



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Medford District Office
3040 Biddle Road
Medford, Oregon 97504
email address: Medford_Mail@blm.gov

IN REPLY REFER TO:

1792(ORM040)

MAY 13 2009

Dear Interested Public:

The enclosed *Environmental Assessment* (EA) for the Cascade-Siskiyou National Monument (CSNM) Fuels Reduction Demonstration Project is available for public review. The public review period, advertised on the Medford BLM Website, ends on June 2, 2009.

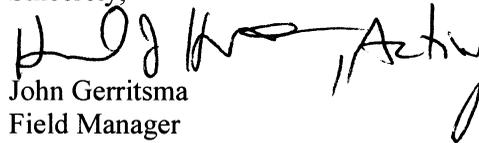
The Bureau of Land Management (BLM) proposes to reduce hazardous fuels by thinning approximately 41 acres of vegetation on BLM-administered lands in the Jenny Creek Watershed within the CSNM. The project is within an area classified as the wildland-urban interface (WUI). This project is designed to implement the BLM's Cascade-Siskiyou National Monument Resource Management Plan (RMP) (USDI 2008a). Hazardous fuels would be reduced by using chainsaws to cut and hand pile non-commercial sized material. The hand piles would be burned on site when fuel moisture and weather conditions allow for the safe burning of material. Required Project Design Features are included in the EA for the protection of resources.

We welcome your comments on the content of the EA. We are particularly interested in comments that address one or more of the following: (1) new information that would affect the analysis; (2) information or evidence of flawed or incomplete analysis; (3) BLM's determination that there are no significant impacts associated with the proposed action; and (4) alternatives to the Proposed Action that would respond to purpose and need. Specific comments are the most useful. **Comments are due by 4:30 p.m., June 2, 2009.**

Before including your address, telephone number, email address, or other personal identifying information in your comment, be advised that your entire comment, including your personal identifying information, may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

All comments should be made in writing and mailed or delivered to Kevin Kocarek, Ashland Resource Area, 3040 Biddle Road, Medford, OR 97504. Further information on this proposed project is available at the Medford District Office, 3040 Biddle Road, Medford, Oregon 97504 or by calling Kevin Kocarek at (541) 618-2261 or Kathy Minor at (541) 618-2245.

Sincerely,



John Gerritsma
Field Manager
Ashland Resource Area

Enclosure

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT OFFICE

Jackson County, Oregon

(OR-M040-2009-0001-EA)

ENVIRONMENTAL ASSESSMENT
CASCADE-SISKIYOU NATIONAL MONUMENT
FUELS REDUCTION DEMONSTRATION PROJECT

Specialty	List of Preparers
Botanist	Armand Rebeschke
Wildlife Biologist	Steve Godwin
Fire/Fuels Specialist	Greg Chandler
Fisheries Biologist Interdisciplinary Team Leader	Kevin Kocarek
Soil Scientist	Ted Hass
Hydrologist	Kathy Minor
Recreation/Cultural Resources	David Knutson
Oregon Department of Forestry/Community Liaison	Steve Bridges
Silviculturist	Sean Gordon
Silviculturist	Nate Goodwine

PURPOSE AND NEED FOR THE PROPOSED ACTION

INTRODUCTION

The Bureau of Land Management (BLM), Ashland Resource Area, proposes to implement the Cascade-Siskiyou National Monument Fuels Reduction Demonstration Project, a forest management project, designed to implement the Bureau of Land Management's Cascade-Siskiyou National Monument (CSNM) Resource Management Plan (RMP) (USDI 2008a). This Environmental Assessment (EA) documents the environmental analysis conducted to estimate the site-specific effects on the human environment that may result from the implementation of this fuels reduction proposal. The analysis documented in this EA will provide the BLM authorized officer, the Ashland Resource Area Field Manager, with current information to aid in the decision-making process. This EA complies with the Council on Environmental Quality's (CEQ) Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA; 40 CFR Parts 1500-1508) and the Department of the Interior's regulations on Implementation of the National Environmental Policy Act of 1969 (43 CFR part 46).

WHAT IS THE BLM PROPOSING AND WHY?

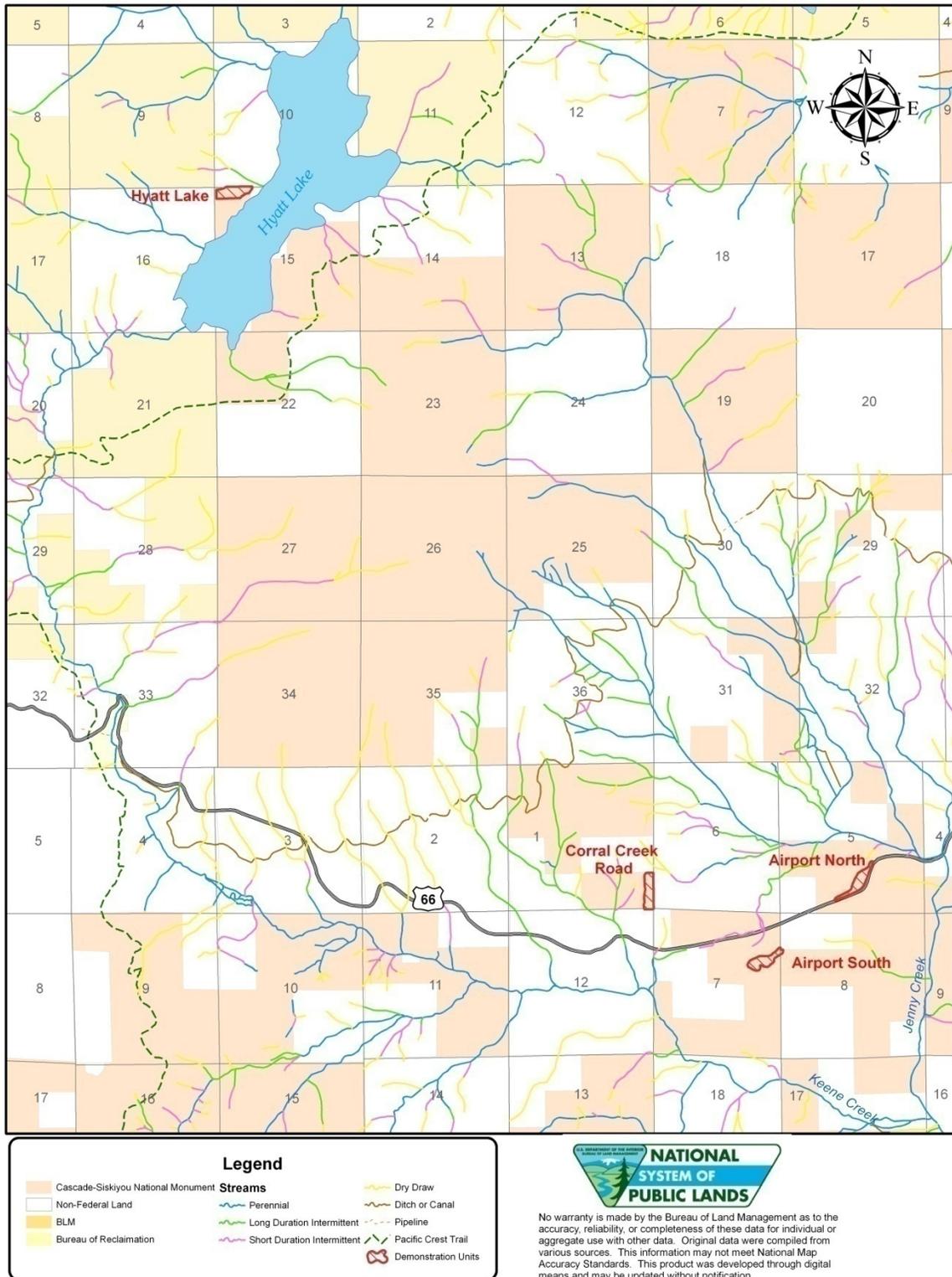
The Bureau of Land Management proposes to reduce hazardous fuels on 41 acres of BLM-administered lands in the Cascade-Siskiyou National Monument (Map 1) as a demonstration project. The project is within an area classified as wildland-urban interface (WUI). This project would reduce hazardous fuels by thinning non-commercial sized vegetation; hand piling; and burning the hand piles on BLM-administered lands to reduce the threat of large-scale wildfires and their potential to cause adverse effects on federally managed resources, private property, and homes adjacent to federally managed lands.

