# MEDFORD BLM BIOLOGICAL ASSESSMENT of ACTIVITIES THAT WILL MAINTAIN SPOTTED OWL HABITAT

Many of the activities included in the proposed action were originally analyzed in previous biological assessments (BA) prepared by the Medford BLM (BLM) or jointly by BLM and the Rogue River Siskiyou National Forest (FS). These same activities were evaluated by the US Fish and Wildlife Service (USFWS) in letters of concurrence or Biological Opinions. Recent lawsuits on Endangered Species Act (ESA) issues have resulted in the need to reinitiate on all remaining projects identified in the Proposed Action section of this BA, which the BLM has determined may affect, but are not likely to adversely affect (NLAA) spotted owls (*Strix occidentalis caurina*) (spotted owl) or spotted owl designated critical habitat. A separate BA will be prepared in 2007 to evaluate proposed activities the BLM has determined may affect, are likely to adversely affect (LAA) spotted owls and/or their designated critical habitat.

## DESCRIPTION OF THE ACTION AREA

The Action Area has been defined as all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action (50 CFR 402), and includes all public lands managed by Medford BLM and all areas subject to increased ambient noise levels caused by activities associated with the proposed action.

## DEFINITIONS

### NW Forest Plan Land Use Allocations (USDA USDI 1994b)

**Late-Successional Reserves (LSR)** are managed to protect and enhance habitat conditions for late-successional and old-growth related species. These reserves are designed to maintain a functional, interacting late-successional and old-growth ecosystem.

**Riparian Reserves** are areas along all streams, wetlands, ponds, lakes, and unstable and potentially unstable areas where riparian-dependent resources receive primary emphasis.

**Matrix** consists of those federal lands not in the categories above. For the BLM this is the general direction for Matrix lands.

North General Forest Management Area

Retain on average 6-8 trees per acre (modified even-aged systems)
Retain on average of 12-15 trees per acre (for shelterwood)
Retain on average 16-25 trees per acre (structural retention systems) in scattered or clumped distribution

Southern General Forest Management Area

Medford BA on Activities that will Maintain Spotted Owl Habitat

Retain on average 16-25 trees per acre in scattered or clumped distribution

Further details on management in land use allocations are located in Medford District Record of Decision (ROD) and Resource Management Plan (RMP) USDI (1995).

AMA (Adaptive management Areas)

Generally follows Matrix guidance, but encourages adaptive management approaches to forest management Specifically, for the Applegate AMA, the direction is to develop and test forest management practices, including partial cutting, prescribed burning, and low impact approaches to forest harvest (e.g., aerial systems), that provides for a broad range of forest values, including late-successional forest and high-quality riparian habitat.

**Activity Periods**

- The breeding period of the northern spotted owl is March 1 - September 30.
- The critical-breeding period of the northern spotted owl is March 1 - June 30.

**Streamlined Consultation**

This BA was developed under the Streamlined Consultation Procedures for Section 7 of the Endangered Species Act (ESA) (USDA, USDC, USDI, 1999) by the Rogue River/South Coast Province Terrestrial Wildlife Level 1 team under authority of the Level 2 Team, and complies with procedures under that process. The Level 1 team includes the USFS Forest Biologist, the Medford BLM District Biologist and the Roseburg Office USFWS Biologist. The Level 2 team includes the USFS Forest Supervisor, the Medford BLM District Manager, and the Roseburg Office USFWS Supervisor.

**Species Sites**

A **spotted owl site** is defined as a location with evidence of continued use by spotted owls, including: breeding, repeated location of a pair or single birds during a single season and /or over several years, presence of young before dispersal, or some other strong indication of continued occupation. A spotted owl site may include one or more Known Spotted Owl Activity Centers (i.e., nest site) or a site found after 1994. Sites found after 1994 do not have 100 acre core areas. Recent evaluation of owl telemetry literature indicates that most spotted owl activities are focused within the 0.5 mile radius around the nest tree (Jim Thrailkill, personal communication).

