), and to re-assess the current boundary designation of the ROG relative to habitat suitability and Forest Plan standards. Currently, ROG 04345PP consists of more acres than directed by the Forest Plan, and includes early successional habitats not desired for ROG habitats. The identification of pileated woodpecker feeding areas is also desired, and directed by the Forest Plan.

### **The Need to Reduce Road and Old Skid Trail-Related Impacts to Watershed and Wildlife Values**

Within the Monument Fire Project Area, stream systems have been impacted by road location, construction, and maintenance. Several native-surface roads are less than 300 feet from tributaries and springs. Some of these roads directly influence channel morphology, limit woody debris recruitment, and contribute sediment to the stream channel.

Road-related impacts on streams would decrease by decommissioning and closing roads within RHCAs. Adverse impacts to water quality, fish habitat, and wildlife habitat would decrease by minimizing road-related sediment delivery to water sources. A road condition inventory identified specific segments as improperly functioning drainage features. There is a need to storm-proof these roads (close, decommission, or improve) to reduce sediment delivery to streams. Closing, stabilizing, or obliterating, roads not needed for future management activities would assist in meeting INFISH standard RF-3(c).

Past logging activities in the 1960s used ground-based skidding methods on slopes exceeding 35%. Under current policy, these methods are used on slopes 35% or less, to prevent excessive soil displacement. In several areas, skids trails ran down steep slopes, cut across slopes, or followed Category 4 stream channels (adjacent to or in the bottom of). Skid trails often crossed existing stream channels, capturing the flows and diverting water down the skid trail. There is a need to obliterate old skid trails to reduce the existing drainage network and improve natural sediment capture and transport. Infiltration will increase, sedimentation will decrease, and runoff will lessen, providing for vegetative recovery along the channel.

Loss of live vegetation, particularly in the moderate to severely burned areas, has resulted in the loss of security/hiding cover in the short to mid-term. There is the need to reduce open roads to improve big game animal security and vulnerability to disturbance from motorized vehicle use by hunters, road traffic, and recreationists. The reduction in open roads will also reduce the risk of noxious weed spread. Motorized vehicles are often a major source for spread of noxious weed seeds.

### **The Need to Capture the Economic Value of Wood Products**

Timber harvesting plays an important role in the economic stability of the local area. There is a need to make wood products available for local, regional, and national needs to

provide jobs in the most cost-effective manner, while being sensitive to resource conditions such as loss of ground vegetation during the fire, soil sensitivity to erosion, and steepness of slopes. We also need to remove the timber in a timely manner to ensure that the highest economic value is obtained. The Malheur Forest Plan directs us to provide public economic return and maximize outputs (Forest Plan goal 25 and 26, IV-2).

## Proposed Action

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### Background

On December 13, 2002, the Malheur Forest Supervisor issued a project initiation letter to the Monument Team Leader. The Monument Team followed the identified direction during development of the purpose of and need for the proposed action. Following is a summary of direction included in the project initiation letter.

Develop a proposed action that considers:

- Harvesting dead and dying trees to reduce fuel loadings and reduce the risk of high-severity fires within the natural return cycle for low-intensity/ frequent-fire regime areas, while capturing the economic value of those trees surplus to other resource needs.
- Harvesting and thinning some green trees in areas that burned with lower severities, to restore ecologically appropriate tree vegetation structural and compositional characteristics; and improve resilience to insects, disease, wildfire, and other disturbances, in those areas.
- Developing appropriate stands in the fire area as replacement old growth, and changing the status of designated and replacement old-growth areas in the fire area as appropriate. Evaluate stands outside of the fire area, but within the affected subwatersheds, for replacement of designated and replacement old-growth areas.
- Restoring/improving riparian conditions in riparian habitat conservation areas (RHCA's). Actions could include timber harvest and directional felling of trees to reduce abnormally high levels of dead standing fuel that may eventually contribute to high-severity fires.
- Minimizing negative impacts to water quality, fish habitat, and wildlife habitat by decommissioning old roads and skid trails, repairing road surfaces, and limiting construction of temporary roads. No new permanent road construction will be proposed.
- Applying helicopter logging on steeper slopes, high-intensity burn areas, and sensitive soil types. To ensure protection of soil and water quality, helicopter logging will be applied in the Little Malheur River Drainage and its tributaries.
- Planting appropriate and desirable vegetation in upland and riparian locations.
- Removing hazard trees along system roads.
- Repairing road surfaces used to access this project area.

### Dead and Dying Tree Determination

Determining potential tree survivorship or mortality after a wildfire is often difficult because of the varied and complex factors governing the survival of fire injured trees.

Numerous factors often interact to determine the fate of trees following wildfire, including, age, size, crown ratio, bark thickness, and other fire-resistance characteristics of the affected tree species; stand density, fuel loads, season of fire, and growing site quality characteristics. These factors influence the intensity and duration of the fire, and degree of damage to trees; and insect populations and disease status with affected stands.

The most current scientific literature available, which builds on past fire research efforts (Scott 1996) was published in November, 2002 and was written by Scott et al. It is titled “Factors Affecting Survival of Fire Injured Trees: A Rating System for Determining Relative Probability of Survival of Conifers in the Blue and Wallowa Mountains”. This document was written to provide a field rating system to determine potential survivorship or mortality of fire injured trees. Field verification of the rating system was conducted by Don Scott, Craig Schmitt, Lia Spiegel and Prairie City Ranger District personnel in June 2003 (Letter to District Ranger, 12/3/2003).

