Deschutes and Crook Counties Wildfire Mitigation Draft Environmental Assessment

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FEMA

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TERMS USED IN THIS DOCUMENT

Area of Potential Effects – the geographic area or areas within which an undertaking may cause changes in the character or use of historic properties, if such properties exist. The area of potential effects is influenced by the scale and nature of the undertaking.

Best Management Practices (BMPs) – innovative environmental protection practices applied to help ensure that projects are conducted in an environmentally responsible manner.

Crown Fire – fire that involves the tops of the canopy trees in the forest; can spread rapidly.

Fire Regime – the frequency of occurrence, size, and intensity of fires that occur within a given area. Includes non-lethal (one fire every 5–25 years), mixed severity (one fire every 5–67 years), and stand replacement (one fire every 70–120+ years) regimes.

Fuels (Ladder) – understory branches or shrubs that can allow a fire to ascend into the canopy.

Fuels Reduction – removal of excess fuels through thinning, limbing, slash pile burning, or other methods to reduce the potential for severe wildfires.

Limbing – removal of large tree limbs to reduce fuel load and the potential for crown fires.

Prescribed Fire – any fire ignited by management actions to meet specific objectives. A written approved prescribed fire plan must be completed and appropriate National Environmental Policy Act requirements followed prior to ignition. This term replaces the term "management ignited prescribed fire."

Suppression – a response to wildland fire that results in curtailment of fire spread and elimination of all identified threats from the fire.

Thinning – removal of trees, branches, or shrubs to reduce fuel loads.

Wildfire – an unwanted wildland fire.

Wildland Fire – any non-structure fire, other than prescribed fire, that occurs in the wildland. This term encompasses fires previously referred to as both wildfires and prescribed natural fires.

Wildland-Urban Interface – line, area, or zone where structures and other human development meet or intermingle with vegetative fuels in wildlands.

ACRONYMS USED IN THIS DOCUMENT

BLM	Bureau of Land Management
BMP	best management practice
CFR	Code of Federal Regulations
EA	environmental assessment
EO	Executive Order
FEMA	Federal Emergency Management Agency
HFRA	Healthy Forest Restoration Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
SHPO	State Historic Preservation Officer
USFS	US Forest Service
USFWS	US Fish and Wildlife Service

Deschutes and Crook Counties have applied to the US Department of Homeland Security's Federal Emergency Management Agency (FEMA) Pre-Disaster Mitigation Program for assistance with a wildfire fuel load reduction project in Central Oregon. The project will build upon activities outlined in both Counties' respective Natural Mitigation Plans to assist the region in reducing risk and preventing loss from future wildland fires.

The National Environmental Policy Act (NEPA) of 1969 and the Council on Environmental Quality regulations implementing NEPA (40 Code of Federal Regulations [CFR] Part 1500 through 1508) direct FEMA and other federal agencies to fully understand and take into consideration environmental consequences of proposed federally funded projects. Under NEPA, Congress authorizes and directs federal agencies to carry out their regulations, policies, and programs as fully as possible in accordance with the statute's policies on environmental protection. NEPA requires federal agencies to make a series of evaluations and decisions that anticipate significant effects on environmental resources. This requirement must be fulfilled whenever a federal agency proposes an action, grants a permit, or agrees to fund or otherwise authorize any other entity to undertake an action that could possibly affect the human environment. In compliance with NEPA and its implementing regulations, FEMA prepared this draft environmental assessment (EA) to analyze potential environmental impacts of alternatives.

The primary goal of this project is to protect surrounding lands, structures, critical facilities, and residents from potential loss of life and property due to wildfires in Deschutes and Crook Counties. The project will accomplish this by removing wildfire fuel in the form of undergrowth and other vegetative debris through ladder fuels reduction, brush mowing, and tree thinning from 757 acres of publicly-owned land and 871 acres of privately-owned land within areas of high fire risk in these counties.

The purpose of the FEMA Pre-Disaster Mitigation Program is to provide funding to states and communities to implement a sustained, pre-disaster, natural-hazard mitigation program that will reduce the overall risk to the population and structures, while also reducing reliance on federal funding from actual disasters. The purpose of this action is to provide Pre-Disaster Mitigation funding to Deschutes and Crook Counties for mitigating their natural hazard risks. The combined lands of Crook and Deschutes Counties cover an area of 6,046 square miles. Lands in these counties have an acute potential for high impact and reoccurring wildland fires due to the region's arid high desert climate, difficult terrain, patterns of hot sun and gusty winds, frequent summer lighting strikes, and stands of timber and other vegetation that contain volatile and highly flammable oils and resins.

The geographic areas targeted for wildfire vegetation management under the proposed project were identified as high risk in the Counties' Natural Hazards Mitigation Plans and Individual Community Wildfire Protection Plans. The assessment was based on four primary factors: how fire occurs, how embedded the community is within the surrounding forest and rangeland, the degree to which fire exclusion has modified fire regime and condition classes, and the availability and location of wildland-urban interface fire protection resources.

Long-term fire suppression and other past vegetation management choices have exacerbated wildfire risk. Historically, prior to fire suppression practices, frequent fires prevented the build-up of flammable materials. Because of the constant reduction in flammable materials such as grasses, shrubs, and western juniper trees, fires in rangeland plant communities such as Deschutes and Crook Counties were mostly non-lethal and primarily limited to over-story trees.

Due to a rapid rise in population and expanding development, many people are now living within these high wildfire risk areas of the wildland-urban interface, in the forests and grasslands located between and around primary population centers. A total of 136 communities in Central Oregon appear on the federal government's Five-Year Action Plan for communities in the US that are most at risk from wildfires. This presents a real danger to people and property in these areas. The need for this action is to reduce or eliminate the risk to people and to property from wildfires in Deschutes and Crook Counties.

The following sections discuss the two alternatives considered in this EA: (1) the No Action Alternative and (2) the Proposed Action Alternative to which FEMA funding would contribute.

3.1 ALTERNATIVE 1 – NO ACTION

Under the No Action Alternative, FEMA would not provide funding to reduce wildfire fuel load in target areas of Central Oregon's wildland-urban interface. Existing conditions at these sites would continue to deteriorate. People and nearby structures would continue to be at risk from catastrophic fire events. Current and ongoing activities to protect the open spaces and urban interface will continue, but not to the degree needed and/or anticipated if funding is appropriated. This alternative would not meet the project nor the Counties' goals and objectives.

3.2 ALTERNATIVE 2 – PROPOSED ACTION

Deschutes and Crook Counties, located in Central Oregon, have completed a wildfire fuels reduction analysis that provides broad-based and high-level guidance with a geographic scope that includes all lands located within the counties. This proposal and funding would initiate fuels reduction respective of those urban interface areas of high priority outlined in the broader-based Wildfire Fuels Reduction Plans for both counties.

The Proposed Action would remove excessive fuel loading through thinning of the understory, removal of down and dead debris, and mowing on approximately 757 acres of publicly-owned lands and 871 acres of privately-owned lands (Figure 1 in Appendix A). Vegetation that would be removed includes small ponderosa pine, Douglas fir, lodgepole pine, sagebrush, bitterbrush, mountain shrub, and a variety of non-native and/or invasive plant species. Thinning, understory removal, and mowing would take place on approximately 467 acres of publicly-owned lands that have been surveyed for cultural resources. Archeological resources that were identified during previous cultural resources survey would be marked for avoidance. The remaining 290 acres of publicly-owned lands would have various ladder fuels limbed and pruned and excess materials would be hand-removed and hauled to a local co-generation facility. In the private-land areas, owners would be given an opportunity to prune ladder fuels themselves and move any excess fuels to the roadside where they would also be hauled by the Counties to the co-generation plant. The Counties would remove this material to other areas for disposal (co-generation). No burning is planned for any areas in this proposal. No heavy equipment would operate in areas beyond those that have been approved in consultation with SHPO based on previous cultural resource survey results.

The Counties will work with qualified landowners and properties at high risk for wildfire and coordinate with other local fire suppression and emergency response personnel to educate and motivate private landowners to work with fuels reduction on their respective properties. These areas are defined as areas where no heavy equipment would be used and private land owners would prune and limb trees and move the fuels to the curbside for disposal by the Counties. The program will be administered by the Deschutes County Forester.