A **Known Spotted Owl Activity Center (KOAC)** for the northern spotted owl is a designated reserve protecting approximately 100 acres of the best habitat adjacent to a nest site or activity center for all spotted owl sites known prior to January 1, 1994 on Federal Matrix and AMA lands. Although not required by the NWFP (Northwest Forest Plan, USDA, USDI 1994),

Medford BA on Activities that will Maintain Spotted Owl Habitat
Medford BLM also identified 100 acre core areas for historic owl sites in LSR (Late Successional Reserves. By definition, LSRs are already identified as reserves for northern spotted owls and other late-successional related species.

**Habitats**

**Capable habitat** for the northern spotted owl is habitat that is either currently suitable or that can become suitable in the future, as trees mature.

**Dispersal or Dispersal-only habitat** (**northern spotted owl**) is a subcategory of all dispersal habitat for northern spotted owls. Zabel et al. (2003) developed a model of owl habitat for northern California. They defined this type of habitat as "foraging/dispersal". Throughout this document, "dispersal" will be used to describe dispersal-only. We define dispersal as forested habitat greater than 40 years old, with canopy closure 40-59%, average diameter greater than 11 inches, and that has flying space for owls in the under story. It provides temporary shelter for owls moving through the area between NRF habitat and provides some opportunity for owls to find prey, but does not provide all of the requirements to support an owl throughout its life. (Thomas et al 1990). Dispersal will be used throughout this document to refer to habitat that doesn't meet the criteria to be NRF (nesting, roosting or foraging) habitat, but has adequate cover to facilitate movement between blocks of suitable NRF habitat. Owls can also disperse through NRF habitat. When both dispersal and NRF are intended, we'll use the term "all dispersal". Dispersal habitat is defined as Habitat 5 and 6 (USDA, USDI 2005). These classifications were part of the 1991-1992 Draft Resource Management Plan (RMP) (USDI 1992). Habitat 5 currently lacks NRF structure and provides dispersal-only function. It has the potential to develop into NRF habitat. Habitat 6 currently lacks NRF structure, provides dispersal-only function and does not have the potential to develop into NRF habitat.

**Suitable habitat** for the northern spotted owl consists of habitat used by owls for nesting, roosting *and* foraging (NRF). NRF habitat also functions as dispersal habitat. Generally this habitat is at least 80 years of age or older (depending on stand type and structural condition), is multi-storied and has sufficient snags and down wood to provide opportunities for nesting, roosting and foraging. The canopy closure generally exceeds 60 percent, but canopy closure alone does not qualify a stand as NRF. The best quality suitable habitat has large old trees with cavities, broken tops or mistletoe platforms branches, dead standing and fallen decayed trees, and multiple canopies of shade-tolerant hardwoods and conifers that support prey base (Thomas et al 1990). NRF habitat in SW Oregon is typified by mixed-conifer habitats, recurrent fire history, patchy habitat components, and has a higher incidence of wood rats, which is a high quality spotted owl prey species. NRF in SW Oregon varies greatly. It may consist of somewhat smaller tree sizes yet tree species are more diverse within each stand than owl habitat in the northern Westside Oregon BLM Districts and Forests. One or more important habitat components such as dead down wood, snags, dense canopy or multi-storied stands, mid-canopy habitat might be lacking or even absent in portions of SW Oregon NRF. However, SW Oregon NRF can support nesting owls if those components are available across the immediate landscape. Mistletoe is often used as a nesting substrate in SW Oregon, which makes smaller trees suitable

as nest trees. The unit wildlife biologist makes site-specific determinations and delineations of suitable habitat.

Medford BLM classifies suitable NRF habitat as McKelvey Habitat 1 and Habitat 2. These classifications were part of the 1991-1992 Draft Resource Management Plan (USDI 1992). Acres changed due to fire or harvest activities have been incorporated in the Environmental Baseline (USDA, USDI, 2005). Habitat 1 classified lands are those that provide nesting, roosting and foraging. Habitat 2 classified lands are those that lack obvious nesting structure but provide foraging and/or roosting characteristics at varying degrees of quality.

For spotted owls, features that support nesting and roosting habitat typically include a moderate to high canopy (60-90 percent), a multi-storied multi-species canopy with large overstory trees (>30 inch diameter), a high incidence of larger trees with various deformities, including mistletoe, large snags, large accumulations of fallen trees and wood on the ground and flying space (Thomas et al. 1990).