This rating system was used to determine those trees designated for salvage and are considered as dead. The rating system has a high degree of confidence in predicting survivorship or mortality when a tree is classified as either high probability of survival or low probability of survival. Further discussion of vegetative response to fire can be found in the following documents: Scott et al, (2003), Scott et al, (2002), Schmitt and Spiegel (2002), Miller (2000), Johnson (1998), and Scott (1996).

## Proposed Activities/Treatments

The following activities are proposed in the Monument Fire Recovery Project Area to meet the six project objectives identified in the purpose and need statements, Malheur Forest Plan direction, and direction issued by the Malheur Forest Supervisor in the Project Initiation Letter.

Under the proposed action, activities would most likely begin in the fall of 2003. Activities could extend over a period of 3 to 4 years ending in 2007. A detailed schedule of project activities by alternative is contained in Chapter 2.

The six project objectives include: (1) **Fuels** – reduction of future high fuel levels, (2) **Forest Vegetation** – improvement of forest structure, (3) **Forest Vegetation** – restoration of forest vegetation killed by fire, (4) **Old Growth** – replacement of Dedicated Old Growth and Replacement Old Growth, (5) **Water Quality** – improvement of water quality conditions being degraded by roads and old skid trails, and (6) **Economics** – capture of economic value of the dead/dying trees.

The following treatments were developed to meet the six project objectives.

### *Fuels/Economics*

#### **Salvage Treatment**

The Salvage Treatment addresses the need to reduce future fuel levels and capture economic value of a portion of trees killed in the Monument Fire.

Approximately 3,451 acres are proposed for salvage harvest. These areas generally burned with higher severities (high end of the moderate, to severe burn-severities). The fire in these areas is described as stand-replacement, with a limited number of trees expected to survive the fire. Only dead and dying trees would be removed. Treatment

boundaries incorporate non-forest areas such as grassland and shrubland. These non-forest areas have scattered dead and dying trees, and would be excluded from harvest.

Wildlife snag habitat would be retained throughout the landscape. Green trees of all sizes and species (expected to survive the fire), would be retained. Residual fuels such as tops and limbs left on site would be lopped and scattered to place them in contact with the ground. This slash retention would reduce erosion potential and initiate the decomposition process. Harvest landing slash would be piled and burned. Trees of appropriate species (primarily ponderosa pine, Douglas-fir, and western larch) would be planted in areas treated.

**Table 1-4. Summary of Upland Salvage Treatment Activities – Proposed Action (Alternative 2).**

Watershed	Harvest Acres	Logging System (Acres)	
		Tractor	Helicopter
Upper North Fork Malheur Watershed (Swamp Creek Subwatershed)	490	490	0
Little Malheur Watershed (Upper Little Malheur Subwatershed)	2,961	0	2,961
<b>Totals</b>	<b>3,451 Acres</b>	<b>490 Acres</b>	<b>2,961 Acres</b>

**Riparian Habitat Conservation Area (RHCA) Salvage Treatment**

The objective of the RHCA Salvage Treatment is to remove excess (outside the desired range) standing fuel in the RHCA that may contribute to future high-severity fires. Approximately 601 acres of salvage is proposed in RHCAs in the Little Malheur River and Camp Creek drainages within the Little Malheur watershed (Table 1-5). This includes 400 acres of salvage in the Category 1 streams that are fish bearing, 21 acres in RHCA Category 2, and 180 acres in Category 4. The RHCA zones would become more resilient to future fire events as these areas re-vegetate and recover. Other objectives include reforestation of RHCAs that burned with higher severities to enhance recovery of forested vegetation in these zones.

Activities are not proposed for RHCAs in the North Fork Malheur watershed, because these RHCAs did not burn with the same severities as those in the Little Malheur and Camp Creek drainages. Also, salvage harvest was not proposed in the Little Malheur River stream reach below the confluence with Camp Creek.

**Category 1 – Fish Bearing Streams (Little Malheur River and Camp Creek)**

Standing dead trees <20” DBH will be removed from RHCAs adjacent to the lower reaches of the Little Malheur River and Camp Creek, in order to lower future fuel to more natural levels. Standing dead trees ≥20” DBH, in both the Little Malheur River and

Camp Creek RHCAs would be retained to provide future replacement of large woody debris (LWD) over the next 100 years.

To restore riparian vegetation, tree planting with appropriate conifer species would occur on a site-specific basis in Category 1 RHCAs. Conifer species will be planted at low stocking levels. The majority of conifers will be planted at least 50 feet away from stream channels, with a limited number planted adjacent to or near stream channels to allow for recovery of hardwood shrubs adjacent to the stream channel. Where upland areas are present in the RHCA, planting will mimic planting prescriptions for adjacent upland stands.

Fuel treatments would consist of a combination of lopping and scattering tops and limbs, and hand piling within the Little Malheur River portion of the treatment area.

All Salvage Harvest in RHCAs would be completed with helicopter yarding, to minimize ground disturbance. Helicopter landings would be located outside of RHCAs.

**Category 2 – Perennial Streams (Little Malheur and Camp Creek Tributaries)**

Treatments in Category 2 RHCAs would be the same as those in Category 1 RHCAs.

**Category 4 – Intermittent Streams (Little Malheur and Camp Creek Tributaries)**

Treatments in Category 4 RHCAs would mimic treatments in adjoining upland stands, because vegetation in Category 4 RHCAs is predominately upland species in the Camp Creek and Little Malheur River drainages.