3.2.1 Alternative Features

FEMA funding for the project would provide for activities that will span two years and would reduce fuels and develop community fuel breaks in high risk, high priority wildland interface areas. Tasks include:

- Hand thinning of areas and removal of residual materials for disposal or recycling through various means (co-generation)
- Brush cutting or mowing in areas with brush and grasses to minimize flame lengths and fire carrying capability (these activities would be conducted on public lands that are high priority and have a completed cultural resource inventory)
- Other low-impact measures that minimize disturbance to the landscape or environment such as pruning and limbing of ladder fuels would be conducted on private lands at the owners discretion
- Removal of fuels from private properties who participate in the project would be conducted by the Counties as a curbside service
- No new roads would be built
- No activities would take place in wetlands, riparian areas, cultural resource-identified areas, or floodplains.

The proposed tasks are consistent with the National Fire Plan, a plan developed by the US Forest Service (USFS) and the Department of the Interior in August 2000 with the intent of actively responding to severe wildland fires and their impacts on communities in urban interface areas.

3.3 OTHER ALTERNATIVES CONSIDERED

In order for the Counties to select a preferred alternative for reducing wildfires, an extensive education and awareness program for fire prevention was conducted during development of wildfire protection plans (see Section 6). Several approaches were considered.

The Proposed Action Alternative is the end result of a series of rigorous processes to prevent, plan for, mitigate, and respond to the specific ongoing and pervasive threat of uncontrolled wildfire in the region. Other alternatives were considered to help mitigate the problem, including restricting development in high-risk areas, requiring fire-safe building construction and materials, and mandating certain landscape requirements. These alternatives were seen as far more intrusive and potentially unenforceable within the community. These alternatives were dropped from further study and no further alternatives were evaluated.

The Counties' have a comprehensive approach for minimizing wildfire and that will continue beyond those specific activities outlined for the Proposed Alternative. The approach includes a program that includes the following actions:

1. Develop and adopt program criteria, policies, and operating guidelines

2. Communicate project readiness to property owners and compile working inventory
3. Conduct environmental assessments on affected properties and plan responsive mitigation strategies
4. Monitor and evaluate program effectiveness and adjust if needed to achieve goals
5. Prepare and submit required status reports and communicate project results
6. Explore ways to make the program self-sustaining on a long-term basis

This section discusses the existing conditions by resource and the potential effects of the No Action and Proposed Action alternatives.

For each resource category, the impact analysis follows the same general approach. Where possible, quantitative information is provided to establish impacts. Qualitatively, these impacts will be measured based on minor, moderate, and major impacts as outlined in the chart below.

Impact Intensity	**Criteria**
Small	Environmental effects would not be detectable or would be so minor that they would neither destabilize nor noticeably alter any important attribute of the resource.
Moderate	Environmental effects would be sufficient to alter noticeably, but not to destabilize, important attributes of the resource.
Large	Environmental effects would be clearly noticeable and would be sufficient to destabilize important attributes of the resource.

Impacts are disclosed based on the amount of change or loss of the resource from the baseline conditions as described in Section 3, Environmental Consequences. Impacts may be direct or indirect. Direct impacts are caused by an action and occur at the same time and place as the action. Indirect impacts are caused by an action and occur later in time or farther removed from the area, but are reasonably foreseeable. Cumulative impacts are discussed in Section 5.

Resources that were not analyzed in detail include air quality, wild and scenic rivers, and visual resources. No prescribed fire would be used for fuel reduction in this project so no effect to air quality is expected beyond small amounts of dust from short term removal operations. The Deschutes River is designated a Wild and Scenic River Corridor but no activities associated with the Proposed Action would be implemented in the corridor. No visual impacts are anticipated due to the minor loss of vegetation and small amounts of ground disturbance. These resources will not be analyzed to any further extent.

4.1 CLIMATE, GEOLOGY AND SOILS

4.1.1 Climate

Two climate divisions make up Deschutes and Crook Counties: Climate Division 5 and Climate Division 7, as established by the National Climatic Data Center. Deschutes County contains both climate divisions, while Crook County is located entirely within Climate Division 7 (Oregon Climate Service 2005a and b).

Climate Division 5 can receive 12 to 65 inches of rain per year depending on location. Average temperatures for this zone range from highs in the 60s in the summer to the mid-30s in winter and lows of 40s in the summer to the teens for the winter. This division has short seasons and temperatures can vary considerably during each day and throughout the year.

Climate Division 7 receives low amounts of precipitation year round, totaling on average less than 15 inches per year. However, some higher mountain areas receive as much as 40 inches per year. The driest months of the year occur generally between July and September in this division.

4.1.2 Geology and Soils

The project area is located in the Deschutes-Columbia physiographic province. The Deschutes-Columbia Plateau physiographic province is a north-sloping, volcanic plateau that covers over 60,000 square miles in Oregon, Washington, and Idaho. A great variety of volcanic and glacial landforms are present. Volcanic rocks mapped as Columbia River Basalt Group underlie nearly the entire province. The portion of the project area characterized by the Deschutes National Forest is flanked by the Cascade Mountain range. The crest of the Cascades are lined by glacier eroded strato or composite volcanoes, and many cinder cones can be found dotting the landscape. Glacial till and outwash underlay the eastern slopes of the Cascades. The portion of the project area characterized by the Ochoco National Forest is a much older volcanic region that has been uplifted and eroded. Large landslide features associated with local faulting in the area also are present (NRCS 1999). The project area is relatively flat with small topographic changes. The topography is conducive to fire spread with ground fuels and canopy fuels readily available.

Soils in the project area are predominantly volcanic in origin. The majority of soils in the region are composed of volcanic ash or pumice and other volcanic materials from local volcanic mountains. Soils are mostly referred to as loess, which are described as brown, fine-grained, silty soils. This type of soil is vulnerable to accelerated erosion caused by disturbance of natural conditions through burning, excessive grazing, or tillage. These disturbances increase the potential for erosion by wind and water. Wind typically presents the greatest source of erosion under arid conditions.

4.1.3 Environmental Consequences

Alternative 1 – No Action

Under the No Action Alternative, FEMA would not provide funding to reduce wildland fuel loads in target areas of Deschutes and Crook Counties wildland-urban interface. No impacts to soil resources within the project area would be expected, except for impacts associated with a catastrophic fire. These impacts may include devegetation caused by uncontrolled fire and subsequent soil erosion.

Alternative 2 – Proposed Action

No effect on climate and geology would be expected based on the small scale of the project and minor ground-disturbing activities. Fires of varying intensities may alter the physical, chemical, and biological properties of the soil as a result of vegetation removal, organic consumption, and increased temperatures. In addition, the lack of fire may alter the soil properties as a result of limited nutrient cycling in fire maintained habitat areas.

No environmental consequences to soils are expected from fuels reduction activities in the project area because the activities would not require leveling of the soil. Mechanical removal activities would be limited to the use of chainsaws, weed cutters, and pulaskis, and would not include heavy equipment. Additionally, no fuels reduction by burning is planned with this project. By avoiding vegetation removal in overly large areas at a given time and employing best management practices (BMPs) for erosion control, vegetation removal activities would not

result in increased turbidity in streams and increased erosion of stream banks. No soils would be removed.

Direct, indirect, and cumulative effects to soil productivity, fertility, stability, or infiltration capacity would be at or below the lower levels of detection. Any effects on soil productivity or fertility would be slight, and no long-term effects to soils would occur.

4.2 FLOODPLAINS

Priority areas in Deschutes County are adjacent to the Deschutes River, Little Deschutes River, and Fall River floodplains. However, the project actions will not occur within the adjacent floodplains.

4.2.1 Environmental Consequences

Alternative 1 – No Action

Under the No Action Alternative, FEMA would not provide funding to reduce wildland fuel loads in target areas of Deschutes and Crook Counties' wildland-urban interface. No impacts to floodplains adjacent to the project area would be expected, except for impacts associated with a catastrophic fire. These impacts may include devegetation caused by uncontrolled fire and subsequent soil erosion.

Alternative 2 – Proposed Action

No environmental consequences related to floodplains are expected from fuels reduction activities because the activities do not require soil-leveling or large-scale removal of vegetation that would result in changes to the adjacent floodplain contours or elevations. The actions will not occur within designated floodplains and/or riparian areas. No direct, indirect, or cumulative impacts to floodplains are anticipated.