**Critical Habitat** for the northern spotted owl was designated in *Federal Register 57* and includes the primary constituent elements that support nesting, roosting, foraging, and dispersal. Designated Critical Habitat also includes forest land that is currently unsuitable, but has the capability of becoming suitable habitat in the future (FR57 (10):1796-1837).

Primary constituent elements of spotted owl critical habitat *are those physical and biological attributes that are essential to species conservation. In addition, the Act stipulates that the areas containing these elements may require special management consideration or protection. Such physical and biological features, as stated in 50 DFR 4.2.4.1.2, includes, but are not limited to the following:*

*-Space for individual and population growth, and for normal behavior;*
*-Food, water, or other nutritional or physiological requirements;*
*-Cover or shelter;*
*-Sites for breeding, reproduction, rearing of offspring; and*
*-Habitats that are protected from disturbance or are representatives of the historic geographical and ecological distribution of the species.*

**Treatment Types**

Forest stands in southwest Oregon are often multiple-aged with multiple canopy levels that have resulted from past natural stand disturbance such as repeated historic low-intensity fire or from previous partial-cut harvesting (Draft Medford MFP and EIS Vol. II, p 2-37 (USDI 1992). The actual interpretation of treatment impacts to owls will be defined by the Resource Area (RA) Biologists in collaboration with their Interdisciplinary Team and Field and District Manager. Interpretation issues will also be coordinated with the Level 1 Team to ensure all projects in this BA will maintain and not alter spotted owl habitat.

Medford BA on Activities that will Maintain Spotted Owl Habitat
**Habitat Modification**

Effects of individual activities will be determined by the BLM following these descriptions.

***Spotted Owl***

**Treat and maintain NRF or dispersal habitat** means to affect the quality of spotted owl NRF or dispersal habitat without changing the owl habitat classification. The NRF stand retains large trees, multi-storied canopy, standing and down dead wood, diverse understory adequate to support prey, and may have some mistletoe or other decay. Dispersal stands continue to function as dispersal habitat.

> **The effects determination for treating and maintaining habitat is "may affect not likely to adversely affect" the spotted owl** because spotted owls will be able to use the stand as before. By design, these projects will maintain the habitat conditions pre and post-treatment that defined the habitat condition (Zabel et al 2003, Thomas 1990). Some change to understory vegetation and dense trees may occur. NRF habitat will retain 60% canopy cover, and large trees and snags, large down wood, and structural diversity important to northern spotted owls will be retained. Dispersal only habitat will continue to provide at least 40% canopy, flying space, and trees 11 inches or greater, on average following treatment. The habitat classification of the stand following treatment will be the same as the pre-treatment habitat classification. Many NLAA fuels, silviculture and timber projects may have a long term benefit because they reduce the unnaturally high brush and dense trees that have resulted from years of wildfire suppression. Resulting treated stands are more ecologically sustainable for high fire return interval ecosystems.

***Spotted Owl Critical Habitat***

Treating and maintaining critical habitat means that no primary constituent elements are removed or reduced and all primary constituent elements of CH are retained. The ESA consultation handbook (USFWS 2002, pg 4-33), as amended, provides the following information regarding critical habitat.

**Constituent elements***: physical and biological features of designated or proposed critical habitat essential to the conservation AND RECOVERY)(amendment due to Gifford Pinchot court evaluation) of the species, including, but not limited to: (1) space for individual and population growth, and for normal behavior; (2) food, water, air,light, minerals, or other nutritional or physiological requirements: (3) cover or shelter; (4) sites for breeding, reproduction, rearing of offspring, germination, or seed dispersal: and (5) habitats that are protected from disturbance or are representative of the historic geographic and ecological distributions of a species [ESA S3(5) (A)(i), 50 CFR 424, 12 (b)].*

It further defines critical habitat for listed species consists of*: (1) the specific areas within the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the Act, on which are found those physical or biological features*

Medford BA on Activities that will Maintain Spotted Owl Habitat
*(constituent elements) (a) essential to the conservation of the species and (b) which may require special management considerations or protection ; and (2) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the Act, upon a determination by the Secretary that such areas are essential for the conservation of the species [ESA S 3 (5)(A)]. Designated critical habitats are described in 50 CFR S 17 and 226.*