The CSNM was reserved in June 2000 by presidential proclamation in recognition of its remarkable ecology and to protect a diverse range of biological, geological, aquatic, archeological and historic objects. The BLM manages the CSNM in accordance with the direction in the 2008 Cascade-Siskiyou National Monument Record of Decision (ROD) and Resource Management Plan (RMP)(USDI 2008a).

The RMP grouped the monument into two "emphasis areas." The grasslands, shrublands, woodlands, semi-wet meadows and meadows make up the Diversity Emphasis Area (DEA) and the mixed conifer and white fir plant communities make up the Old-Growth Emphasis Area (OGEA). The WUI is an area within the CSNM surrounding several thousand acres of private land in the Greensprings community. The WUI is comprised of both OGEA conifer forests and interspersed DEA plant communities.

Effective fire suppression efforts, logging practices, and cattle grazing over the past 100 years have significantly influenced the mixed conifer communities and pine forests in the OGEA, resulting in a shift toward dense stands of white fir and Douglas-fir at the expense of sugar pine, ponderosa pine, and incense cedar. Tree growth rates have slowed, and the understory composition of stands has shifted to predominantly white fir. In the DEA, fire exclusion and cattle grazing have influenced many of the fire-dependent plant communities, creating a preponderance of older-aged shrub stands. In addition to altering the historic structure of forest stands and fire dependent plant communities, fire exclusion and other management practices have created conditions that support higher fire intensities than would have been common historically. Excessive ground and ladder fuels have increased the potential for stand-replacing events.

Map 1. Cascade-Siskiyou National Monument Fuels Reduction Demonstration Project.



As part of the National Fire Plan, the Oregon Department of Forestry identified the Greensprings as a “community at risk” for wildland fire spreading from public to private lands. Likewise, resources in the CSNM are also at risk from fires that originate on private land.

The CSNM RMP identified treatments in the WUI to restore ecological integrity and lower fire hazard as the highest initial treatment priority in the OGEA. One of the primary management objectives identified in the RMP is to protect monument resources from fires originating on adjacent private lands and to reduce the risk of wildland fires spreading to residential properties. Part of this objective includes reinforcing fire hazard reduction activities on private lands by reducing fire hazard on adjoining monument lands. Many of the private landowners in the Greensprings community have recently completed fire hazard reduction activities on their lands.

These demonstration units would be the BLM’s first step in completing the overall community wildfire protection strategy. The BLM is starting with small demonstration units in order to evaluate these kinds of fuels reduction treatments prior to planning these activities on a larger scale in the WUI. Results from monitoring this demonstration project will be used in designing and implementing similar projects in the future.

PUBLIC INVOLVEMENT

Scoping is the process the BLM uses to identify issues related to the proposal (40 CFR 1501.7) and determine the extent of environmental analysis necessary for an informed decision. A letter describing the scoping proposal and inviting comments was mailed to interested individuals, organizations, adjacent landowners, and other agencies on October 28, 2008. Notification of the proposed project was published in the quarterly *Medford’s Messenger* in the Fall 2008 edition. The BLM held a field tour of the proposed demonstration units on November 1, 2008. The field tour included discussion on how to treat these stands to best provide conditions to withstand wildfire and reduce the intensity and harmful effects of wildfire in the vicinity of private lands.

Five written responses were received. Issues related to the scoping proposal were identified by the public and the interdisciplinary team (IDT). These issues were considered; the scoping proposal was evaluated in relation to the issues and modified into the Proposed Action. Issues that could not be resolved with the development of the Proposed Action will be carried forward for analysis.

ISSUES

The following issues have been determined to be relevant to the Proposed Action. These issues will be used to identify required project design features and to focus the analysis of environmental effects that may result from the implementation of the Proposed Action or alternative:

Ecological Integrity and Protection of Biological Objects: Fuels reduction work may not be consistent with protecting monument objects and maintaining ecological integrity. Treating fuels has the potential to remove or modify the components of older forest structure such as coarse down wood and snags. Unless carefully designed and implemented, fuels reduction treatments have the potential to create homogenization within and among stands.

The best available science should inform the treatment strategy and the strategy should be customized to suit the unique characteristics of each stand. Treatment design, such as choice of removal by species and consideration of species heterogeneity, downed wood and snags left in place, identification of areas where no treatment is appropriate, creation of openings from canopy removal, and location and size of slash pile burns, should be informed by a multidisciplinary team (e.g. botanist, wildlife biologist, hydrologist, fisheries biologist, soil scientist, fire and fuels specialist).

Treating fuels with different timing and magnitude than historic natural fires may have some undesirable consequences. Treatment areas should be monitored pre- and post-treatment to establish response trends and ensure monument objects are being protected.

Noxious Weeds/Exotic Species: Fuels reduction treatments can increase the risk of introduction and spread of noxious weeds and/or non-native species. Soil disturbance and canopy openings provide opportunities for the introduction and spread of non-native and invasive species.

Soil Disturbance: Methods used to reduce fuels can damage soils and lead to compaction, erosion and sedimentation.

Air Quality: Particulate matter produced during the implementation of prescribed fire has the potential to adversely affect air quality.