4.3 WETLANDS AND WATER RESOURCES

Wetlands and water bodies were mapped in the project area (Figures 2 and 3 in Appendix A) in order to avoid any impact to the areas from the project. These wetlands have not been assessed for function and value and are considered arid wetlands or forested wetland complexes.

4.3.1 Environmental Consequences

Alternative 1 – No Action

Under the No Action Alternative, FEMA would not provide funding to reduce wildland fuel loads in target areas of Deschutes and Crook Counties' wildland-urban interface. No impacts to wetlands and water resources within the project area would be expected, except those impacts associated with a catastrophic fire. These impacts may include a loss of vegetation due to uncontrolled fire and subsequent soil erosion, both of which would affect the water quality of wetlands and riparian habitats along the Deschutes River.

Alternative 2 – Proposed Action

No environmental consequences are expected to occur in the wetlands and waterways within the project area. No manual, mechanical, or chemical vegetation removal would occur in wetlands, riparian areas, or streams. In steep areas requiring vegetation management, soil disturbance would not be expected from vegetation control activities; however, BMPs for erosion control would be used if necessary. These BMPs would include the use of straw bales and silt fences to prevent sediment transport and the seeding of disturbed areas with native erosion control seed mixes until native plants can be installed. Therefore, impacts should be considered small for water quality and quantity.

4.4 VEGETATION

Both counties are located east and in the rain shadow of the Cascade Mountains where precipitation on the interior side of a mountain range is negligible. The eastern location also contributes to a preponderance of annual dry lightning storms which commonly ignite wildfires. While vegetation can vary somewhat from one specific location to the next, the region generally features a mixture of ponderosa pine, mixed conifer, and juniper forests as well as non-forest grasses and sagebrush.

Ponderosa pine is currently found in the southern and western portions of the greater Bend, Oregon area, and in higher elevations, with small patches in the project area. Historically, ponderosa pine forests contained more understory grasses and less shrubs than are present today. These plants, combined with fallen pine needles, formed fast-burning fuels that led to recurrent widespread burning. The fire history for ponderosa pine is characterized by low-intensity ground fires that occur at intervals of 11 to 15 years. The pattern of low ground fires and stand dynamics resulted in the open park-like conditions that early inhabitants and visitors found in the region.

Less stand management, less logging activity and highly effective wildland fire suppression have significantly altered the ponderosa pine forest type. Removal of the larger “yellow belly” pines has dramatically decreased open park-like forests, replacing them with more evenly spaced and smaller “black-bark” forests. Similar to other species of conifer forest types, fire suppression has greatly increased the number of trees (stocking levels) and density of trees, creating ladder fuels and putting the stands at risk of attack from insects and disease. These factors have contributed to more intense fires in ponderosa pine forests in recent years.

Western juniper occurs mainly in the northern and eastern sections in the Greater Bend Wildland Urban Interface. The fire history of western juniper is characterized by fire that occurs approximately every 30 years and is generally limited by the availability of fuels. Western juniper trees have thin bark and fires kill them easily. Western juniper appears to be expanding its range over the previous century. Several factors may account for the expansion: a) fire suppression, which allows the stands to grow unchecked by fire; b) overgrazing by domestic livestock, which opens up new sites for colonization; c) reestablishment of juniper after being logged; and d) climate change.

Bitterbrush occurs throughout the Greater Bend area on all aspects and elevations and is frequently found with mixed shrubs such as manzanita and sage. Fire severely damages bitterbrush, especially if rain is not received shortly after a burn. Bitterbrush is fire dependent, but not fire resistant. It regenerates mostly from seed after a fire and often sprouts from caches of seeds made by rodents. Bitterbrush will sprout after burning regardless of the severity of the burn and matures relatively quickly. Consequently, the Greater Bend wildland urban interface area is rich with patches of bitterbrush that burn well on their own and provide fire-ready ladder fuels for taller tree stands.

Manzanita is a shrub that occurs throughout the Greater Bend area, usually mixed with other shrub species such as bitterbrush. Manzanita is established both through sprouts and seeds that are stimulated by fire. Fires in manzanita are conducive to rapid and extensive fire spread due to both physical and chemical characteristics. The shrub has volatile materials in the leaves, low moisture content in the foliage and persistence of dead branches and stems. Manzanita is particularly susceptible to fire where it is the primary understory component.

Western sage is found on the eastern portions of the Greater Bend planning area and commonly grows in association with juniper and bitterbrush. Most fires kill western sage plants. In many western sage communities, changes in fire occurrence along with fire suppression and livestock grazing have contributed to the current condition of sage communities. Prior to the introduction of annuals, insufficient fuels may have limited fire spread in big sagebrush communities. Introduction of annuals, especially cheatgrass, has increased fuel loads so that fire carries easily. Burning in sage communities commonly sets the stage for repeated fires. Fire frequency can be as little as five years, not sufficient time for the establishment and reproduction of big sagebrush. In these cases, annuals such as cheatgrass commonly take over the site.

The result of the fuel hazards and forest types in the Greater Bend area is an overgrowth of trees, forest floor fuels and an abundance of dead or dying vegetation that contribute to a substantially elevated risk of wildland fires that are difficult to control. These overly dense conditions lead to fire behavior that produce flame lengths over eight feet with crowning and torching that can result in stand replacement severity fires.

Not only have large, stand replacement fires not occurred, but also the more frequent low intensity fires have not been allowed to burn either. This practice of fire exclusion along with insufficient vegetation/fuels reduction has resulted in the buildup of excessive live and dead fuels.

4.4.1 Environmental Consequences

Alternative 1 – No Action

As new development occurs within the wildland-urban interface within fire-prone areas, the risk of loss from wildfires would increase. Factors contributing to the highest fire risk include combinations of steep topography, narrow roads with few connecting streets, inadequate water supply in older neighborhoods, dense development, fuel loads, and buildings lacking defensible space (clearings between wildland vegetation and structures). Under the No Action Alternative, FEMA would not provide funding to reduce urban fuel load in target areas of wildland-urban

interface in Crook and Deschutes Counties. Increased invasive species creating an increased fuel load, resulting in an increased fire risk, would be expected.

Alternative 2 – Proposed Action

Integrating thinning and manual/mechanical vegetative treatment could result in a small loss of individual native plants. Various disturbances, as a result of the work crews, removal of individual trees, and hard thinning/limbing would result in localized, direct, small effects to native plant communities. However, thinning is generally desirable and promotes reduction of overstocked understory trees and shrubs.

Changes in vegetative community or species population would be minor, with small and localized effects to a relatively minor proportion of any native species population. These effects would be considered short term or less than a year.

Education as part of mitigation efforts would increase home and business owner's awareness of the risks and would provide them with alternatives for reducing those risks. Using education in combination with the use of manual/mechanical vegetative treatment would benefit natural resources and the ecological system as a whole.

4.5 BIOLOGICAL RESOURCES

There are well over 350 species of wildlife associated with the forests and rangelands in Central Oregon. In a classic wildland urban interface environment, the priority areas are also home to abundant wildlife including deer, elk, mountain lion, and many species of birds and fish.

4.5.1 Federally Listed Species and Critical Habitat

Two lists of federally endangered and threatened species (and species proposed for threatened or endangered status) with the potential to occur in Deschutes and Crook Counties were obtained from the US Fish and Wildlife Service (USFWS) on August 29, 2007 (See Appendix B). In addition, an Oregon Natural Heritage Information Center data system search of occurrence records that included federally listed species and other special-status species was prepared. According to these inventories, the federally listed species that may be found within the proposed project areas were northern spotted owl and bull trout and its associated critical habitat.

4.5.1.1 Northern Spotted Owl

The northern spotted owl is a federal and Oregon State listed species. The northern spotted owl is a forest bird that inhabits old-growth coniferous and mixed conifer-hardwood forests from British Columbia through northern California. Suitable habitats for spotted owls provide elements necessary for nesting, roosting, foraging, and dispersal. Characteristics of nesting and roosting in Oregon generally include forests dominated by Douglas-fir and western hemlock with large (more than 30 inches diameter at breast height) overstory trees. Canopies exhibit a moderate to high canopy closure (60 to 80 percent), and are multi-layered with multiple tree stories (USFWS 1992). In addition, trees with various structural deformities (cavities, broken tops, mistletoe infections) and large snags are also characteristic of northern spotted owl habit, as well as accumulated fallen trees and debris on the forest floor (USFWS 1992). Most nest and

roost sites are within forest stands with trees that are often more than 200 years old, but northern spotted owls also utilize mature forests 100 to 200 years old. Foraging and dispersal habitats may be in younger, more open and fragmented forests than those associated with nesting and roosting (USFWS 1992). There is no potential habitat for northern spotted owls in the priority areas.