> Projects in this BA are designed to ensure that primary constituent elements are maintained so the stand will continue to meet habitat criteria important to owls that existed prior to the treatment. **The effects determination for maintaining suitable and dispersal critical habitat is "*may affect, not likely to adversely affect*" the spotted owl critical habitat.**

## DESCRIPTION OF THE PROPOSED ACTION

### Project Design Criteria

Project Design Criteria (PDC) are conservation measures developed to reduce impacts to listed species. Conservation measures may include implementation of seasonal restrictions that reduce impacts during critical breeding seasons, retention of known nest trees and/or restricting activities within a certain distance of known sites to reduce impacts of disturbance. Mandatory PDC will be applied to all activities associated with this proposed action. Recommended PDC will be incorporated during project implementation when practical. Detailed descriptions of the PDC are provided in Appendix A.

Activities below that have potentially disturbing impacts that could harm or harass owls would incorporate appropriate project design criteria such as seasonal protection during the critical breeding period from March 1-June 30. Any of the following activities that have the potential to disturb owls in unsurveyed NRF habitat will be analyzed in the LAA BA. PDC involving seasonal restrictions will be implemented unless surveys, following approved protocols, indicate either non-occupancy or non-nesting of target species. Project design criteria help the BLM comply with their responsibilities to conserve listed species under the ESA Section 7 (a) 1.

### Harvest Treatments

Harvest treatments in this BA are designed to ensure that NRF habitat remains NRF characteristics post-treatment and dispersal habitat retains dispersal characteristics post-treatment. Harvest activities that meet these criteria include various levels of: commercial thinning, selective harvest, density management, commercial firewood, hazard tree removal, salvage, and roads and site prep (including slash treatment) related to the timber sale.

Medford BA on Activities that will Maintain Spotted Owl Habitat
Harvest treatments include commercial and occasionally non-commercial removal of mature overstory and/or understory trees and can include selective harvest, salvage, density management, commercial thinning, and individual tree removal. Tree harvest also covers miscellaneous projects, including the removal of hazard trees for public safety, commercial firewood, and salvage. Salvage may result from blowdown (other than hazard trees), disease, or small fires. Typically, a blowdown salvage project may cover 500 acres or more along at least 50 miles of roadway. If the salvage situation (such as blow down or fire) changes the stand to non-habitat, the impacts of salvage removal would be no effect, except for possible disturbance. Most salvage harvest that would maintain habitat would involve the removal of a few trees and the retention of the pre-salvage habitat condition for owls. This type of salvage may occur within LSRs and Riparian Reserves. The standards and guidelines in the Northwest Forest Plan and LSR individual Assessments will be met.

Harvest can result in the removal of a few trees within a stand within the project area. Openings may occur in an even or patchy distribution, depending on objectives of the treatment and constraints of the land use allocation. Trees are harvested by individual sawyers, or crews of people with chain saws or machine-mounted saws. Harvest includes the layout, marking, falling, limbing, yarding, and decking the trees to be removed from the site. In all cases but biomass removal, the limbs and needles/branches remain within the project area, and the bole of the harvested tree is removed. Trees are hauled to landings by cable or heavy equipment or helicopter. Trees are removed from decks or landings by logging trucks or helicopters. Access to the timber sale involves the use of existing roads in areas where roads already occur, and can also involve the design and development of new roads or redevelopment of old roads. New roads involve cutting trees from the road prism, occasional blasting, grading, hauling gravel, cutting into side banks, installing culverts and waterbars, stabilizing adjacent areas. Trees removed from road prisms are often decked for inclusion in the timber sale, or could be sold in unrelated sales, or could occasionally be used on-site or off-site for watershed restoration, down wood supplementation, or in-stream structures.

Harvest treatments are seasonally restricted around known spotted owl nest sites and unsurveyed NRF (see PDC for details) to reduce potential disturbance to NLAA. Some harvest could occur in suitable Matrix and AMA habitat that has not been surveyed for northern spotted owls, because the BLM is not required to survey these lands. In these situations, biologists will evaluate Matrix and AMA lands which are not surveyed to protocol standards to see if owl habitat could be present adjacent to project areas, and if adverse disturbance effects could result in harm or harassment to an owl. If such adverse disturbance is possible, those projects will be analyzed in the LAA BA. No adverse disturbance projects are included in this BA, because all projects are designed to reduce and avoid LAA impacts, including those resulting from disturbance.