**Table 1-5. Summary of RHCA Salvage Activities – Proposed Action.**

Watershed	Harvest (Acres)		
	Category 1 RHCA	Category 2 RHCA	Category 4 RHCA
Upper North Fork Malheur Watershed (Swamp Cr subwatershed)	0	0	0
Little Malheur Watershed (Upper Little Malheur Subwatershed)	400 Acres	21 Acres	180 Acres

*Forest Vegetation Structure*

**Resiliency Treatment**

The Resiliency Treatment meets the need to improve residual timber stand resilience to insects, disease, wildfire, and other disturbances, and restore ecologically appropriate structural and compositional characteristics of the remaining live upland vegetation.

Approximately 223 acres of timber harvest and 382 acres of precommercial thinning are proposed for Resiliency Treatment. Due to lack of old-forest structure within the Monument Fire Project Area, Resiliency Treatment activities will focus on accelerating development of large trees and future old-forest structures, and maintaining existing old-forest structures in either old-forest multistory structure or old-forest single-story structure, which will provide for old-growth-dependent species needs.

This treatment would be applied in a portion of the area that burned with light to lower-end moderate intensity. This locale was selected because it has a manageable/desirable overstory that will likely survive the effects of the Monument Fire. A dominant mature/old ponderosa pine component exists in the overstory, sometimes mixed with the presence of mature Douglas-fir, western larch, and the occasional mature grand fir.

The goal of the Resiliency Treatment is to mimic historic vegetation conditions while meeting wildlife habitat needs, and improving resilience to damage from insects and disease.

The Resiliency Treatment would primarily includes salvage of dead and commercial thinning of the residual live trees, by applying a commercial thinning. The treatment would retain live/green trees greater than 21 inches in diameter and would target retaining other desirable live trees in the 12 to 20 inch diameter range. The prescription would thin live trees less than 21 inches in diameter, and salvage most of the dead. A more open structure (similar to old-forest single-story condition) would result in some areas, while in other areas a more open multiple-canopy condition (similar to young-forest multistory or old-forest multistory structure) would result. Snags would be retained to meet wildlife habitat needs across the landscape. Larger diameter snags (greater than 21 inches DBH) are the most desirable to retain, although smaller diameter classes would also be retained. In some of these stands, precommercial thinning would take place to reduce stocking of smaller trees. Trees of appropriate species (primarily ponderosa pine, Douglas-fir, and western larch) would be planted in treated areas, where needed to meet stocking level and habitat diversity requirements.

Fuel treatment activities would include either lop and scatter or whole-tree yarding. In helicopter-logged areas, fuel treatment would also consist of primarily lop and scatter of tops and limbs, and limited hand piling in areas with higher than desirable fuel loadings.

**Table 1-6. Summary of Resiliency Treatment and Precommercial Thinning Activities - Proposed Action**

Watershed	Precommercial Thinning (Acres)	Harvest (Acres)	Logging System (Acres)	
			Tractor	Helicopter
Upper North Fork Malheur Watershed; Swamp Cr Subwatershed	135	0	0	0
Little Malheur Watershed; Upper Little Malheur Subwatershed	235	233	0	233
<b>Totals</b>	<b>370 acres</b>	<b>223 Acres</b>	<b>0 Acres</b>	<b>223 Acres</b>

*Forest Vegetation*

**Reforestation Treatment**

Approximately 5,322 acres are planned for reforestation. All areas that do not have substantial live trees sufficient to meet management objectives that are capable of growing trees will be planted in each alternative, regardless if an area is to be harvested.

Twenty-one acres of plantations destroyed by the Monument Fire were planted in 2003. In 2004, an additional 223 acres of trees already being grown in the nursery are anticipated to be available for planting in plantations and precommercial thinning units that were destroyed by the fire. The species that are planned to be planted are predominately ponderosa pine, western larch, and some Douglas-fir. Western white pine or lodgepole pine may be planted in areas of poor cold air drainage and this will be determined on a case-by-case basis. Seed will be sown in the springs of 2003 and 2004 for out year planting.

Only previously forested areas would be planted. Areas that had become forested due to in growth during the recent period of fire exclusion, such as dry meadows and rocky ridge tops would not be replanted.

*Water Quality*

**Road Restoration and Old Skid Trail Obliteration Treatments**

*Road Restoration*

Several miles of road maintenance, road closures, and road decommissioning are proposed, to reduce adverse impacts to water quality, fish habitat, wildlife habitat, and decrease the spread of noxious weeds by motor vehicles (figures 13 and 14, Map Section).

Road closure (gate) – 7.0 miles

Road decommissioning – 11.8 miles

The primary emphasis for road maintenance, closure, and decommissioning is to minimize road-related sediment delivery to water sources. The objective is to minimize road effects on interception and concentration of runoff and precipitation. The following table (1-7) summarizes road management activities proposed in riparian habitat conservation areas and upland areas.

**Table 1-7. Summary of Road and Skid Trail Activities - Proposed Action.**

<b>Area</b>	<b>Gated Road Closure (Miles)</b>	<b>Road Decommissioning (Miles)</b>
Upland Areas	6.5	6.0
RHCA Cat 1	0.0	3.9
RHCA Cat 2	0.2	0.3
RHCA Cat 4	0.3	1.6
<b>Total</b>	<b>7.0</b>	<b>11.8</b>

Roads proposed for decommissioning have structural damage and are unsafe for travel or are not drivable. Many of the roads are located adjacent to or near the channel, are sloughing into the channel, or have major erosion problems due to steep grades. On these roads some of the culverts have been removed, rocks partially block access, and trees have blocked access. These roads will not be used for salvage or regeneration activities identified in the proposed action. Roads identified in the Roads Analysis (Monument Recovery Roads Analysis, July 2003) would remain open and allow for alternate access.