4.5.1.2 Bull Trout (Columbia River Basin)

Bull trout have stringent requirements for cold water and clean gravel to rear and reproduce, and spawning usually occurs in mountain streams fed by snow-melt or springs fed by snow fields (USFWS 2004a and b, Goetz et al. 2004). Juvenile bull trout feed on aquatic insects and crustaceans, while adult bull trout feed almost entirely on fish. Bull trout have been recorded to make movements of over 100 miles during foraging or spawning migrations (Goetz et al. 2004).

Bull trout have been documented to exhibit four life-history forms in the northwest. Resident bull trout reproduce in small streams, where they remain for their entire life-cycle. Fluvial bull trout reproduce in small streams, but as one- to two-year old juveniles, migrate into mainstem rivers to rear and mature. Fluvial-lacustrine populations reproduce in streams, but soon migrate into large lakes to rear and mature (WDFW 2004). All of these life history types have been documented to occur in the Columbia River basin (WDFW 2004, USFWS 2002). In the Columbia River Basin, bull trout historically were found in about 60 percent of the basin. They now occur in less than half of their historic range. The Deschutes Recovery Unit encompasses the entire Deschutes River basin and its tributaries. Bull trout have been observed in the Deschutes River and its tributaries.

4.5.1.3 Migratory Birds

The project areas provide habitat for a variety of migratory birds, including songbirds and birds of prey. The USFWS Office of Migratory Bird Management maintains a list of migratory birds (50 CFR 10.13). The Migratory Bird Treaty Act of 1918, as amended, provides federal protections for migratory birds, their active nests, eggs, and parts from harm, sale, or other injurious actions; the act has no "take" provision. Fuels reduction activities such as vegetation removal have the potential to directly and indirectly affect migratory birds. However, potentially negative impacts to migratory birds can be eliminated or greatly reduced by avoiding fuels reduction activities during the most sensitive portion of the breeding season (early March through July). If seasonal restrictions are not practicable, a pre-construction survey to identify active nests should be conducted by a qualified biologist prior to any disturbing activities.

4.5.2 Environmental Consequences

Alternative 1 – No Action

Under the No Action Alternative, FEMA would not provide funding to reduce wildland fuel loads in target areas of Deschutes and Crook Counties' wildland-urban interface. The No Action Alternative would not conduct vegetation management activities, and therefore would not directly affect proposed or listed threatened and endangered species and their habitat in the project areas. However, the potential for losses of listed species due to wildfire would remain. Native plant and wildlife species would not benefit from the selective reduction of non-native

vegetation. Also, uncontrolled wildfires have the potential to burn at a greater intensity than a prescribed fire. Therefore, future uncontrolled wildfires could result in adverse impacts to wildlife through the loss of habitat and/or the mortality of individuals.

Alternative 2 – Proposed Action

While some habitat would be affected by the Proposed Action Alternative activities, the activities would not have long-term adverse effects to listed threatened or endangered species (none are located in the project area). Impacts to native wildlife would be detectable potentially through displacement and habitat modification such as changes in food sources, thermal and hiding cover, either as a direct consequence of the project's vegetation modification or indirectly through the response to invasive weed species. However, these effects would not be expected to exceed the natural range of variability, or have long-term effects to native species, their habitats, or the natural processes sustaining them. As nature responds after a natural wildfire, wildlife would adapt over time.

4.6 HISTORIC, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

4.6.1 Historic Resources

Examples of historic resources include canals, railroads, residences, and other buildings. An online database of the National Register of Historic Places (NRHP) was reviewed in October 2007. There does not appear to be any NRHP-listed resources located within the project area. However, Oregon State Historic Preservation Officer (SHPO) maintains a statewide database of inventoried historic resources, and there may be historic resources present within the project area that are not listed on the NRHP but that may be eligible for listing.

The scope of the action is to reduce fuel loading through manual means such as pruning, select cutting, and mowing. The Counties intend to avoid all impacts to historic resources. The Counties intend to avoid and therefore expect no effect to aboveground structures.

4.6.2 Archaeological and Cultural Resources

Section 106 of the NHPA holds that activities occurring on federal lands, or those that require federal permits or use federal funds, undergo a review process to protect cultural resources that are or may be eligible for listing on the NRHP.

A review of confidential archaeological records on file at the Oregon SHPO office in Salem, Oregon, was conducted in September 2007 to determine the presence or absence of previously recorded sites and the extent of survey coverage in and near the Area of Potential Effects. This search determined the nature of previous studies and the extent of known archaeological sites within or adjacent to the project vicinity.

The results of the record search indicate that approximately 467 acres, or 29 percent of the proposed project area, has been subjected to previous inventory efforts that meet current archaeological site identification and reporting standards. Four archaeological resources appear

to fall within the inventoried units, and consist of a collapsed log cabin and root cellar, two can dumps, and a single resource that is not specified.[1]

4.6.3 Environmental Consequences

Alternative 1 – No Action

Under the No Action Alternative, FEMA would not provide funding to reduce wildland fuel loads in target areas of Deschutes and Crook Counties' wildland-urban interface. Because no federal activity would occur, no requirement for compliance with Section 106 of the NHPA exists. Structures will continue to be at the same risk level for potential damages.

Alternative 2 – Proposed Action

Mechanical vegetation treatments have the potential to adversely affect archaeological deposits by disturbing the spatial integrity of a site and by damaging individual artifacts (Odess and Robertson 2007). The Proposed Action may affect four known resources identified during the record search, as well as a number of potential, as yet unidentified, sites falling within the project area, because the majority of the proposed project area has not been subjected to prior inventory and therefore the quantity and type of potential cultural resources falling within the parcels is undetermined.

Publicly-Owned Lands

The project may occur within publicly-owned lands, which includes approximately 467 acres (consisting of five parcels), that have been previously inventoried for cultural resources and do not have identified sites, with no further consideration for cultural resources. These are areas where heavy equipment and mowing could take place. All of the previously inventoried areas are shown on Figure 4 in Appendix A.

For all publicly-owned lands that have not been inventoried for cultural resources, which includes approximately 379 acres (consisting of three parcels), no ground-disturbing work would occur in order to eliminate the potential for disturbing cultural resources. All work conducted in these non-surveyed areas will be limited to hand-pruning or other activities that do not require use of heavy equipment or vehicular traffic on the native ground surface. It is the Counties' intent to avoid ground-disturbing impacts within all public lands that have not been subjected to previous cultural resource inventory efforts.

For those parcels that have been previously inventoried and archaeological resources have been identified (Figure 4 in Appendix A), approximately 88 acres (consisting of two parcels) of public lands, no ground-disturbing activities would occur within the site boundaries.

[1] The SHPO database indicates that there is one site in the project area for which there are no corresponding survey reports or site records, so the origin of the information is undetermined. The site does not have a designated trinomial, which may indicate that it was less than 75 years of age at the time of the notation, and therefore, not "historic" by State standards.

Consultation with the SHPO, other appropriate agencies, and Tribal groups has been initiated and a determination of "no effect" with appropriate measures is expected prior to issuance of a Finding of No Significant Impact (FONSI). During the consultation process, an appropriate method or strategy for avoiding cultural resources will be determined. Such methods may include, but are not limited to, requiring the counties to provide a qualified archaeologist to flag the sites as avoidance areas prior to initiation of the project, and/or requiring an archaeologist to be on-site to monitor project activities that would occur near the archaeological resources. It is the Counties' intent to avoid all identified sites, and through avoidance, eliminate the potential for adverse impacts to the resources.

Privately-Owned Lands

The Counties would not conduct any ground-disturbing work within approximately 871 acres of privately-owned lands. The project activities in these parcels are limited to educating private landowners about fuel reduction methods such as pruning and limbing of ladder fuels, and providing curbside removal of debris such as tree limbs that may be removed at the landowners' discretion. No effects to cultural resources are expected since the majority of the privately-owned parcels are already residentially developed and given the low impact of the proposed action. No federal funding would be provided to the landowners to conduct this work, and therefore compliance with Section 106 of the NHPA does not apply to fuel reduction activities that may occur at the landowners' discretion within the privately-owned parcels.