All timber sale contracts will contain special provision E-4 (BLM). These are standard contract provisions which require purchasers to discontinue operations upon receiving written notice from the BLM that listed species may be affected by the action; an example situation might be when a previously unknown spotted owl nest is discovered in an active timber sale.

Medford BA on Activities that will Maintain Spotted Owl Habitat
Various types of thinning, density management, or selective harvest can occur in all land use allocations, if the harvest meets the objective of the land use allocation, as specified in the NWFP. See Table 1, 2, 3 for detailed acres by land use allocation

NLAA timber sale activities include all effects related to clearance work, marking, cutting, yarding, hauling, post-harvest site preparation and planting (if any). Some fuels reduction related to slash could be expected, and would incorporate PDC's to ensure any potential disturbance effects to owls would not be adverse. Fuels treatments related to site preparation after timber harvest are included in the "footprint" acres reported for the timber sale and are not reported as fuels acres.

On sites at high-risk for spreading Port Orford Cedar (POC) root disease, selective harvest in the Applegate watershed would include a contract stipulation for the removal of all POC. These areas are generally within 50 feet of major roads within the POC zone. The treatment description is the same as the timber harvest activities described above with the exception of LSR. In LSR, no POC greater than 20 inches in dbh would be removed. The removal of POC would occur as part of fuel hazard reduction and selective harvest prescriptions. Up to 150 acres of POC are proposed to be treated in this BA as a harvest activity.

**Vegetation Management - including Silvicultural Projects**

All projects in this BA are designed to ensure the owl habitat classification following treatment will retain the owl habitat characteristics of the pre-treatment habitat and habitat will be maintained. Silvicultural projects usually involve site preparation, planting, maintenance to assure survival of planted material, and the removal of trees and shrubs to enhance the vigor and growth of residual plants.

Maintenance brushing, release, pre-commercial thinning, prescribed burning or scalping small areas of grass / forbs for site preparation (see also fuels reduction), planting, POC clearing (sanitation) to control *Phytophthora lateralis*, animal damage control, fertilization, and pruning are common treatments. Many of these treatments occur in stands that have been previously harvested or have experienced natural disturbance events such as fire, and these areas commonly do not qualify as northern spotted owl habitat. Thinning and brushing work is usually done with hand crews, but mechanical thinning/brushing may occur where slope and other factors allow. Occasionally, a woody material mastication machine may be used. Underground traps are used to control gopher population extremes to prevent them from killing newly planted seedlings. Fertilizer is applied to accelerate growth of young trees, to speed the development of habitat characteristics, or to improve native plant restoration project success. Fertilizer is applied at a rate of no more than 200 lbs of nitrogen per acre. Application method on stands greater than 10 years of age is usually aerial. Occasionally hand application is used concurrent with planting, whereby the fertilizer is placed in or adjacent to the planting hole (i.e. - underground). Up to 350 acres of POC are proposed to be treated in this BA as vegetation management. Many vegetation management treatments would not affect northern spotted owls or critical habitat because they do

not occur in spotted owl habitat (see disturbance). PDC would be implemented to reduce the potential adverse effects of disturbance to nesting owls.

Fuels reduction projects in this BA are designed to maintain pre-treatment habitat by design and avoid adverse disturbance, and include fuel breaks, piling and prescribed burning, thinning, and brush treatments.

Medford BLM has short natural fire return intervals. Years of fire suppression and management actions have resulted in habitat conditions much brushier and denser than would occur under natural burn regimes. Fuels management has three primary purposes: fuels reduction to reduce wildfire hazard, site preparation/slash reduction for improving conifer planting (covered in silviculture and timber above), and restoration of ecosystem function where wildfire has been suppressed. Fuels projects designed to restore ecological function may have long term beneficial effects to owls.