The road closures would be gated year-long closures to motorized vehicles. Gated closures provide continued access (by permit only), and limit disturbance to wildlife.

### *Old Skid Trail Obliteration*

Approximately 2.2 miles of old skid trail obliteration activities are proposed. Low ground pressure equipment and handwork would be used to return these affected areas to as natural a condition as possible. Returning the skid trail surface to the original contour or out-sloping would return the water to the channel, slow runoff, and increase infiltration. Wood placements would filter additional sediment, and mulching and seeding would be applied as needed.

## Old Growth Habitat

### Dedicated Old-Growth (DOG) and Replacement Old-Growth (ROG) Areas

- The re-delineation or designation of suitable late-and-old-structure (LOS) habitats to replace DOG and ROG 04334PP that no longer meet forest old growth structure condition.
- Re-delineation of replacement old-growth areas to incorporate suitable LOS or older structure stands, to provide suitable replacement areas for associated DOGs 04334PP and 04345PP and bring them into compliance with the Forest Plan.

### Pileated Woodpecker Feeding Areas

- Identification and delineation of pileated woodpecker feeding areas, as appropriate, to provide suitable foraging habitat to meet Forest Plan direction.

The following table (1-8) shows the proposed changes (in approximate acres) of the proposed designations and figure 15 (Map Section) identified the locations of the proposed changes.

These changes also effect Forest Plan Management Area designations and require a non-significant plan amendment .

**Table 1-8. Changes for DOG/ROG and Pileated Woodpecker Habitat- Proposed Action**

Designation	Current Size (Acres)	Proposed (Acres)	Change (Acres)
Dedicated Old Growth 04334PP	504	575	+71
Replacement Old Growth 04334PP	334	356	+22
Pileated Woodpecker Feeding Area 04334PP	0	380	+380
Dedicated Old Growth 04345PP	410	410	+0
Replacement Old Growth 04345PP	1,254	294	-960
Pileated Woodpecker Feeding Area 04345PP	0	431	+431
<b>Total</b>	<b>2502</b>	<b>2446</b>	<b>-56</b>

### Conformance with Forest Plan Standards and Guidelines, as Amended

A non-significant Forest Plan amendment would be required to implement the proposed action. Alternative 2 was designed, in part, to replace DOG and ROG 04334PP that is now unsuitable due to the fire. Selecting Alternative 2 would include a site-specific, non-significant amendment to convert the original MA 13 to MA-1 or MA 4A. The other part of the DOG and ROG re - delineation would change the boundary of DOG 04345 converting changing the MA 13 and MA 1 acres.

Selection of this alternative would meet Forest Plan Standards and Guidelines (36 CFR 219.10 (c)).

## Actions Outside of this Final EIS to Address Recovery Needs

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The following are implemented through administrative decisions outside of this Final EIS.

- Commercial and personal use firewood cutting would be delayed until 2008 for Alternatives 2, 3, and 4.
- To allow vegetation and riparian areas to recover, livestock grazing would be delayed for two or more years depending on fire severity and whether monitoring shows that the range resource is ready after two growing seasons or not. This will comply with the Forest's post burn grazing guidelines. Grazing may be delayed for a longer period if necessary to meet other resource objectives.
- The fire area would be open to all other usual Forest-wide accepted activities, including mushroom gathering, hunting, and recreation, which are outside the scope of this project. Designated roads would be opened to the public after hazard trees are felled.
- FSR 1672457 (road from the junction of Camp Creek road to trailhead) will remain closed until a decision on the future of this road and recreation facility is made.

## Decision Framework

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The Responsible Official for this proposal is the Forest Supervisor of the Malheur National Forest. After completion of the Final EIS, there will be a 45-day public comment period. Based on response to this Final EIS and the analysis disclosed in the Final EIS, the Responsible Official will make a decision and document it in a Record of Decision (ROD) which will accompany the Final EIS.

The Responsible Official can decide to:

- Select the proposed action, or
- Select an action alternative that has been considered in detail, or
- Modify an action alternative, or
- Select the no-action alternative.

Alternatives 2, 3, 4 and 5 will require a non-significant Forest Plan amendment related to MA 13 (old growth) designation (see Chapter 2, Alternatives Considered in Detail).

Alternative 2 and 4 will require a non-significant amendment for reduction of big game cover and Alternative 4 requires a non-significant amendment related to snag retention.

The Responsible Official will also determine if the selected alternative is consistent with the Forest Plan, as amended, or whether to amend the Forest Plan.

## Public Involvement

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### Initial Scoping

The Notice of Intent (NOI) was published in the Federal Register on March 24, 2003. The NOI asked for public comment on the proposal from March 24, 2003, to April 30,

2003. The project has been listed in the quarterly Schedule of Proposed Activities (SOPA). In addition, as part of the public involvement process, an Open House was held at the Federal Building in John Day on February 13, 2003. On February 14, 2003, the agency mailed a scoping letter seeking public comment to approximately 130 groups, other agencies, and individuals who had previously shown interest in Malheur National Forest projects.