PLAN CONFORMANCE

This forest management/fuels reduction proposal is designed to be in conformance with the Cascade-Siskiyou National Monument's 2008 Record of Decision and Resource Management Plan (USDI 2008a). The analysis supporting this decision tiers to the 2005 Final Environmental Impact Statement for the Proposed Resource Management Plan for the Cascade-Siskiyou National Monument (USDI 2005).

The proposed action is in conformance with the direction given for the management of public lands in the Medford District by the Federal Land Policy and Management Act of 1976 (FLPMA), National Environmental Policy Act (NEPA) of 1969, the Endangered Species Act (ESA) of 1973, the Clean Water Act of 1987, Safe Drinking Water Act of 1974 (as amended 1986 and 1996), Clean Air Act of 1990, and the Archaeological Resources Protection Act of 1979.

DECISION FRAMEWORK

This environmental assessment will provide the information needed for the authorized officer, the Ashland Resource Area Field Manager, to select a course of action to be implemented for the CSNM Fuels Reduction Demonstration Project. The Ashland Resource Area Field Manager must decide whether to implement the Proposed Action as designed or whether to select the No-Action Alternative. In choosing an alternative, the Field Manager will consider how well the alternative responds to the identified project need, along with the relative merits and consequences of each alternative related to the relevant issues.

The decision will also include a determination of whether or not the impacts of the Proposed Action are significant to the human environment. If the impacts are determined to be within those impacts disclosed in the CSNM RMP (USDI 2008a) and the CSNM Final Environmental Impact Statement (FEIS) (USDI 2005) or otherwise determined to be insignificant, a Finding of No Additional Significant Impact (FONASI) can be issued and a decision implemented. If this EA determines that the significance of impacts are unknown or greater than those previously analyzed and disclosed in the RMP/FEIS, then a project specific environmental impact statement (EIS) must be prepared.

ALTERNATIVES

ALTERNATIVES INCLUDING THE PROPOSED ACTION

The following sections present the alternatives considered, including the Proposed Action in detail, as well as another alternative that was considered, but not carried forward.

Alternative 1 (No Action)

The No Action Alternative describes a baseline against which the effects of the action alternative can be compared. This alternative describes the existing condition and the continuing trends. Under the No Action Alternative, no fuels reduction treatments would be implemented. Future fuels reduction in this area would not be precluded and could be analyzed under a subsequent EA.

It is also assumed that fire suppression activities would continue on federal and non-federal lands. The BLM has a master cooperative fire protection agreement with the Oregon Department of Forestry (ODF). This agreement gives the responsibility of fire protection of all lands within the project area to the ODF. This contract directs the ODF to take immediate action to control and suppress all fires. Their primary objective is to minimize total acres burned while providing for firefighter safety. The agreement requires the ODF to control 94 percent of all fires before they exceed 10 acres in size.

Alternative 2 (Proposed Action)

An estimated 41 acres within the wildland-urban interface of the Cascade-Siskiyou National Monument (Table 1) would be thinned using chainsaws; the cut material would be hand piled and burned on site when fuel moisture and weather conditions allow for the safe burning of material. Pile burning will usually be completed within six months to two years after thinning treatments, depending on the time of year the thinning occurred. Slash needs a period of time to cure before burning can take place.

A mosaic of plant communities and vegetation conditions exist within all units including shrubland dominated plant communities, conifer/hardwood with understory vegetation, and conifer dominated plant communities (Table 1). As vegetation conditions change through treatment units, the appropriate fuels reduction prescription would be applied accordingly. Work would be done using ecological principles to provide for retention of fire adapted species, for retention of uncommon species and the promotion of fire resilient species. Vegetation thinning prescriptions are included below.

Table 1. Treatment Unit Dominant Vegetation.

Unit	Location	Vegetation Type	Acres
1	Airport North	Mixed Conifer	10
2	Airport South	Pine Site	10
3	Corral Creek Road	Mixed Conifer	10
4	Hyatt Lake	Mixed Conifer	11

Fuels Reduction Thinning Prescriptions

General Prescription:

- **Thin:** conifer trees two feet tall and taller; up to eight inches diameter at breast height (DBH).
- **Prescription:** Manual thinning with chainsaws.
- **Reserve Vegetation:** No cutting of hardwoods (white oak, black oak, madrone, or riparian associated hardwoods) and no cutting of conifers greater than eight inches DBH.
- **Preferred Leave Tree Selection Order of Priority:** sugar pine, Ponderosa pine, incense cedar, Douglas-fir, white fir.

- Reserve vegetation is not included in spacing.
- Conifers less than eight inches DBH and greater than two feet tall would be left on an approximate 20 ft. by 20 ft. spacing (+ or – 25 percent to retain younger age classes), using the preferred species order list (above).
- Pruning of limbs to approximately eight feet above ground would occur on all remaining conifers, not to exceed one-third of the crown.
- Pile concentrations of dead and down white fir with diameters less than eight inches. Piles of freshly thinned material can be placed on top of this older material where possible.
- No cutting of material within 25 feet of any wet areas.

Chapparral Dominated Areas:

There is a small chapparral-dominated area adjacent to the end of the runway in the Airport South unit. In this area, the following thinning prescription would be applied:

- Brush clumps (no greater than 15-ft. canopy width) will be reserved on an approximate 45 ft. by 45 ft. spacing.
- All brush clumps that provide ladder fuels to the canopy in the edge area that transitions to the forest stand will be removed.

Project Design Features

The following Project Design Features (PDFs) are an integral part of the Proposed Action developed to avoid or reduce the potential for adverse impacts to resources. These PDFs are a combination of applicable Best Management Practices (BMPs) identified in the CSNM ROD/RMP and resource protection measures identified by the project IDT. BMPs are considered the primary mechanisms to achieve Oregon Water Quality Standards. The PDFs serve as a basis for resource protection in the implementation of any projects and will be considered in the analysis of impacts for this proposal.

Prevent Offsite Soil Erosion and Soil Productivity Loss

- (1) Hand piles (or hand pile burning) would not be allowed in the channel bottom of short-duration intermittent streams, or within the draw bottom of dry draws.
- (2) Piles would be dispersed across treatment areas. To the extent possible, piles would be located on old roads or trails to minimize damage to soils. Whenever possible, pile burning would be planned and scheduled when surrounding vegetation and organic material is wet enough to maintain an unburned ring of woody material on the ground surrounding the burn pile. This helps to prevent soils exposed from burning from moving beyond the burn pile site.
- (3) Natural surface roads would not be used by contractors or administrators during the wet season, which generally occurs from November 1 to May 15, when use would result in road damage and off-site movement of sediment.

Riparian Reserve Specifications

The CSNM ROD/RMP incorporated by reference the “Aquatic Conservation Strategy” component of 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* (USDA and USDI 1994) and the *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl* (USDA and USDI 1994) (Northwest Forest Plan (NFP)). The Aquatic Conservation Strategy is comprised of four components: 1) Riparian Reserves, 2) Key Watersheds, 3) Watershed Analysis, and 4) Watershed Restoration (USDA and USDI 1994: B12-B32). There are intermittent streams in the vicinity of all of the proposed fuels treatment units; however, the Riparian Reserves for these streams are not located within any of the units.