4.7 SOCIOECONOMIC AND ENVIRONMENTAL JUSTICE (EO 12898)

Executive Order (EO) 12898, Environmental Justice, directs federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects on minority and low-income populations in the US resulting from federal programs, policies, and activities. Socioeconomic and demographic data for residents in the project vicinity was studied to determine if a disproportionate number (defined as greater than 50 percent) of minority or low-income persons have the potential to be affected by the alternatives (Crook County, 2005).

Alternative 1 – No Action

Under the No Action Alternative, FEMA would not provide funding to reduce wildland fuel loads in target areas of Deschutes and Crook Counties' wildland-urban interface. Because no federal activity would occur, no requirement for compliance with EO 12898 exists. A greater potential for fire and economic loss would continue to exist.

Alternative 2 – Proposed Action

Maintenance activities of any sort within the project areas are unlikely to affect either the local population or a disproportionate number of minority or low-income persons. Private property owners throughout the priority areas are culturally diverse and range from low to high income. These areas were selected as high priority based solely on their need for fuel reduction. The Proposed Action would not cause adverse economic impacts, and would comply with EO 12898. The results of the project are general safety for all area and local populations. The ability to decrease the potential for catastrophic fire would be a social and economic beneficial impact.

The Council on Environmental Quality regulations for implementing NEPA requires an assessment of cumulative effects during the decision-making process for federal projects. Cumulative effects are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative effects are considered for both the No Action and Proposed Action alternatives. Cumulative effects were determined by combining the effects of the alternative with other past, present, and reasonably foreseeable future actions.

There would be no significant cumulative impacts associated with the Proposed Action Alternative or other urban interface activities that are planned in the fire management plans by the Counties. This includes the educational element for the private land owners to maintain these fuel reduction practices over time and the understanding of fire related risks as development increases in the wildland urban interface. Due to the limited scope of the work and the proposed mitigation, no loss of any sensitive species or habitat is expected that would contribute a measurable amount to the cumulative effects.

FEMA is the lead federal agency for conducting the NEPA compliance process for the vegetation management project. As the lead agency, FEMA expedites the preparation and review of NEPA documents, responds to the needs of residents surrounding the treated lands, meets the spirit and intent of NEPA, and complies with all NEPA provisions.

A public notice is required for this draft EA. The public will have the opportunity to comment on the EA for 30 days after the publication of the public notice. The notice identifies the action, location of the proposed site, participants, location of the draft EA, and who to write to provide comments. FEMA will review all written comments submitted for identification of any significant issues that need to be addressed and will incorporate them into the final EA, as appropriate.

Public involvement is ongoing and had begun before the initiation of this EA. With the passing of the Healthy Forests Restoration Act (HFRA) in 2003, many communities in Oregon organized or increased their public education efforts to reduce hazardous fuels on public and private forested lands. HFRA also directed federal agencies to work each community to develop a Community Wildfire Protection Plan. The plans outline priority areas, strategies and action plans for wildfire fuel reduction treatments and educate their respective communities on living in a fire-adapted ecosystem. These plans were developed in large part by the efforts of Oregon local community groups. The groups also have worked to provide public information concerning National Fire Plan goals and to develop wildfire education and prevention programs.

The following seven plans are relevant to public involvement efforts supporting this EA.

Upper Deschutes River Natural Resources Coalition Community Wildfire Protection Plan

The Upper Deschutes River Natural Resources Coalition comprises sixteen neighborhoods in southern Deschutes County and includes the La Pine Rural Fire Protection District, the Oregon Department of Forestry, the USFS, the Bureau of Land Management (BLM), and Deschutes County. Since 2004 this coalition has worked to increase neighborhood interest in restoration and protection of natural resources along the Upper Deschutes River. The coalition regularly participates in wildfire prevention education and activities.

The Upper Deschutes River Natural Resources Coalition plan (Upper Deschutes River Natural Resources Coalition 2007) also lists seven “Communities at Risk” as defined by HFRA. These consist of Three Rivers, Wild River, Foster Road Corridor, Little Deschutes Corridor, Big River, Haner Park, and Fall River. These communities face significant threat from wildfire due to location (near federal land), have conditions conducive to large-scale wildfires, and face a threat to human life and property from these fires. Due to this, community education and involvement efforts have been ongoing.

Greater La Pine Community Wildfire Protection Plan

Greater La Pine community members involved in the development of their plan include members of fire agencies, local businesses and organizations, and individuals. Similarly to Upper Deschutes, the La Pine Rural Fire Protection District, the Oregon Department of Forestry, the USFS, and the BLM all were involved in the effort to develop the plan and continue to be

involved in the ongoing process of revision and improvement of the plan (Project Wildfire 2005).

The Greater La Pine plan has two primary goals: education and outreach. The Greater La Pine community also continues to educate and inform residents about living in a fire-adapted environment and increasing personal responsibility for creating defensible space. With the rapid influx of new residents in the area, efforts have been established to educate new residents and make informational resources easily available. The La Pine Rural Fire Protection District routinely partners with Project Wildfire for public educational efforts. Some homeowners' associations and other organized groups in the Greater La Pine area provide valuable ongoing education to their members about the risks of wildland fire and the ways to reduce those risks.

Additional public outreach is ongoing in the Greater La Pine "Communities at Risk" as defined by the HFRA. These communities consist of Wickiup Acres, Newberry Estates, 6th and Dorrance, Ponderosa Pines, Masten Road, Day Road Corridor, Little Deschutes River, Huntington South, and Section 36.

Greater Redmond Community Wildfire Protection Plan

Community members and local businesses and organizations collaborated with representatives from Redmond Fire & Rescue, Deschutes County Rural Fire Protection District #1, Oregon Department of Forestry, the USFS, the BLM, the Oregon Military Department, Deschutes County, and Project Wildfire to develop this plan (Project Wildfire 2006a). The three main purposes of this plan are to 1) instill a sense of personal responsibility for taking preventative actions regarding wildland fire, 2) increase public understanding of living in a fire-adapted ecosystem, and 3) increase the community's ability to prepare for, respond to, and recover from wildland fires. To reach these goals, public involvement and education are ongoing.

Greater Redmond selected seven subregions as their "Communities at Risk" as defined by the HFRA. These are the Northwest, Southwest, Northeast, Southeast, Urban Northwest, Urban Northeast, Urban Southwest, and Urban Southeast subregions. In order to meet the fire safety needs of these communities, education and outreach are top priorities of the Greater Redmond community.

Further public education has been made possible by the individual and collaborative efforts of Redmond Fire & Rescue, Oregon Department of Forestry, the Central Oregon Fire Prevention Cooperative, and Project Wildfire. These groups provide a variety of wildland fire prevention programs in the Greater Redmond area.

Crook County Community Wildfire Protection Plan

The Crook County plan was developed by the collaborative efforts of the Crook County Court, Crook County Fire and Rescue, Crook County Emergency Management, Crook County Natural Resources Planning Committee, Oregon Department of Forestry, and the Ochoco National Forest and BLM-Prineville District via Central Oregon Fire Management Services (Crook County Community Wildfire Protection Plan Committee 2005).

The Community Emergency Preparedness Committee and the Crook County Natural Resources Planning Committee presented the plan to the public for review and input and posted a draft of the document on the County website. Additional presentations of the plan were held throughout the county during the 2005 Cook County Sheriff's Town Hall meetings.

The Crook County plan divided the county into six geographical blocks containing multiple communities and referred to as Risk Assessment Areas to identify "Community at Risk" (as defined by HFRA). These areas were Juniper Canyon, Powell Butte, McKay, Paulina, Maury, and Twelve Mile. These communities will direct outreach and resources.

Greater Sisters Country Community Wildfire Protection Plan

Education and outreach are primary goals for the Greater Sisters Country plan (Watershed Research and Training Center 2006). The two main themes of education and outreach are to increase public understanding of living in a fire-adapted ecosystem and to increase personal responsibility for creating defensible living space. To accomplish this, in the fall of 2004 the Greater Sisters Country plan steering committee hosted four community meetings to introduce the idea of a plan to the public and to obtain feedback. The meetings increased public support for the plan, identified community members who wanted to participate in additional efforts, gathered information about community values and concerns, identified potential emergency response and preparedness improvements, identified community priorities for federal land fuel reduction, and identified future educational opportunities.