In response to these scoping efforts, written comments were received from 13 interested parties:

- Dan Bishop/Prairie Wood Products
- John Edmundson
- Greg Jackson/Jackson Oil, Inc. et. al.
- Michael Letourneau/US EPA, Region 10
- Karen Coulter/Blue Mountain Biodiversity Project
- Leeanne Siart/Oregon Natural Resources Council
- Bill Wilcox
- Linda Driskill/Grant County Conservationists
- Jeffrey Ritter
- Kelly O'Brien/Northwest Environmental Defense Center
- Rachel Thomas
- Steven Courtney/Malheur Lumber Company
- Thomas Partin/American Forest Resource Council

In addition to comments supporting the project, the District received comments reflecting concerns related to potential adverse impacts on soils, wildlife and aquatic habitat, and economics. Public comments were used in the development of the reasonable range of alternatives and the identification of the key issues.

## **DEIS Comments/Responses**

The Monument Recovery Project DEIS was completed in July 2003, and was made available to the public the week of August 3, 2003. The 45 day review period began on August 8, 2003, the day the Notice of Availability was printed in the Federal Register. The review period ran through September 23, 2003. The DEIS was mailed to over 100 interested publics. Additional copies were given to other individuals, agencies, and groups following the initial mailing. Written comments were received from 11 individuals, agencies, and groups. These comments, with agency responses, are located in Appendix F.

## **Coordination with Other Governments and Agencies** \_\_\_\_

The Prairie City Ranger District staff contacted three tribes that have rights or interests in the Monument Fire Recovery Project area: the Confederated Tribes of Warm Springs, the Confederated Tribes of the Umatilla Indian Reservation, and the Burns Paiute Tribe. Based on a government-to-government relationship, the purpose of the contact was to exchange information, answer questions, and to work closely and continuously with each other to integrate tribal rights and interests in the planning process. The Burns Paiute Tribe provided comments during the scoping period.

Coordination has also occurred with federal, state, and local government officials (see also Chapter 4). The National Oceanic and Atmospheric Administration-Fisheries (NOAA), and U.S. Fish and Wildlife Service have been kept informed of proposed activities.

Using the comments from the public, other agencies, and tribes, the interdisciplinary team developed a list of issues to address.

## Issues

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Comments received from the public generated issues are discussed in this document. The interdisciplinary team (ID team) reviewed and evaluated comments received from the scoping process and are incorporated as key issues. In the NEPA process, key issues are defined as resource or other values that drive the development of an alternative, may be adversely affected by the proposed action, or involve unresolved conflicts regarding alternative uses of available resources. Key issues provide focus for the analysis and are used directly in formulation of the alternatives. Listed with each key issue are indicators to show a measurement of how each key issue is affected by proposed activities for each alternative.

In addition to key issues identified by the IDT, there are “other analysis” issues addressed in the effects analysis and often used to compare alternatives. For example, heritage resources will always be addressed in actions that have site-specific ground-disturbing actions. Although alternatives may not be designed specifically to address heritage resources, the consequences of all the alternatives must be measured against compliance with direction to provide adequate protection for these resources (see Other Analysis Issues and Concerns, this chapter).

Issues selected as key issues for this Final EIS are listed below. They are not listed in any particular order. They will be discussed in detail in the analysis and throughout the remaining chapters of this document. The Forest Service identified the following key issues during scoping.

1. **Snag Habitat:** The standard for snags in the Malheur Forest Plan is based on species dependent on old structure, green stands. Retaining Forest Plan snag levels may not be provide adequate snag habitat for dead-forest-dependent species and primary cavity excavators.

Indicators/measurements selected to compare the results of each alternative in response to this issue include: number of snags retained per acre within harvest areas and acres and percent severely fire effected forested habitat remaining after salvage.

2. **Water Quality/Sedimentation:** There is concern that salvage harvest should not occur in areas that are severely burned or are located on erosive sites, riparian areas, or steep slopes (see Beschta report recommendations). Harvest on these areas could increase erosion potential in the fire area. The proposed action includes salvage harvest and tractor logging within both RHCAs and severely burned areas. Salvage harvest would occur within the RHCAs of the Little Malheur River. The Little Malheur River is proposed as critical habitat for bull trout. The river has also been identified on the Oregon Department of Environmental Quality 303 (d) list for exceeding water temperature standards. There is concern that harvest activities in the

project area could further degrade water quality, and prolong recovery of stream habitat in the fire area.

Indicators/measurements selected to compare the results of each alternative in response to this issue include: acres of tractor skidding, acres of harvest in RHCAs, change in stream shading due to harvest, and other non-harvest ground disturbing activities within RHCAs classed by moderate or severe vegetative burn severity.

3. **Green Tree Harvest:** The proposed action includes harvest thinning to promote stand resiliency. There is concern that thinning the few remaining live stands of trees would negatively impact their value for wildlife cover, landbird species habitat, moisture retention, and nutrient recycling.

Indicators/measurements selected to compare the results of each alternative in response to this issue include: acres of green tree harvest (resiliency treatment) and acres of wildlife cover.

4. **Economics:** Commercial value of the fire-killed trees will deteriorate quickly if salvage does not occur within the next year. The recovery value of the timber will have an effect on the local economy. Any delays in harvest would affect the economic viability of the timber sales within the fire project area.

Indicators/measurements selected to compare the results of each alternative in response to this issue include: Timber jobs provided, commercial harvest volume, and present net value.