Protect Residual Leave Trees

- (1) In pine series forests, slashed fuels should be hand piled outside of the driplines of individual pine trees and burned.
- (2) Prescribed underburns should be performed when moisture conditions are high enough and prescription windows are at a level so that no more than 50 percent of the mound depth/duff layer around pine trees is consumed during burning.
- (3) No more than 25 percent of the pine tree live crown should be scorched for trees 8 inches DBH and larger.
- (4) Implement prescribed underburning when soil and duff moisture and weather conditions allow for low intensity burning in order to minimize tree stress and adverse effects on tree roots and foliage.
- (5) Piles will be located and burned in a manner that will help to avoid killing any leave trees or reserved vegetation.

Reduce Disturbance (Noise and Habitat) Impacts to the Northern Spotted Owl

- (1) Work activities that produce noise above ambient levels would not occur within specified distances (Table 2) of any nest site or activity center of known pairs and resident single between March 1 and June 30 (or until two weeks after the fledgling period) unless protocol surveys have determined the activity center to be unoccupied, non-nesting, or failed in their nesting attempt.
- (2) Prescribed burning during the nesting season within 0.25 miles of occupied habitat would be dependent upon area biologist review and concurrence. The US Fish and Wildlife Service will be notified of all such occurrences.

Table 2. Northern Spotted Owl Operating Restrictions

Type of Activity	Zone of Restricted Operation
Blast of more than 2 pounds of explosive	1 mile
Blast of 2 pounds or less of explosive	360 feet
Impact pile driver, jackhammer, or rock drill	180 feet
Small helicopter or single-engine airplane	360 feet
Helicopter, Type 1 or 2	1320 feet
Chainsaws	195 feet
Heavy Equipment	105 feet

Protection of Cavity Nesting Wildlife Species

- (1) All snags will be retained unless they need to be felled for worker safety.

Minimize or Avoid Impacts to Special Status Plant Species

There is no known Special Status Plants within the vicinity of the project.

Minimize the Spread of Noxious Weeds

- (1) Roadside noxious weed populations would be treated prior to fuels reduction activity.
- (2) Vehicles will be power washed before entering units to remove all soil and vegetative material.
- (3) Mud and vegetative material shall be removed from boots and clothing prior to entering treatment units.
- (4) Any noxious weed populations found during subsequent monitoring will be treated as funding and resources allow.

Reduce Impacts to Air Quality

- (1) Implement prescribed burns in accordance with the Oregon Smoke Management Plan to reduce emissions, avoid smoke intrusions into designated areas.
- (2) Complete mop-up as soon as practical to reduce potential level of smoke emissions.
- (3) Cover hand piles to permit burning during the rainy season and to ensure lower fuel moisture to facilitate quick and complete combustion while reducing potential level of smoke emissions.
- (4) Burn during the rainy season when there is a stronger possibility of atmospheric mixing and/or scrubbing to allow for better smoke dispersion. All burning will be done after proper clearances have been provided by the Oregon Department of Forestry.

Monitoring

Monitoring of fuels reduction units would be conducted before, during, and after implementation to determine if desired objectives are achieved. Plots will be established in each unit to inventory vegetation conditions and establish response trends. Photo points will be established at each plot location.

Fuels reduction units would be evaluated annually initially to determine the presence/absence of noxious weeds (two years after treatment and determination that no noxious weeds are present), then periodically post-treatment.

Alternatives Considered but not Carried Forward

The scoping proposal included two additional units for fuels reduction treatments. These units require thinning of commercial-sized material to effectively reduce the fuel loadings and fire hazard. Concerns were raised during scoping about how to logistically accomplish the removal of commercial-sized material and protect monument objects. At this time, the BLM feels that there is not agreement between the various stakeholders and interested parties in how best to accomplish fuels reduction in these kinds of stands and therefore, these two units will not be carried forward in the Proposed Action for analysis.

ENVIRONMENTAL CONSEQUENCES: EFFECTS OF IMPLEMENTATION

This section presents a discussion of the estimated environmental effects of implementing the No Action Alternative and the Proposed Action Alternative. This impact analysis addresses direct, indirect, and cumulative effects on all identified affected resources.

The anticipated effects of this Cascade-Siskiyou National Monument Fuels Reduction Demonstration Project are minimal, limited to the site, and are not expected to contribute to any significant adverse cumulative effects. In conifer stands, this project would thin from below, cutting and piling conifer trees up to eight inches diameter. Overstory canopy closure would be retained. In shrub-dominated communities (a small area in the Airport South unit), project design features call for leaving clumps of untreated shrubs to maintain habitat for a variety of species. This project requires the implementation of project design features to minimize disturbance, prevent off-site movement of sediment (thus to avoiding any effects to water quality), and avoid adverse impacts to special status plants and wildlife species. Therefore, the potential for this project to contribute to significant adverse cumulative effects is low. Also refer to individual resource discussion of effects below.

FOREST HEALTH, FOREST COMPOSITION, FIRE AND FUELS

Affected Environment

Fire is recognized as a key natural disturbance process throughout southwest Oregon (Atzet and Wheeler 1982). Human-caused and lightning-caused fires have been a source of disturbance to the landscape for

thousands of years. Native Americans influenced vegetation patterns for over a thousand years by igniting fires to enhance values that were important to their culture (Pullen 1996). Eventually, early Euro-American settlers to this area used fire to improve grazing and farming and to expose rock and soil for mining. Thus, fire has played an important role in influencing vegetative successional processes. Large fires of varying severity were a common occurrence in the area based on analysis of individual tree fire scars and landscape vegetative patterns.

A natural fire regime is a general classification of the role fire would play across a landscape in the absence of modern human intervention, but including the influence of aboriginal burning (Agee 1995, Brown 1995). Fire regime refers to the frequency, severity and extent of fires that would have naturally occurred in an area given the existing vegetation types (Agee 1991). Climate and topography combine to create the fire regimes throughout the CSNM. Historic fire regimes and the departure from them, correlate to the change from historical to current vegetative structure. The change in vegetation also helps to describe the difference in fuel loading (dead fuels and live in the form of increased vegetation) from historical to current conditions.

These changes in vegetation and fuel conditions help to determine the expected change in fire behavior and its effects. This difference in many respects is attributed to fire exclusion, but also includes all human practices that would affect the extent, severity, or frequency of fire events compared to historical accounts. These practices include road building, livestock grazing, and some logging practices as well as fire suppression.