Ongoing education and outreach efforts continue in the form of guided tours for the public of recent large wildland fires in the area, guided tours of the Metolius Heritage Demonstration Project, an interactive website, and tours of the ongoing Highway 20 Fuels Reduction Project.

The Greater Sisters Country Community selected 14 communities as their "Communities at Risk" (as defined by HFRA) through a wildfire risk assessment, which included input from community meetings. These communities require additional efforts to reduce wildland fire risk. They are Tollgate, Crossroads, Panoramic View Estates, Camp Sherman, Sage Meadows, Sisters Area, Indian Ford Meadows, Squaw Creek, Black Butte, Cascade Meadows, Forked Horn Estates, Suttle Lake, Plainview Estates and Area, and Aspen Lakes.

Greater Bend Community Wildfire Protection Plan

After the passing of HFRA in 2003, three community meetings were held to generate interest and participation in the planning process. This inspired the Greater Bend Community to develop the Greater Bend plan (Project Wildfire 2006b). Participants includedg the City of Bend Fire Department, Deschutes County Rural Fire Protection District #2, Oregon Department of Forestry, the USFS, the BLM, Deschutes County, members of fire agencies, local businesses and organizations, and individuals.

Three of the public education goals of the Greater Bend plan are 1) instill a sense of personal responsibility for taking preventative actions regarding wildfires, 2) increase public understanding of living in a fire-adapted ecosystem, and 3) increase the community's ability to prepare for, respond to, and recover from wildland fires. These goals have made education and outreach top priorities for the plan. The City of Bend Fire Department, the Central Oregon Fire

Prevention Cooperative and Project Wildfire all provide wildfire prevention education to the public and federal and state agencies. Many neighborhood groups and homeowner associations also provide ongoing information to their residents to reduce wildfire risk and improve their protection.

The Greater Bend plan selected 10 "Communities at Risk" (as defined by HFRA) for assessment and prioritization. These are identified as North, Northeast, Southeast, Urban Growth Reserve East, Urban Growth Reserve West, West, Deschutes River Woods, Tumalo, Skyliners, and Saddleback. These risk areas require ongoing planning and public education efforts.

Sunriver Community Wildfire Protection Plan

The Sunriver Owners Association, the Sunriver Fire Department, federal and state agencies, community individuals, and other interested parties collaborated to develop the Sunriver plan (Sunriver Owners Association Environmental Services and Sunriver Fire Department 2005). Prior to this collaboration, the association had drafted a Fuels Modification Plan as early as 1991 (later called the Ladder Fuels Reduction Plan). The plan detailed the reduction of fuels on private properties and common areas. In 1996 Sunriver made fuels reduction mandatory for property owners.

Deschutes and Crook Counties are required to obtain and comply with all required local, state, and federal permits and approvals prior to implementing the Proposed Action Alternative. Development at the Proposed Action Alternative sites shall comply with the approved site plan. Any expansion or alteration of this use beyond that initially approved would require a new or amended permit. In the event that historically or archaeologically significant materials or sites (or evidence thereof) are discovered during the implementation of the project, the project shall be halted immediately and all reasonable measures taken to avoid or minimize harm to property. The Counties would then be required to consult with FEMA and the SHPO for further guidance.

The draft EA evaluated potentially significant resources that could be affected. The evaluation resulted in identification of no significant impacts associated with the resources of climate, geology and soils; floodplains; wetlands and water resources; vegetation; biological resources (endangered species act); historic, archaeological, and cultural resources; and socioeconomic and environmental justice. Obtaining and implementing permit requirements along with appropriate BMPs will avoid or minimize any effects associated with the action. It is recommended that a finding of no significant environmental impact to the human or natural environment be issued for the Proposed Action Alternative.

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US Fish and Wildlife Service (USFWS). 1992. Endangered and Threatened Wildlife and Plants; Determination of Critical Habitat for the Northern Spotted Owl; Final Rule. Fed. Reg. 57(10):1796-1838.

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Washington Department of Fish and Wildlife (WDFW). 2004. Washington State Salmonid Stock Inventory Bull Trout/Dolly Varden. Olympia, Washington.

Watershed Research and Training Center. 2006. Greater Sisters Country Community Wildfire Protection Plan. Prepared by Marcus Koffman. June 25.

Legend

- Highway
- River
- City Limit
- Lake
- County Boundary

N

Redmond

Prineville

FIGURE 3

Bend

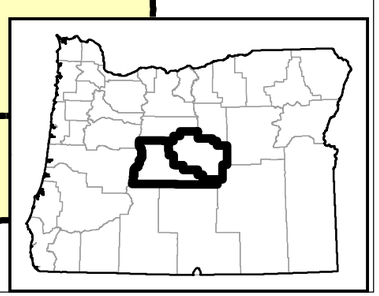
CROOK COUNTY

Sunriver

FIGURE 2

DESCHUTES COUNTY

LaPine



Sources: Deschutes County Information Technology Department
Crook County GIS Department.

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Miles

URS

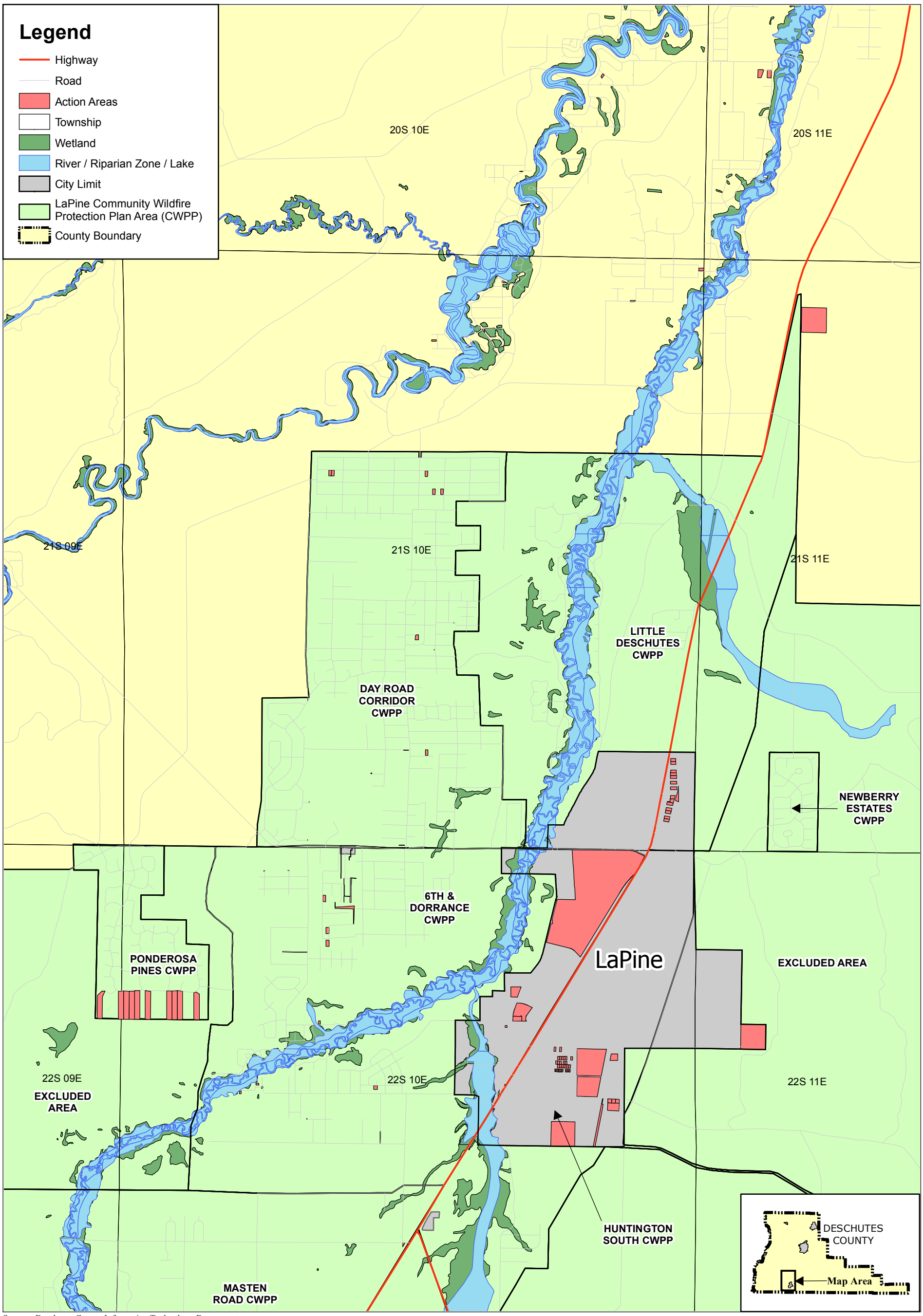
DESCHUTES AND CROOK COUNTY COMMUNITY WILDFIRE PROTECTION PLAN BOUNDARIES

JANUARY 2008
15702306

WILDFIRE REDUCTION ENVIRONMENTAL ASSESSMENT
DESCHUTES AND CROOK COUNTY, OREGON

FIGURE 1

O:\15702306 Deschutes & Crook Counties Wildfire Fuels Reduction EA\GIS\MXD\Fig 1 Overall.mxd



Source: Deschutes County Information Technology Department.