5. **Fuels:** There is a scientific controversy relevant to benefits of using salvage harvest to reduce fuels in order to reduce potential effects of future fire events. Some science advocates a passive approach to fuels management in burned areas, by recommending that natural processes are best for management of fuels. Others suggest that salvage harvest is the best way to reduce the potential for another cycle of heavy fuel accumulations therefore, limiting future management opportunity to use prescribed fire to restore the landscape to historical conditions.

Indicators/measurements selected to compare the results of each alternative in response to this issue include; fire severity and fire intensity in 20 years as predicted by fuel loading (tons/acre).

6. **Soils:** Concerns were expressed that using ground based mechanized equipment to harvest timber and reduce fuels would increase soil erosion and decrease soil productivity, especially on severe and moderate severity burned areas.

Indicators/measurements selected to compare the results of each alternative in response to this issue include: acres of ground-based (tractor) salvage harvest on severely and moderately-burned areas.

## Other Analysis Issues

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*Other analysis issues are issues addressed in the effects analysis and used to compare alternatives.* The following issues were raised by the public and Forest Service resource specialists and were considered as this project was developed and analyzed. These issues did not drive alternatives, but they were addressed or used in this analysis. *Other analysis issues are listed here, and analyzed in Chapter 3.* Some issues are already addressed through other processes or in the Forest Plan, some led to mitigation measures (see Management Requirements and Mitigation Measures in Chapter 2), and some are analyzed in Chapter 3.

Some issues fit into the following categories: (1) outside the scope of the proposed action; (2) already decided by law, regulation, Forest Plan, or other higher level decision; (3) irrelevant to the decision to be made; or (4) conjectural and not supported by scientific or factual evidence. The Council on Environmental Quality (CEQ) NEPA regulations require this delineation in Sec. 1501.7: “identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3).”

The following is a list of other issues, and reasons regarding their categorization as non-significant, or a reference to a location in this EIS where that issue is addressed. A brief response follows the issue in italics.

### **Forest Vegetation/Structure**

There is an issue that removing burned trees may reduce crucial shade for the reestablishment of seedlings. *This is discussed in Chapter 3 in the Forest Vegetation, Shade and Microclimate section.*

There is an issue that natural reforestation may not be successful, and conversely, that planting may not be necessary to establish reforestation. *This is discussed in Chapter 3 in the Forest Vegetation, Reforestation section.*

There is an issue that the future forest vegetation needs to be more resilient and sustainable and able to withstand periodic natural disturbances. *This is discussed in Chapter 3 in the Forest Vegetation, Future Stand Resiliency section.*

### **Roads/Access**

There is an issue that closing and decommissioning roads could affect forest users. This is discussed in Environmental Effects for the alternatives in the Recreation and Botany sections in Chapter 3.

### **Wildlife Habitat**

There is an issue that salvage logging and fuels reduction activities could adversely affect management indicator species (MIS) and featured species identified in the Forest Plan. *This is discussed in Chapter 3, Environmental Consequences in the Wildlife section.*

There is an issue that salvage logging and fuels reduction activities could adversely affect threatened, endangered, and sensitive wildlife species. *This is discussed in Chapter 3, Environmental Consequences in the Wildlife section, and in the Biological Evaluation in Appendix A.*

Many populations of neotropical migratory bird species are considered in decline (Saab and Rich 1998, Altman 2000, Sharp 1996). Habitat loss is considered the primary factor for population declines. There is an issue that salvage logging and fuels reduction activities could contribute to further population decline. *This is discussed in Chapter 3, Environmental Consequences in the Wildlife section.*

There is an issue that the salvage harvest could affect the lynx populations. *This is discussed in Environmental Consequences for the alternatives in the Wildlife section under Old Growth in Chapter 3. None of the alternatives include harvest in those areas identified as lynx habitat.*

## **Soils**

There are issues about logging impacts on mycorrhizae fungi and other soil biota. Effects of post-fire logging of dead and dying trees, on soil biota, and effects of changes in soil biota on soil quality, are discussed in the soils section of Chapter 3.

## **Water Quality/Fish**

There is an issue that proposed activities may degrade watershed conditions downstream of the project area. This is discussed in the Cumulative Effects section of Environmental Effects in the Aquatics section of Chapter 3.

Fish species distribution and populations are controlled by water quality and habitat quantity/quality. There is an issue that salvage harvest, fuels reduction, and road activities could further impact populations of redband trout and Malheur mottled sculpin by degrading water quality and fish habitat quantity/quality by directly or indirectly modifying stream channel morphology. This is discussed in the Cumulative Effects section of Environmental Effects in the Aquatics section of Chapter 3.

## **Cattle Grazing**

There is an issue that there needs to be a recovery period after burning before grazing is resumed. A recovery period will occur in all alternatives. This is discussed under Actions Outside of this Final EIS to Address Recovery Needs (Chapter 1), and in Range in Chapter 3.