Fuels management includes manual and/or mechanical treatments using chainsaws or mechanical equipment such as mechanical masticators, followed up with prescribed fire (pile burning or under-burns. Broadcast burning without pre-treatment (brush fields) can also occur. Mechanical treatment is designed to convert abnormally high amounts of shrubs and ladder fuels so that subsequent prescribed burning or wildfire won't be as severe. The material may be piled or may be left dispersed, and is usually burned once that material dries out. A small portion of the acres may also be burned or brushed again. These fuel treatments are generally implemented over a period of years. The acres in the proposed action are the acres of the fuels treatment "footprint", and impacts are assessed for the entire treatment period.

Prescribed fire use is dependent upon management objectives. The primary role of prescribed fire has traditionally been for site preparation and fuels reduction. Recently, natural fuels reduction and ecological "improvement" have become end goals of prescribed fire. The effects of prescribed natural fire, when limited to the prescription, can usually be controlled or manipulated.

Prescribed burning is generally restricted to spring or a small window in the fall, due to risks of escapes, smoke concerns, and weather. When successful understory treatments have been completed, and risks of escape are reduced, more burning during late summer or fall could be anticipated. Mechanical and mastication treatments can occur at any time of the year.

Natural and created fuel breaks across the landscape may be developed to help with the suppression of large-scale wildfires. In this case, treatment of fuels along a ridge or topographic break would occur to reduce the fuels and facilitate suppression activities. All fuel breaks identified in this NLAA BA would maintain existing habitat following treatment and would retain important owl habitat components. Fire line construction and blasting may occur as a tool to help create fire lines. No treatments will occur without an evaluation for habitat of listed species. Potentially disturbing activities would implement PDC's to protect known owl sites and unsurveyed NRF. Many fuels management treatments would not affect northern spotted owls or

critical habitat because they do not occur in spotted owl habitat. Actual wildfire suppression during a wild fire would be evaluated under emergency consultation procedures if it were to occur.

**Watershed restoration** projects in this BA are designed to maintain habitat and avoid disturbance. They include culvert repair/replacement, road restoration or decommissioning, slope stabilization, habitat improvement projects, stream improvement projects, including tree lining/felling, down wood, and snag creation that would treat and maintain habitat. Road work also includes some of these treatments (see F). Resource areas reported projects as one or the other and are not duplicative.

Specific watershed restoration projects anticipated on Medford BLM include: road decommissioning to restore habitat to pre-road conditions, storm proofing of roads (see road maintenance/decommissioning below), upslope erosion rehabilitation, riparian silviculture, in-stream habitat improvement, large wood restoration, wildlife tree development using chainsaws, wildlife habitat restoration and enhancement (such as meadows), and prescribed burning (see fuels management). Some blasting (such as snag creation) may occur with watershed restoration projects.

Roads no longer essential for forest management may be gated, closed or ripped or sub-soiled or otherwise decommissioned (put back to natural contours). Roads with the potential to fail or deliver large amounts of sediment to stream segments may be decommissioned or closed or may be improved. Improvements include repairing road drainage facilities (culverts, drain dips, etc.) and surfacing (to reduce sediment). Restoration activities could include snag creation. Down wood development or placement could occur. Effects are similar to tree harvest or silviculture projects. Meadow restoration, fencing, native plant seeding and planting, and weed removal may occur to restore or repair healthy ecosystems. Most watershed restoration projects will take place in Key Watersheds identified in the Forest Plans. Other restoration work may be required as the result of future wind, snowstorms, rain, and flooding. Expected activities and effects specific to roads are evaluated under road construction and maintenance (below), although road construction, restoration, maintenance, and drainage work is interdependent and interrelated to most Action Agency activities. No ground disturbance will occur without an evaluation for habitat of listed species. Many watershed restoration activities would not affect northern spotted owls or critical habitat because they do not occur in spotted owl habitat. Any potentially disturbing impacts from these proposed projects to owls would be reduced by PDC's so the project will remain NLAA. (See also Road Maintenance/Construction).

**Recreation** projects in this BA are designed to maintain pre-treatment owl habitat and avoid adverse impacts related to disturbance. Recreation projects include trail construction and maintenance, campground maintenance and development, facilities maintenance and development that would occur in northern spotted owl habitat or might occur within an affected disturbance distance of a northern spotted owl (see Appendix A, PDC).