0 1 2 Miles

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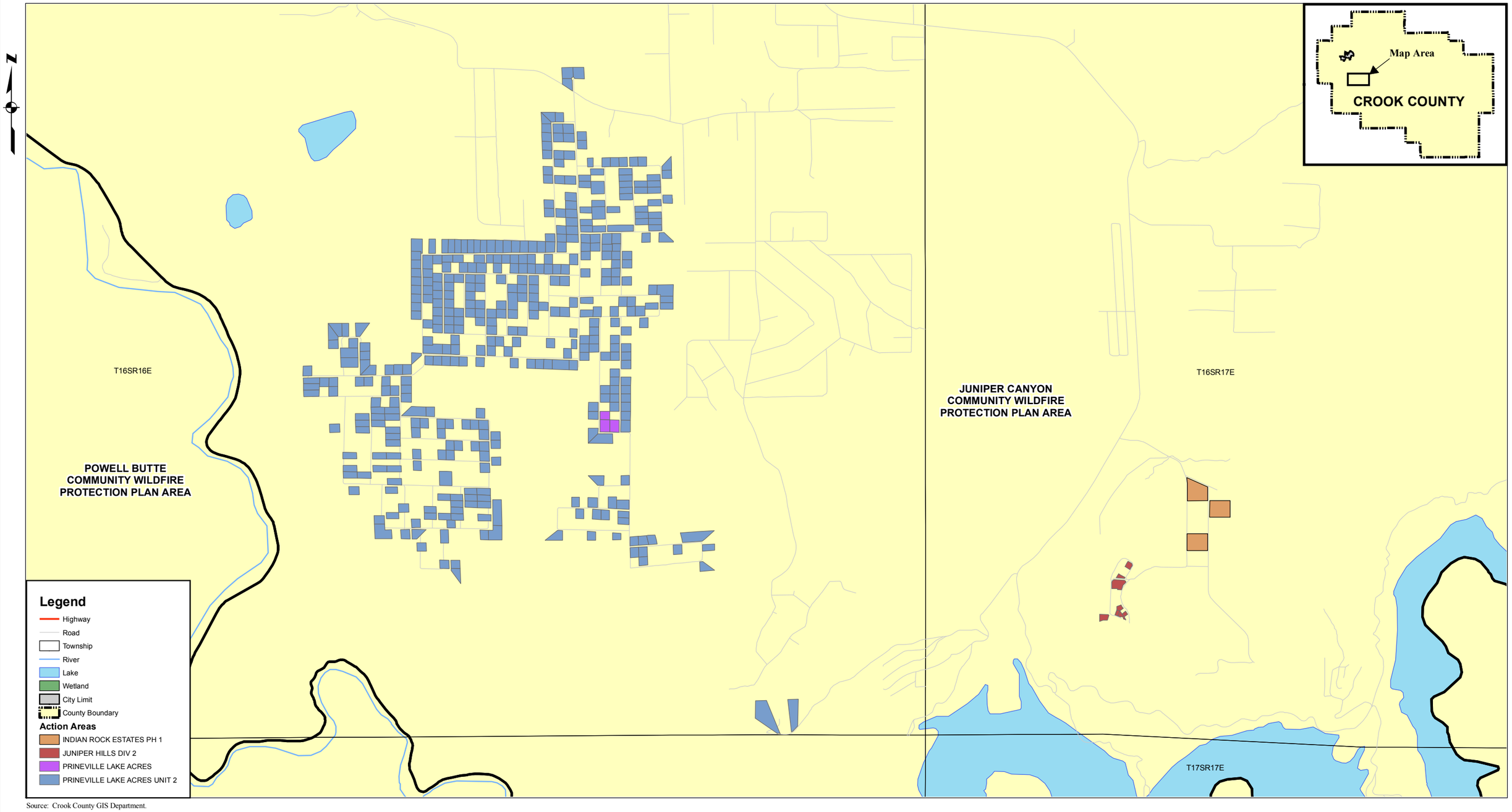
SOUTH DESCHUTES COUNTY COMMUNITY WILDFIRE PROTECTION PLAN AREAS

JANUARY 2008
15702306

DESCHUTES COUNTY
WILDFIRE REDUCTION ENVIRONMENTAL ASSESSMENT
DESCHUTES AND CROOK COUNTY, OREGON

FIGURE 2

O:\15702306 Deschutes & Crook Counties Wildfire Fuels Reduction EA\GIS\MXD\Fig 2 South Deschutes.mxd



Source: Crook County GIS Department.

0 2,500 5,000 7,500 10,000 Feet

URS

CROOK COUNTY COMMUNITY WILDFIRE PROTECTION PLAN AREAS

JANUARY 2008
15702306

CROOK COUNTY
WILDFIRE REDUCTION ENVIRONMENTAL ASSESSMENT
DESCHUTES AND CROOK COUNTY, OREGON

FIGURE 3

O:\15702306 Deschutes & Crook Counties Wildfire Fuels Reduction EA\GIS\MXD\Fig 3 Crook County.mxd

ENCLOSURE A

FEDERALLY LISTED THREATENED, ENDANGERED, PROPOSED, CANDIDATE SPECIES AND SPECIES OF CONCERN WHICH MAY OCCUR WITHIN CROOK COUNTY, OREGON

LISTED SPECIES[1/]

PROPOSED SPECIES

None

CANDIDATE SPECIES[2/]

Amphibians and Reptiles	
Columbia spotted frog	*Rana luteiventris*
Oregon spotted frog	*Rana pretiosa*

SPECIES OF CONCERN

Mammals	
Pygmy rabbit	*Brachylagus idahoensis*
Pale western big-eared bat	*Corynorhinus townsendii pallescens*
California wolverine	*Gulo gulo luteus*
Silver-haired bat	*Lasionycteris noctivagans*
Small-footed myotis (bat)	*Myotis ciliolabrum*
Long-eared myotis (bat)	*Myotis evotis*
Fringed myotis (bat)	*Myotis thysanodes*
Long-legged myotis (bat)	*Myotis volans*
Yuma myotis (bat)	*Myotis yumanensis*
Preble's shrew	*Sorex preblei*
Birds	
Northern goshawk	*Accipiter gentilis*
Western burrowing owl	*Athene cunicularia hypugea*
Ferruginous hawk	*Buteo regalis*
Greater sage-grouse	*Centrocercus urophasianus*
Black tern	*Chlidonias niger*
Olive-sided flycatcher	*Contopus cooperi*
Willow flycatcher	*Empidonax trailli adastus*
Yellow-breasted chat	*Icteria virens*
Lewis' woodpecker	*Melanerpes lewis*
Mountain quail	*Oreortyx pictus*
White-headed woodpecker	*Picoides albolarvatus*
Amphibians and Reptiles	
Tailed frog	*Ascaphus truei*
Northern sagebrush lizard	*Sceloporus graciosus graciosus*
Fishes	
Interior redband trout	*Oncorhynchus mykiss gibbsi*
Invertebrates	
Cascades apatanian caddisfly	*Apatania tavala*
Plants	

Henderson ricegrass	*Achnatherum hendersonii*
Wallowa ricegrass	*Achnatherum wallowaensis*
Estes' artemisia	*Artemisia ludoviciana* ssp. *estesii*
Bastard kentrophyta	*Astragalus tegetarioides*
Upward-lobed moonwort	*Botrychium ascendens*
Crenulate grape-fern	*Botrychium crenulatum*
Mountain grape-fern	*Botrychium montanum*
Peck's mariposa-lily	*Calochortus longebarbatus* var. *peckii*
Cusick's erigonum	*Eriogonum cusickii*
Ochoco lomatium	*Lomatium ochocense*
Disappearing monkeyflower	*Mimulus evanescens*
Little mousetail	*Myosurus minimus* ssp. *apus* (= var. *sessiliflorus*)
Oregon semaphore grass	*Pleuropogon oregonus*
Howell's theylpody	*Thelypodium howellii* ssp. *howellii*

(E) - Listed Endangered *(T) - Listed Threatened* *(CH) - Critical Habitat has been designated for this species*
(PE) - Proposed Endangered *(PT) - Proposed Threatened* *(PCH) - Critical Habitat has been proposed for this species*

Species of Concern - Taxa whose conservation status is of concern to the Service (many previously known as Category 2 candidates), but for which further information is still needed.