## **Culturally Important Plants and Sensitive Plant Species**

American Indians are concerned that proposed activities such as road closures may impact access to culturally important plants and tribal uses of these plants in the project area. *This is discussed in Environmental Consequences in the Botany section of Chapter 3.*

## **Invasive Species**

There is an issue that proposed activities could spread invasive plant species, both noxious weeds and non-native, introduced species. *This is discussed in Environmental Consequences in the Botany section of Chapter 3.*

## **Roadless/Unroaded**

There is an issue that the Monument Fire Recovery Project may affect roadless and contiguous roadless areas. *The proposed treatments are consistent with management direction in the Malheur Forest Plan (1990) and current Forest Service roadless direction. There are no 1000 acre contiguous unroaded areas or inventoried roadless areas in the project area (project record, GIS analysis). The inventoried roadless areas are identified in the Forest Service Roadless Area Conservation FEIS, Vol. 2 (USDA Forest Service 2000). Discussion of the direction and effects are further discussed in Chapter 3, Other Disclosures, Unroaded.*

## **Timber Harvest/Project Design**

There is an issue that alternatives should be considered with a full range of logging systems based on-site-specific resource conditions, timing of events, and economic

factors. There maybe alternative means to meet resource constraints to protect sensitive site conditions using other logging systems that are more cost effective. *Other logging systems methods were considered. In Chapter 2, in the section “Alternatives Considered but not Analyzed,” different logging systems and fuel treatments were identified.*

There is an issue to include the implementation flexibility by allowing the use of stewardship or service contracts for salvage or hazardous fuels reduction projects in addition to the more standard timber sale contract. *The proposed harvest included in the salvage and resiliency treatments could be implemented using stewardship or service contracts as long as they meet design or mitigation measures and provide the best economic return.*

## Laws and Regulations

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This Final EIS adheres to the following legal requirements, coordination, and regulations.

### **The Preservation of American Antiquities Act of 1906**

This Act makes it illegal to “appropriate, excavate, injure, or destroy any historic or prehistoric ruin or monument, or any object of antiquity, situated on lands owned by the Government of the United States, without the permission of the Secretary of the Department of the Government having jurisdiction over the lands on which said antiquities are situated.”

### **The National Historic Preservation Act**

This Act requires Federal agencies to consult with State and local groups before nonrenewable cultural resources, such as archaeological sites and historic structures, are damaged or destroyed. Section 106 of this Act requires Federal agencies to review the effects project proposals may have on the cultural resources in the Analysis Area.

### **The Endangered Species Act of 1973, as Amended**

The purposes of this Act are to “provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in subsection (a) of this section.” The Act also states “It is further declared to be the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act.”

### **The Migratory Bird Treaty Act of 1918**

The purposes of this Act are to establish an international framework for the protection and conservation of migratory birds. The Act makes it illegal, unless permitted by regulations, to “pursue, hunt, take, capture, purchase, deliver for shipment, ship, cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in this Convention... for the protection of migratory birds...or any part, nest, or egg of any such bird” (16 USC 703). The original 1918 statute implemented the 1916 Convention between the United

States and Great Britain (for Canada). Later amendments implemented treaties between the United States and Mexico, Japan, and the Soviet Union (now Russia).

### **The National Environmental Policy Act (NEPA) of 1969, as Amended**

The purposes of this Act are “To declare a national policy which will encourage productive and enjoyable harmony between man and his environment, to promote efforts which will prevent or eliminate damage to the environment and biosphere, and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality” (42 U.S.C. Sec. 4321). The law further states “it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans” [42 U.S.C. Sec. 4331(a)]. NEPA establishes the format and content requirements of environmental analysis and documentation, such as the Monument Fire Recovery Project.

### **The National Forest Management Act (NFMA) of 1976**

This Act guides development and revision of National Forest Land Management Plans, and has several sections, ranging from required reporting the Secretary must submit annually to Congress, to preparation requirements for timber sale contracts. There are several important sections within the act, including Section 1 (purpose and principles, Section 19 (fish and wildlife resource), Section 23 (water and soil resource), and Section 27 (management requirements).

### **The Clean Water Act, as Amended in 1977 and 1982**

The primary objective of this Act is to restore and maintain the integrity of the nation’s waters. This objective translates into two fundamental national goals: (1) Eliminate the discharge of pollutants into the nation’s waters; and (2) Achieve water quality levels that are fishable and swimmable. This Act establishes a non-degradation policy for all Federally proposed projects.

### **The Clean Air Act, as Amended in 1990**

The purposes of this Act are “to protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare and the productive capacity of its population; to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution; to provide technical and financial assistance to State and local governments in connection with the development and execution of their air pollution prevention and control programs; and to encourage and assist the development and operation of regional air pollution prevention and control programs.”

**Multiple-Use Sustained-Yield Act of 1960**

The Multiple-Use Sustained-Yield Act of 1960 requires the Forest Service to manage National Forest System lands for multiple uses (including timber, recreation, fish and wildlife, range, and watershed). All renewable resources are to be managed in such a way that they are available for future generations. The harvesting and use of standing timber can be considered a short-term use of a renewable resource. As a renewable resource, trees can be reestablished and grown in again if the productivity of the land is not impaired.

**Treaty with the Walla Walla, Cayuse, and Umatilla Tribes, June 9, 1855, and Treaty with the Tribes of Middle Oregon, June 25, 1855**

These treaties established “That the exclusive right of taking fish in the streams running through and bordering said reservation is hereby secured to said Indians, and at all other usual and accustomed stations, in common with citizens of the United States, and of erecting suitable house for curing the same; also the privilege of hunting, gathering roots and berries, and pasturing their stock on unclaimed lands, in common with citizens, is secured to them.” All actions to be taken must fully consider and comply with American Indian treaty rights.

The project area falls within lands ceded by the Confederated Tribes of the Warm Springs Reservation and within lands that have an overlap of use with the Umatilla Tribes. These tribes have reserved rights to anadromous fish, and Federal court decisions have specifically established that the tribes have treaty rights to an equitable share of the Columbia Basin fishery resource (CRITFC 1995, Vol. I, p. 4-1 – 4-3).