Medford BA on Activities that will Maintain Spotted Owl Habitat
Recreation management includes trail construction and maintenance, campground and physical facilities maintenance, boat landing maintenance, observation decks and guard rails, signing, foot bridges, and permits for rafting and boating and other uses (see special use permits). Ground or habitat disturbing actions will not occur without an evaluation for habitat of listed species. Occasional heavy equipment use could cause high noise levels for less than a week, and occasional groups of people may be concentrated along short sections of a trail or river for various periods of time. Trees may be felled in developed areas or along trails where public safety is a concern (this is generally an annual activity). Many recreation projects are No effect because they do not occur in spotted owl habitat. Permitted recreational activity that has the potential to disturb spotted owls would implement PDC's to reduce the potential of disturbance effects.

Sports Car Road Race: The proposed action involves the use of a paved portion of Conde Creek. Rd (38-3E-17) for a two day timed road climb event on July 7 and 8th, which is outside the critical breeding season for spotted owls. This event was previously permitted through a BLM Special Recreation Permit from 1996 through 2001. Vehicles would individually run along the 2.5 mile length of road to determine results from best-timed runs, based on the submitted operations plan. Only 0.15 miles (790 feet) occurs in NRF habitat and 0.5 miles (2640 feet) of Dispersal habitat. Each competitor will be allowed two runs per day. Each run consists of a single vehicle. Each run is spaced two minutes apart. The competition is limited to 60 vehicles. The race occurs on existing roads, and is outside the critical breeding period. No known owls occur within 65 yards of the event. It is likely that any owls in the area would be acclimated to the regular traffic on this heavily-used road.

The Limestone Challenge endurance ride would use approximately twenty miles of existing BLM roads and trails for a one day equestrian endurance event, with approximately 30-60 participants. The roads and trails are located in: T38S, R7W, Section 19, 33; T38S, R8W, Section 13, 23, and 25; T39S, R7W, Section 4, 7, 8, 9, 17, 18, 19 and 20; and T39S, R8W, Section 1, 11, 13, 14 and 23. No habitat would be removed or changed. No known spotted owl nests are located within 65 yards of the event. This event may or may not occur during the breeding season. Any disturbance would be insignificant due to short duration, and using of existing roads and trails.

**Road Maintenance/Construction** includes maintenance, ditching, restoration or decommissioning, culvert replacement and repair, bridge maintenance and repair, road re-alignment. Road construction involves ground disturbance, removal of vegetation, use of heavy equipment, occasional blasting, and periods of high noise and activity, and would be tied to tree harvest, recreation, and several other project categories. This BA includes only road work that maintains existing spotted owl habitat, and ensures that any adverse related disturbance would be avoided due to PDC. (See PDC, Disturbance Distances). Road maintenance consists of grading, brushing, culvert maintenance and repair, installing and repairing waterbars, minor resurfacing, and hazard tree removal or minor re-routing.

Medford BA on Activities that will Maintain Spotted Owl Habitat
BLM maintains roads on a schedule, but also responds to unanticipated repairs due to weather, accident, or landslide. Most activity is limited to short periods of time (*i.e.*, one or two passes with a grader). Road grading generally affects the ditch and a foot or so of the cut-slope; some loose material is spilled over the fill-slope. Maintenance brushing generally entails mechanically cutting brush down to less than a foot high within four feet of the edge of road. Brush more than four feet from the edge of the road tread is not treated. Heavy trucks and heavy equipment such as graders, gravel trucks, backhoes, and chainsaws and/or brush removal machinery, can increase noise in the area of activity for short, but intense, periods of time, and can occur for up to one week in time. Most activities would require a few hours of work or less within any 0.25-mile road segment in a 24-hour period. Some blasting may be required with road projects removing unstable portions of the cut-slope, often at rock faces. PDC apply.

Road decommissioning is tied to Watershed Restoration and covers activities that reduce or eliminate traffic use on the road by installing gates, barriers, rocks, ripping the tread, pulling culverts, and seeding grass and herbs. Full obliteration of the road returns the road back to natural contour levels using excavators. Full obliteration can remove vegetation along the top of the cut slope to create a stable slope.