Two fire regimes are found within the project area: Fire Regime I and Fire Regime III. Fire Regime I, characterized by a 0-35 year fire return interval, typically burned with low severity and large stand replacing fires burned under certain weather conditions, but were rare events (i.e. every 200 years). Fire Regime I includes typical climax plant communities such as ponderosa pine, pine-oak woodlands, and oak woodlands. These plant communities historically recovered rapidly from fire and can be directly or indirectly dependent on fire for their continue persistence. The dominant trees within this regime are adapted to resist fire due to the thick bark they develop at a young age (USDI 2008a).

Fire Regime III is characterized by a historical fire return interval of 35-100 years; long summer dry periods; and typically mixed severity fires. Fire Regime III(a) includes mixed conifer and very dry site westside Douglas-fir; Fire Regime III (b) includes mid-elevation dry site white fir and mixed conifer (USDI 2008a). This regime usually results in heterogeneous landscapes. Large, stand-replacing fires may occur but were usually rare events.

Condition classes are a function of the degree of departure from historical fire regimes resulting in alterations of components such as species composition, structural stage, stand age, and canopy closure. There are three condition classes:

Condition Class 1 – For the most part, these ecosystems are currently within historical ranges. Key components of the ecosystem are not at risk of being lost due to wildfire effects.

Condition Class 2 – These ecosystems are moderately altered from their historical range at the patch and/or landscape scale by either increased or decreased fire frequency. They are at moderate risk of losing key components of their systems due to fire effects.

Condition Class 3 – These lands have been significantly altered from their historical range. The risk of losing key ecosystem components is high. This change results in dramatic changes to fire size, frequency, severity, or landscape patterns.

Plant communities proposed for treatment in this project are in Condition Classes 2 and 3. As a result of the fire exclusion and management practices including road construction, livestock grazing, and logging, fuel accumulation and fire-prone vegetation conditions have increased in these units.

Most conifer stands in the area are suppressed and diameter growth is very slow. These stands are characterized by a closed canopy and high stocking levels with many suppressed trees resulting in poor individual tree vigor. Subtle changes in species composition and stand structure are occurring over the landscape. Many trees with old-growth characteristics are dying as a result of increased competition with younger trees for limited resources. Douglas-fir and white fir, referred to as climax species, are replacing ponderosa pine, sugar pine and incense cedar because of their more shade-tolerant nature. Douglas-fir is encroaching upon the edges of the oak woodlands, and mortality of Douglas-fir along these edges has been noticeable during the last few years. In the mid-size vegetation condition class, suppressed shrubs and hardwood trees beneath the dominant tree canopy layer are dying. Currently, the stocking levels of stands throughout the project area are high. Changes in the horizontal and vertical stand structure have increased the threat of crown fires.

Alternative 1 (No Action)

Under the No Action Alternative, there would be no treatment of existing surface or ladder fuels to help mitigate the effects of wildfire. The majority of the project area would remain in moderate to high fire hazard resulting in a continued high probability that when a wildfire occurs, there will be a higher potential than the action alternative for increased fire behavior and the project area, its resources, and nearby private land and homes will be a greater risk for high severity fire effects.

The current trend of increasing stand density which results in increased mortality to the timbered stands would continue. The transition from ponderosa pine stands to excessively dense white fir and Douglas-fir dominated stands would continue within the project area. Trees growing under these conditions often become weakened and are highly susceptible to insect epidemics and tree pathogens. Younger trees (mostly conifers) contribute to stress and mortality of mature conifers and hardwoods.

Because there are no policies in place that will allow fires to burn naturally within the project area, fire suppression would continue. Firefighter safety would continue to be an issue as well as the potential of resource damage. Defensible space and driveway treatments will likely continue by private land owners, but the actual amount treatments is unknown. As a result of ongoing programs to implement defensible space around structures, driveways and roads for potential escape/evacuation routes, the risk of structure and human loss during wildfire events continually decreases.

Air quality would be impacted in the event of a large wildfire. Emissions from wildfires are significantly higher than from thinning or prescribed burning. The wildfires which occurred in southern Oregon in 1987 emitted as much particulate matter as all the burning that occurred within the state that year.

Alternative 2 (Proposed Action)

The proposed fuel reduction project would reduce the overall density of the treated stands. The thinning of smaller vegetation will help to increase the vigor and diameter growth of the residual stand. Larger diameter trees are more tolerant to surface fires so there would be less mortality to the stand in the event of a surface fire. The thinning proposed would also favor the retention and establishment of more fire-tolerant species such as pine.

The treatment of surface fuels would reduce fire behavior such as flame length and fire duration in the event of a wildfire. With the reduction of flame length and fire duration, the likelihood of a crown fire initiating in these stands would be reduced. Also, mortality of the remaining conifers would be reduced.

somewhat but not as much as in a commercial thin. The reduction of flame length would increase the chance that direct attack of a wildfire could occur, reducing acres burned in the event of a wildfire.

The reduction in stand density would make it possible to use prescribed fire as a tool in the future to maintain the lower fire hazard in these stands. Many factors influence fire behavior and the effects fire will have on the resource. Some are beyond our ability to control such as the location of where a fire starts, weather and topography. Fuels management programs focus on the factor that can be influenced, fuels.

As previously discussed, fire is recognized as playing an important role in the development and maintenance of vegetative diversity in fire-prone ecosystems such as those found in this project area.

BOTANY AND VEGETATION

Affected Environment

Bureau Special Status Plants, Lichens, and Fungi (SSP) include species that are listed as threatened or endangered under the Endangered Species Act (ESA), proposed or candidates for listing, State listed, and Bureau designated Sensitive species.

On July 25, 2007, the Survey and Manage requirements were removed from the Resource Management Plans of nine BLM Districts (including Medford's) through the Record of Decision To Remove the Survey and Manage Mitigation Measure Standards and Guidelines from Bureau of Land Management Resource Management Plans Within the Range of the Northern Spotted Owl (July 2007 ROD). Conservation of rare and little known species is provided for by the Endangered Species Act and the BLM's Special Status Species Program (BLM Manual 6840).

On July 25, 2007, the Oregon State Office Instruction Memorandum No. OR-2007-072 updated the State Director's Special Status Species List to incorporate the July 2007 ROD and to include species additions and deletions from the application of the most recent scientific data. This list was finalized with the February 6, 2008 Instruction Memorandum No. OR-2008-038.

Of the four federal endangered (*Arabis macdonaldiana*, *Fritillaria gentneri*, *Limnanthes floccosa* ssp. *grandiflora*, *Lomatium cookii*) and one candidate (*Calochortus persistens*) plants on the Medford District, one unit of the Cascade-Siskiyou National Monument Fuels Reduction Demonstration Project area is within the range of *Fritillaria gentneri*.

Surveys for all species, except fungi, on the Medford District SSP list were conducted in 2007 by qualified botanists. Due to ongoing litigation, the surveys also included all 2001 Record of Decision Survey & Manage Category A and C (where pre-disturbance surveys are required) species plus amendments made by the Annual Species Reviews. Surveys were conducted using the intuitive controlled survey method (see definitions). These surveys found no occurrences of either the 2007 Bureau SSP listed species or the 2001 S&M plus ASR listed species within or adjacent to the proposed treatment areas. Any sites of listed or candidate plants found outside their defined range would have been reported.