**Public law 92-488**

This law recognizes the Burns Paiute Tribe and their reservation. As a Federally recognized tribe, the Burns Paiute Tribe retains rights of inherent sovereignty. The project area is within the traditional and current use area of the Burns Paiute Tribe.

**Migratory Bird Executive Order (E.O.) 13186, January 2001**

President Clinton signed an Executive Order" (E.O. 13186) titled "Responsibilities of Federal Agencies to Protect Migratory Birds." This E.O. requires that “environmental analysis of Federal actions, required by NEPA or other established environmental review processes, evaluate the effects of actions and agency plans on migratory birds, with emphasis on species of concern.”

**Natural or Depletable Resource Requirements and Conservation Potential**

The Monument Fire Recovery Project has been designed to conform to applicable laws and regulations pertaining to natural or depletable resources, including minerals and energy resources. Regulations of mineral and energy activities on the National Forest, under the U.S. Mining Laws Act of 1872 and the Mineral Leasing Act of 1920, are shared with the Bureau of Land Management. The demand for access to National Forest System lands for the purpose of mineral and energy exploration and development is expected to increase over time.

**Environmental Justice**

On February 11, 1994, President Clinton signed Executive Order 12898. This order directs each Federal agency to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. On the same day, the President also signed a memorandum emphasizing the need to consider these types of effects during NEPA analysis. On March 24, 1995, the Department of Agriculture completed an implementation strategy for the executive order. Where Forest Service proposals have the potential to disproportionately and adversely affect minority or low-income populations, these effects must be considered and disclosed (and mitigated to the degree possible) through the NEPA analysis and documentation (see Environmental Justice, Chapter 3).

**Prime Farmland, Rangeland, and Forestland**

All alternatives are in accordance with the Secretary of Agriculture Memorandum 1827 for prime farmland, rangeland, and forestland. "Prime" forestland is a term used only for non-Federal land, which would not be affected by proposed alternatives. Regardless of the alternative selected, National Forest System lands would be managed with sensitivity to adjacent private and public lands.

**Floodplains and Wetlands (E. O. 11988 and 11990)**

The purpose of these 1977 orders are to "...avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development..." and similarly "...avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands..."

Wetlands that meet the Jurisdictional Definition (Corps of Engineers) are found in the Monument Project Area. These areas will be mapped as described in the Mitigation, and avoided during harvest and fuel treatments.

**Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974 (as Amended)**

This act directed the Secretary of Agriculture to prepare a Renewable Resources Assessment and updates. These assessments include "an analysis of present and anticipated uses, demand for, and supply of the renewable resources, with consideration of the international resource situation, and an emphasis of pertinent supply, demand and price relationships trends." The USDA Forest Service Forest Inventory and Analysis unit provides updates for this assessment.

**Executive Order 12962 (aquatic systems and recreational fisheries)**

This 1995 order's purpose is to conserve, restore, and enhance aquatic systems to provide for increased recreational fishing opportunities nationwide. It requires Federal agencies to evaluate the effects of federally funded actions on aquatic systems, and document those effects relative to the purpose of this order.

**Executive Order 13112 (invasive species)**

This 1999 order requires Federal agencies whose actions may affect the status of invasive species, to identify those actions and, within budgetary limits, “(i) prevent the introduction of invasive species; (ii) detect and respond rapidly to and control populations of such species...; (iii) monitor invasive species populations...; (iv) provide for restoration of native species and habitat conditions in ecosystems that have been invaded...; (vi) promote public education on invasive species...; and (3) not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species... unless, pursuant to guidelines that it has pre-scribed, the agency has determined and made public... that the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions.”

**Executive Order 13287 (preserve America)**

This 2003 order’s intent is to preserve America’s heritage through “actively advancing the protection, enhancement, and contemporary use of the historic properties owned by the Federal Government... The Federal Government shall recognize and manage the historic properties in its ownership as assets that can support department and agency missions while contributing to the vitality and economic well-being of the Nation's communities and fostering a broader appreciation for the development of the United States and its underlying values...”

**Consumers, Civil Rights, Minorities, and Women**

All Forest Service actions have potential to produce some form of impacts, positive or negative, on the civil rights of individuals or groups, including minorities and women. An analysis of this potential impact is required by Forest Service Manual and Forest Service Handbook direction (see Socio-Economics, Chapter 3).

**Project Record**

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This EIS hereby incorporates by reference the Project Record (40 CFR 1502.21). The Project Record contains Specialist Reports and other technical documentation used to support the analysis and conclusions in this EIS. These Specialist Reports are for Soil, Water, Fisheries, Wildlife, Vegetation, Fire and Fuels, Botany, Heritage, Recreation, Roads/Access, and Socio-Economics.

Incorporating these Specialist Reports and the Project Record helps implement the CEQ Regulations’ provision that agencies should reduce NEPA paperwork (40 CFR 1500.4), that EISs shall be “analytic rather than encyclopedic,” and that EISs “shall be kept concise and no longer than absolutely necessary” (40 CFR 1502.2). The objective is to furnish enough site-specific information to demonstrate a reasoned consideration of the environmental impacts of the alternatives and how these impacts can be mitigated, without repeating detailed analysis and background information available elsewhere. The Project Record is available for review at the Prairie City Ranger District Office, 327 SW Front St., Prairie City, Oregon, Monday through Friday, 8 a.m. to 4 p.m.