* *Consultation with NOAA's National Marine Fisheries Service may be required.*

[1/] *U.S. Department of Interior, Fish and Wildlife Service, October 31, 2000, Endangered and Threatened Wildlife and Plants, 50 CFR 17.11 and 17.12*
[2/] *Federal Register Vol. 69, No. 86, May 4, 2004, Notice of Review - Candidate or Proposed Animals and Plants*

ENCLOSURE A

FEDERALLY LISTED THREATENED, ENDANGERED, PROPOSED, CANDIDATE SPECIES AND SPECIES OF CONCERN WHICH MAY OCCUR WITHIN DESCHUTES COUNTY, OREGON

LISTED SPECIES[1/]		
Birds		
Northern spotted owl[2/]	*Strix occidentalis caurina*	CH T
Fish		
Bull trout (Columbia River Basin)[3/]	*Salvelinus confluentus*	CH T
PROPOSED SPECIES		
None		
CANDIDATE SPECIES[4/]		
Mammals		
Pacific fisher[5/]	*Martes pennanti pacifica*	
Birds		
Yellow-billed cuckoo	*Coccyzus americanus*	
Amphibians and Reptiles		
Oregon spotted frog	*Rana pretiosa*	
SPECIES OF CONCERN		
Mammals		
Pygmy rabbit	*Brachylagus idahoensis*	
Pale western big-eared bat	*Corynorhinus townsendii pallescens*	
California wolverine	*Gulo gulo luteus*	
Silver-haired bat	*Lasionycteris noctivagans*	
Small-footed myotis (bat)	*Myotis ciliolabrum*	
Long-eared myotis (bat)	*Myotis evotis*	
Long-legged myotis (bat)	*Myotis volans*	
Yuma myotis (bat)	*Myotis yumanensis*	
California bighorn	*Ovis canadensis californiana*	
Preble's shrew	*Sorex preblei*	
Birds		
Northern goshawk	*Accipiter gentilis*	
Western burrowing owl	*Athene cunicularia hypugea*	
Ferruginous hawk	*Buteo regalis*	
Greater sage-grouse	*Centrocercus urophasianus*	
Black tern	*Chlidonias niger*	
Olive-sided flycatcher	*Contopus cooperi*	
Willow flycatcher	*Empidonax trailli adastus*	
Harlequin duck	*Histrionicus histrionicus*	
Yellow-breasted chat	*Icteria virens*	
Lewis' woodpecker	*Melanerpes lewis*	
Mountain quail	*Oreortyx pictus*	
White-headed woodpecker	*Picoides albolarvatus*	

Amphibians and Reptiles

Tailed frog	*Ascaphus truei*
Oregon slender salamander	*Batrachoseps wrighti*
Cascades frog	*Rana cascadae*
Northern sagebrush lizard	*Sceloporus graciosus graciosus*

Fishes

Pacific lamprey	*Lampetra tridentata*
Interior redband trout	*Oncorhynchus mykiss gibbsi*

Plants

Estes' artemisia	*Artemisia ludoviciana* ssp. *estesii*
Cliff paintbrush	*Castilleja rupicola*
Cusick's erigonum	*Eriogonum cusickii*
Disappearing monkeyflower	*Mimulus evanescens*
Little mousetail	*Myosurus minimus* ssp. *apus* (= var. *sessiliflorus*)
Peck's penstemon	*Penstemon peckii*
Howell's theylpody	*Thelypodium howellii* ssp. *howellii*

(E) - Listed Endangered *(T) - Listed Threatened* *(CH) - Critical Habitat has been designated for this species*
(PE) - Proposed Endangered *(PT) - Proposed Threatened* *(PCH) - Critical Habitat has been proposed for this species*

Species of Concern - Taxa whose conservation status is of concern to the Service (many previously known as Category 2 candidates), but for which further information is still needed.

* *Consultation with NOAA's National Marine Fisheries Service may be required.*

[1/] *U.S. Department of Interior, Fish and Wildlife Service, October 31, 2000, Endangered and Threatened Wildlife and Plants, 50 CFR 17.11 and 17.12*
[2/] *Federal Register Vol. 57, No. 10, January 15, 1992, Final Rule - Critical Habitat for the Northern Spotted Owl*
[3/] *Federal Register Vol. 63, No. 111, June 10, 1998, Final Rule - Columbia River and Klamath River Bull Trout*
[4/] *Federal Register Vol. 69, No. 86, May 4, 2004, Notice of Review - Candidate or Proposed Animals and Plants*
[5/] *Federal Register Vol. 69, No. 68, April 8, 2004, 12-Month Finding for a Petition to List the West Coast Distinct Population Segment of the Fisher*

- The applicants shall obtain all required local, state, and federal permits and approvals prior to implementing the Proposed Action Alternative and comply with any and all conditions imposed.
- The applicant is responsible for selecting, implementing, monitoring, and maintaining best management practices to control erosion and sediment, reduce spills and pollution, and provide habitat protection.
- Any change to the approved scope of work will require re-evaluation for compliance with NEPA and other laws and Executive Orders.
- In the event that archaeological or historic materials are discovered during project activities, work in the immediate vicinity should be discontinued, the area secured, and the State and FEMA notified.

PUBLIC NOTICE

Federal Emergency Management Agency
Draft Environmental Assessment
Wildfire Fuels Reduction in Deschutes & Crook Counties, Oregon

The US Department of Homeland Security's Federal Emergency Management Agency (FEMA) proposes to provide funding to the counties of Deschutes and Crook for a wildfire fuels reduction project in central Oregon. Funding would be provided as authorized by §203 of the Robert T. Stafford Disaster Assistance and Emergency Relief Act (Stafford Act), 42 USC.

FEMA prepared a draft environmental assessment (EA) for the proposed project pursuant to the National Environmental Policy Act (NEPA) of 1969 and FEMA's implementing regulations found in 44 Code of Federal Regulations (CFR) Part 10. The EA evaluates alternatives for compliance with applicable environmental laws, including Executive Orders #11990 (Protection of Wetlands), #11988 (Floodplain Management), and #12898 (Environmental Justice). Many alternatives were evaluated during the development of Community Wildfire Protection Plans and the Hazard Mitigation Plan for Deschutes and Crook Counties. The alternatives evaluated in the EA are the (1) no action; and (2) reduction and management of fuel loads through mechanical and manual means in targeted areas as identified in the Community Wildfire Protection Plans for Deschutes and Crook Counties.

The EA is available for review online at the FEMA environmental website at: http://www.fema.gov/plan/ehp/envdocuments under Region X. If no significant issues are identified during the comment period, FEMA will finalize the EA, issue a Finding of No Significant Impact (FONSI) and fund the project. Unless substantive comments are received, FEMA will not publish another notice for this project. However, should a FONSI be issued, it will be available for public viewing at http://www.fema.gov/plan/ehp/envdocuments under Region X.

The draft EA is also available for review on February 1, 2008 at the Deschutes County Roads Department at 61150 SE 27th Street, Bend, Oregon and the Crook County Fire and Rescue at 500 NE Belknap Street, Prineville, Oregon, 97754.

Written comments on the draft EA should directed no later than 5 pm on March 3, 2008 to Mark G. Eberlein, Regional Environmental Officer, FEMA Region 10, 130 228th Street SW, Bothell Washington 98021, or by e-mail at mark.eberlein@dhs.gov. Comments also can be faxed to 425-487-4613.