Of the 20 species of fungi that are on the Medford District SSP list, 17 are former Survey and Manage (S&M) Category B species whose status determined that pre-disturbance surveys were impractical and not required (Table 3). Two of the 20 fungi species are former S&M Category E or F where their S&M status was undetermined and pre-disturbance surveys were not required. One species of the 20 fungi is not a former S&M species but is a hypogeous (underground) fungus, as are other of the previously

referenced fungi where pre-disturbance surveys were impractical. Oregon State Office Information Bulletin No. OR-2004-145 reaffirmed that these surveys were impractical and further stated that Bureau policy (Manual Section 6840) would be met by known site protection and large-scale inventory work (strategic surveys) through fiscal year 2004.

No noxious weeds occur within the project area. *Centaurea solstitialis* (yellow starthistle), *Cirsium arvense* (Canada thistle) and *Linaria dalmatica* (dalmation toadflax) occur within 0.5 miles of the project area. These sites have been treated for the past two years according to the Medford Districts' Integrated Weed Management Plan (1998) by herbicide spraying (glyphosate) and handpulling. These populations

Table 3. Medford District Bureau Sensitive/S&M B/F Fungi.

Scientific Name	SSP Status	S&M	NatureServe Status	Med Occur.	GeoBOB Occur.
<i>Boletus pulcherrimus</i> *	BSO	B	G2G3/S2	6	44
<i>Dermocybe humboldtensis</i> *	BSO	B	G1G2/S1	0	4
<i>Gastroboletus vividus</i> *	BSO	B	G2?/S1	1	5
<i>Gomphus kauffmanii</i>	BSO	E	G2G4/S3?	4	72
<i>Gyromitra californica</i>	BSO	B	G4/S2	0	42
<i>Helvella crassitunicata</i>	BSO	B	G3/S2	0	27
<i>Leucogaster citrinus</i>	BSO	B	G3G4/S3S4	1	46
<i>Martellia fragrans</i>	BSO	B	G2G3/S1S3	0	2
<i>Otidea smithii</i>	BSO	B	G2/S2	0	10
<i>Phaeocollybia californica</i> *	BSO	B	G2?/S2?	3	36
<i>Phaeocollybia olivacea</i>	BSO	F	G2/S2	13	110
<i>Phaeocollybia oregonensis</i> *	BSO	B	G2?/S2	0	14
<i>Phaeocollybia pseudofestiva</i>	BSO	B	G3/S3?	3	46
<i>Ramaria largentii</i>	BSO	B	G3/S2?	2	20
<i>Ramaria spinulosa</i> var. <i>diminutiva</i> *	BSO	B	GUT2/S1?	0	1
<i>Rhizopogon chamaleontinus</i> *	BSO	B	G1G2/S1S2	1	1
<i>Rhizopogon clavitisporus</i>	BSO		G2G3/S1S2	0	4
<i>Rhizopogon ellipsosporus</i> *	BSO	B	G1G3/S1S3	5	5
<i>Rhizopogon exiguus</i> *	BSO	B	G1G3/S1S2	1	3
<i>Sowerbyella rhenana</i>	BSO	B	G3G5/S3	8	64

have been substantially reduced since treatments began. Since noxious weed control is an objective in and near the CSNM (USDI 2008a: Appendix F), these infestations are unlikely to spread and are likely to be eradicated within 1 to 3 years.

Alternative 1 (No Action)

Since no special status plants occur in the project area, there will be no effect on special status plants as defined above. Habitat trends would continue as described in the forest health section.

Since noxious weed control is an objective in and near the CSNM (USDI 2008a: Appendix F), the nearby infestations are unlikely to spread and are likely to be eradicated within 1 to 3 years.

Alternative 2 (Proposed Action)

Since no special status plants occur in the project area, there will be no affect on special status plants as defined above. Habitat effects would occur as described in the forest health section. In addition, revegetating disturbed areas with native species would prevent the invasion of exotic species. Herbs, forbs and graminoids would likely increase due to opening of the canopy and increased sunlight available to ground level species.

Since noxious weed control is an objective in and near the CSNM (USDI 2008a: Appendix F), the nearby infestations are unlikely to spread and are likely be eradicated within 1 to 3 years.

SOILS

Alternative 1 (No Action)

Under the No Action Alternative, soil conditions would remain the same. However, a high intensity wildfire could adversely impact soils including:

- Increased erosion and sedimentation. Re-vegetation would occur slowly. Within ten years, sediment and erosion should return to pre-fire levels.
- Reduced soil productivity due to loss of the nutrient rich duff/litter layer and reduced soil organic matter.

Alternative 2 (Proposed Action)

The increase in erosion rates over present levels would be minimal as a result of burning hand piles because the piles would be spaced throughout and occupy approximately 3 to 5 percent of the total area. The increased potential of soil particles reaching the local waterways as a result of the prescribed burning would be low because of unburned vegetation between burn pile and local waterways and the low gradient of the landscape. High soil temperatures generated by burning piles would severely and negatively affect soil properties in 3 to 5 percent of the unit by physically changing soil structure and reducing nutrient content.

In most pile burning operations, the duff and woody debris immediately under the pile is completely consumed. Duff and woody debris represent a storehouse of minerals and protection for the soil surface. Since nitrogen losses are roughly proportional to the amount of duff consumed, burn prescriptions that allow greater retention of woody debris benefit long-term site productivity. Burning volatilizes organic nitrogen or changes it into a readily available form (for plant use). Large proportions of the total nitrogen budget can be lost through volatilization in the sites where pile burning occurs. Total foliar nitrogen content also is reduced (14 percent in moderate burns, 33 percent in intense burns), and the effects last at least four years (Atzet 1987). Overall, soil productivity would experience a slight (less than 15 percent), negative decrease short-term effects but potential long-term positive effects would be realized from the proposed actions as the risk of catastrophic fire is diminished.

WATER RESOURCES

Affected Environment

The proposed fuels treatment units are located within four drainages within the Jenny Creek Tier 1 Key Watershed (Table 4). Key Watersheds, a component of the Aquatic Conservation Strategy, are designated refugia for the conservation of at-risk anadromous salmonids and resident fish species.

Table 4. Level 7 Drainages Associated with the Project Area.

Level 7 Drainage	Associated Fuels Treatment Units
Hyatt Reservoir and Shorefront from Cottonwood Creek to Hyatt Dam Spillway	Hyatt Lake
Middle Corral Creek (below Howard Prairie Canal Diversion, above Beaver Creek Confluence)	Airport North, Corral Creek Road
Keene Creek below Mill Creek, above Lincoln Creek	Corral Creek Road
Jenny Creek below Corral Creek, above Keene Creek	Airport South

The Oregon Department of Environmental Quality (ODEQ) is required by the federal Clean Water Act (CWA) to maintain a list of stream segments that do not meet water quality standards for one or more beneficial uses. This list is called the 303(d) list because of the section of the CWA that makes the requirement. ODEQs 2004/2006 303(d) list is the most recent listing of these streams (ODEQ 2006). Within the project area, Jenny Creek and Keene Creek are listed on ODEQs 2004/2006 303(d) list for summer stream temperature.

There are no streams within the proposed fuels treatment units. The closest stream is an intermittent stream approximately 170 feet from the corner of the Hyatt Lake unit.

Alternative 1 (No Action)

Under the No Action Alternative, no fuel treatments would occur. Watershed resources would likely remain unchanged with both anthropogenic and natural disturbances continuing to affect processes. The affected areas would continue to remain vulnerable to wildfire. Should a wildfire occur, negative impacts to water resources are plausible. This would include increased erosion and sediment transport; loss of riparian shade and increased water temperatures; and increases in peakflows, baseflows and water yields. These effects could manifest themselves in the lower watershed and adversely alter channel geometry and water quality. These effects may persist over time.

Alternative 2 (Proposed Action)

Forest management has the potential to affect stream shade and ultimately water temperatures. Since there are no streams within any of the proposed fuels treatment units, stream temperatures will not be affected by implementing this alternative. The primary water quality concerns associated with this proposal are increased soil erosion resulting from pile burning and the possibility of sediment transport to streams. Road use from project activities during wet periods or when snow is plowed on native surface roads can result in adverse effects to water quality. This is accomplished by: 1) the surface can be loosened and available for transport; 2) rutting and tire impressions could render drainage ineffective, resulting in routing and concentrated flow. Bare areas resulting from pile and prescribed burning can result in sediment transport.

Under Alternative 2, a total of approximately 41 acres of fuels treatments are proposed in the Jenny Creek Watershed. All fuels treatments would be accomplished by hand, therefore ground disturbance would be minimal. Given the implementation of project design features, which incorporate BMPs, increased erosion and sedimentation would not appreciably increase beyond background rates and the flat terrain will limit the transport of sediment off site. Overstory vegetation would not be treated and therefore, canopy closure would remain unaffected.

Given the right conditions, high intensity wildfire can still occur across the landscape, including areas where fuel treatments have occurred. In the short and possibly intermediate terms, these treatments will

reduce the likelihood of large-scale, high-intensity wildfire. Implementation of Alternative 2 would not result in adverse impacts to the water resources described above.

With the implementation of the PDFs, together with diligent administration of the contract, this project will have little effect on hydrological processes. Stream shading will not be affected by the project, so there will be no effect to stream temperatures.

FISH AND AQUATICS

Affected Environment

There are no streams within the proposed fuels treatment units. The closest stream is an intermittent stream approximately 170 feet from the corner of the Hyatt Lake unit.

Alternative 1 (No Action)

Under the No Action Alternative, hazardous fuels would not be treated. Aquatic habitats would remain as they are, in an altered state and subject to past and ongoing perturbations. The catchments would remain at an elevated risk of unnaturally intense wildfire. Though fire is a natural component of these environments, unnaturally high fuel loadings could potentially cause a fire to be much more impacting than it historically would have been. Should a particular catchment experience a large, intense, and severe (i.e. stand-replacing) wildfire, it could potentially have negative impacts to aquatic habitat. Anticipated effects in such a scenario would be increased peak flows if enough overstory vegetation succumbed to fire, increased sediment transport from severely burned landscapes, and elevated water temperatures in the event that riparian vegetation was lost. All of which would further degrade aquatic habitat, leading to decreases in biological productivity.

Alternative 2 (Proposed Action)

There are no streams within any of the proposed units. Overstory vegetation would not be treated. In areas lacking large canopy (a small portion of the Airport South unit) leave vegetation would be retained (see PDFs). As such, canopy cover would not be measurably reduced at the landscape level. Fuel reduction activities would not increase ground compaction. Because canopy cover and compaction would remain unaffected, treatments would have no mechanism to affect peak stream flows.

Debris rings around burned piles would be sufficient to capture any chance off-site movement of disturbed particulates, such as ash or bare soil, resulting from the treatments. As such, sediment delivery to aquatic habitats resulting from the project is not anticipated to occur. Furthermore, since there are no streams within the proposed treatment units, shade levels are maintained around streams that would be susceptible to increased water temperature during the summer months (the perennial and long-duration intermittent streams). Hence, summer water temperatures would not be increased as a direct result of the treatments.

Implementation of this project would reduce the likelihood of large scale high severity wildfire occurring to some extent, while not affecting aquatic habitat parameters. As such, it would not affect fisheries or aquatic resources.

WILDLIFE

Alternative 1 (No Action)

Continued accumulation of brush and densely packed small trees reduces wildlife's ability to access and utilize the areas proposed for treatment, and increases available fuel. As the fuel load increases the likelihood of large scale fire also increases and thus the loss of habitat for brush and hardwood dependent

species becomes more likely. Such fires would also be likely to degrade or destroy forest stands utilized by species such as the northern spotted owl and many Bureau Sensitive wildlife species.

Alternative 2 (Proposed Action)

The proposed action involves removal of brush and small diameter trees from the project area. This vegetation currently serves as habitat for a wide variety of wildlife species. In the near term the proposed habitat modification may reduce the suitability of these habitats for some species. Ample areas of similar habitat exist in close proximity to the areas to be treated under the proposed action which will continue to provide areas for these species to persist. The proposed treatment prescription calls for the retention of designated hardwood tree species and the retention of clumps of brush species throughout the stand. This will provide refugia for species to persist which may lose habitat in the treatment areas. Treated areas will return to suitability in a short time (3 to 5 years) as shrub and brush species regenerate and reserved vegetation is allowed to grow with increased vigor. The proposed maintenance under-burning will help to prevent these areas from transitioning into less productive older, denser brush fields, which are less accessible and less useful to these wildlife species.

NORTHERN SPOTTED OWL:

Some of the project area is in suitable and dispersal-only habitat for the northern spotted owl (*Strix occidentalis caurina*), a threatened species. The proposed treatment would maintain the current function of the habitat. Because the habitat would continue to function as suitable or dispersal-only habitat for spotted owls, the project would not adversely affect the northern spotted owl. As stipulated in the PDFs, activity in proximity to known northern spotted owl sites will occur only during prescribed operating periods and in coordination with a wildlife biologist. There are no known northern spotted owl sites within ¼ miles of the project area. The project was consulted on with the U.S. Fish and Wildlife Service and a Letter of Concurrence was received (LOC # 13420-2009-1-0045).

MIGRATORY BIRDS:

The proposed project would not significantly affect migratory birds. BLM issued interim guidance for meeting BLM’s responsibilities under the Migratory Bird Treaty Act and Executive Order (EO) 13186. Both the Act and the EO promote the conservation of migratory bird populations. The interim guidance was transmitted through Instruction Memorandum (IM) No. 2008-050. The IM relies on two lists prepared by the U.S. Fish and Wildlife Service in determining which species are to receive special attention in land management activities; the lists are *Bird Species of Conservation Concern* (BCC) found in various Bird Conservation Regions (BCR) and *Game Birds Below Desired Condition* (GBBDC). The proposed project is located in BCR 5. Table 5 displays those species on the lists that are known or likely to be present in the project area. None of these species would be significantly impacted by the removal of small diameter trees and brush in the project area. Some of these species use habitat components that would be removed by the project. However, not all of the habitat components would be removed, and this type of habitat is common in the general area outside of the proposed project area. There are no known bald eagle nests within ½ mile of the project areas.

Table 5: Bird Species of Conservation Concern (BCC) and Game Birds below Desired Condition (GBBDC)

Species	Status
Olive-sided Flycatcher (<i>Contopus cooperi</i>)	BCC
Rufous Hummingbird (<i>Selasphorus rufus</i>)	BCC
Allen’s Hummingbird (<i>Selasphorus sasin</i>)	BCC
Mourning Dove (<i>Zenaida macroura</i>)	GBBDC
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	BCC

CULTURAL RESOURCES

The entire Cascade-Siskiyou National Monument Fuels Reduction Demonstration Project area was reviewed for the potential for adverse impacts to cultural resources. There are no known cultural sites within the proposed treatment areas. No new cultural sites were discovered during surveys of the proposed units. There are no negative impacts to cultural resources anticipated from this project.

PUBLIC HEALTH AND SAFETY

No aspects of the project have been identified as having the potential to significantly and adversely impact public health or safety. The implementation of hazardous fuel reduction treatments, as designed under this project, would have a beneficial impact on public health and safety by reducing the threat of large-scale high intensity wildfires. Prescribed burning operations would follow all requirements of the Oregon Smoke Management Plan and the Department of Environmental Quality Air Quality and Visibility Protection Program.

Administration of Smoke Producing Projects

The operational guidance for the Oregon Smoke Management Program is managed by the Oregon State Forester. The policy of the State Forester is to:

1. Regulate prescribed burning operations on forest land.
2. Achieve strict compliance with the smoke management plan.
3. Minimize emissions from prescribed burning.

For the purpose of maintaining air quality, the State Forester and the Department of Environmental Quality shall approve a plan for the purpose of managing smoke in areas they designate. The authority for the State administration is ORS 477.513(3)(a).

ORS468A.005 through 468A.085 provides the authority to DEQ to establish air quality standards including emission standards for the entire State or an area of the State. Under this authority the State Forester coordinates the administration and operation of the plan. The Forester also issues additional restrictions on prescribed burning in situations where air quality of the entire State or part thereof is, or would likely become adversely affected by smoke.

In compliance with the Oregon Smoke Management Plan, prescribed burning activities on the Medford District require pre-burn registration of all prescribed burn locations with the Oregon State Forester. Registration includes specific location, size of burn, topographic and fuel characteristics. Advisories or restrictions are received from the Forester on a daily basis concerning smoke management and air quality conditions.

Use of Plastic Covering for Burn Piles

The Oregon Department of Forestry Smoke Management Plan addresses the issue of utilizing plastic to cover piles. In section 629-048-0210, Best Burn Practices; Emission Reduction Techniques, it states that “Best Burn Practices” involves methods that ensure the most rapid and complete combustion of forest fuels. Covering of hand piles is a “Best Burn Practice”. Also in this section it states “When covers will not be removed and thus will be burned along with the piled forest fuels, the covers must not consist of materials prohibited under OAR 340-264-0060 (3), except that polyethylene sheeting that complies with the following may be used:

- (a) Only polyethylene may be used. All other plastics are prohibited”

An addendum to the original Wrobel and Reinhart literature review (2003) on the use of polyethylene sheeting to enhance combustion efficiency, discusses the rules affecting polyethylene (PE) burning. Oregon and New Mexico are the only western states that allow insitu burning of PE pile covers. Oregon has addressed the issue based on the findings reported by Wrobel and Reinhart (2003). The Oregon Department of Environmental Quality and the Oregon Department of Forestry developed an MOU for PE that was adopted in 2005. Combustion studies involving lignocellulosic materials suggest that uncoated Kraft Paper may produce some of the same substances as polyethylene (Garcia and others 2003). It also states that from an operational standpoint, Kraft paper is a more expensive, less durable, and less effective means of minimizing moisture intrusion into the pile because of its tendency to degrade more rapidly than PE. In turn, fuel moisture is increased, combustion efficiency is reduced, and more accelerants may be needed for pile ignition.

Additionally, the weight and means of packaging Kraft paper contributes to decreased production and increased per unit cost of covering piles. The use of Kraft paper averages 55 pounds per square bundle compared to 12 pounds per roll for polyethylene use. It takes 3 bundles of Kraft paper (165 pounds) to cover the same amount of piles that one roll of PE (12 pounds) will cover. Kraft paper bundles are 4 by 4 foot square and are awkward to pack into a unit compared to a roll of polyethylene that can be easily packed into the unit. The size and shape of Kraft paper bundles combined with increased weight could also contribute to increased potential for worker injuries (e.g. knee, back, and ankle sprains) during operations.

PUBLIC PARTICIPATION

Public notice of the availability of this EA was provided through BLM's Medford District website. Notification of the availability of this EA was also mailed to adjacent landowners, interested individuals and the following agencies, organizations and tribes.

ORGANIZATIONS AND AGENCIES

Association of O&C Counties
Audubon Society
Jackson County Stockmen's Association
Jackson County Commissioners
Jackson Co. Soil and Water Conservation District
Soda Mountain Wilderness Council
Klamath Siskiyou Wildlands Center
Northwest Environmental Defense Center
Oregon Department of Forestry
Oregon Wild
Oregon Department of Fish and Wildlife
Oregon Department of Environmental Quality
The National Center for Conservation Science and Policy
Siskiyou Project
Rogue River National Forest (RRNF)
Seven Basins Watershed Council
Southern Oregon University Library
Southern Oregon Timber Industries
Pacific Legal Foundation
Oregon Hunters Association

FEDERALLY RECOGNIZED TRIBES

Cow Creek Band of Umpqua Indians
Confederated Tribes of Grand Ronde
Confederated Tribes of Siletz
Klamath Tribe
Quartz Valley Indian Reservation (Shasta Tribe)
Shasta Nation

OTHER TRIBES

Confederated Bands [Shasta], Shasta Upper Klamath Indians
Confederated Tribes of the Rogue-table Rock and Associated Tribes

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