**Road Use Permits** for specific current applications for right-of-way agreements and road use permits across federal lands are listed below. Landowners or their agents are required to obtain Road Use Permits to build roads across BLM/FS managed land for commercial purposes and/or to haul commercial products on BLM/FS maintained road systems if these permits are not already in place. Federal discretion to influence the implementation of recovery efforts for threatened or endangered species may be limited where certain pre-existing Road Use or Reciprocal Right-of-Way agreements exist between private landowners and Medford BLM. Reciprocal rights of ways already cover most existing road activities in the Action Area with private parties and the Action Agencies no longer have discretion. This BA does not address non-discretionary activities. For the purpose of this BA, private lands refer to privately-owned or other government non-federal parcels located as inholdings or adjoining property through which access is traditionally granted across federally managed lands.

On 30 January 2003, a new multi-agency Road Use Permit policy (*Application of the Endangered Species Act to proposals for access to non-federal lands across lands administered by the Bureau of Land Management and the Forest Service*) was instituted. The Bureau of Land Management, Forest Service, Fish and Wildlife Service, and NOAA (National Oceanic and Atmospheric Administration) Fisheries are signatories to this policy. The provisions of this agreement apply only when a Forest Service special use authorization or a BLM right-of-way grant is required for the reconstruction or construction of a road, for either private or commercial purposes, to secure access to a parcel of non-federal land. The key components of the interagency agreement are:

- The agreement applies to grants of rights-of-way across National Forest System and/or public lands administered by the BLM, under their respective authorities, for purposes of access to non-federal lands.
- The “proposed federal action” to which the agreement applies is the authorization for

access across federal land and subsequent activities on federal land – it does not include any actions on non-federal lands.

- At the applicant's discretion, the agreement provides applicants an option to include the effects of those activities that will be facilitated by the proposed access and conducted on the applicant's non-federal lands as part of a federal agency ESA consultation on the access application.
- ESA sections 9 and 10 still applies to all activities on non-federal land.
- The agreement applies to applications for new authorizations for access that are processed by the FS and BLM after January 30, 2003.

The specific road ROW agreement analyzed in this BA is:

Perpetua ROW

- Glendale Resource Area: Jackpot Mine perpetual ROW. Construction would occur in CHU OR–32 in the Matrix land use allocation. Josephine County. The Jackpot Mine application from Perpetua Company involves construction of approximately 0.7 miles of access road on BLM land in T33S R5W, Section 17 SW of the SE; section 20 NW of the NE and NE of the NW on the Glendale Resource Area of Medford BLM. The BLM portion of the new road would be 3600' long averaging 40' wide. The remainder of the ROW occurs in a young fire replacement stand and would remove some trees 10"-18" in diameter along a narrow, linear strip, and would not change the amount of pre-treatment habitat, nor cause adverse disturbance effects.

**Mining and Quarry Operations** evaluated in this BA are designed to ensure that owl habitat will be maintained and no adverse disturbance effects would occur due to the implementation of PDC. Mining and quarry operations include: casual use, notice and plan level permits and operations, and commercial quarries on BLM lands.

BLM regulates mining claims under 43 CFR 3809 (Surface management) and 43 CFR 3715 (Occupancy). These regulations perpetuate a three-tiered system that distinguishes between three levels of mining. All levels of mining must conform to state regulations:

Casual use activities causing no or negligible surface disturbance, which require no notice to or approval from the BLM

Exploration activities exceeding casual use that will disturb five acres or less, which require that the BLM be notified (notice level) bond required.

Mining activities greater than casual use or will affect certain protected categories of land, require the submission and approval of a plan of operations bond required.

Medford BA on Activities that will Maintain Spotted Owl Habitat

A notice or plan of operations require no specific form but must specify the nature and location of access routes and must describe operating conditions adequate to prevent unnecessary or undue degradation.

To prevent unnecessary or undue degradation, an operation must be reasonably incident to prospecting, mining, or milling activities and operators must meet certain specific performance standards, abide by their notice or plan of operations and comply with all other state and federal laws related to environmental protections.

The performance standards address such things as road placement and construction, the sequence of operations, compliance with land use plans, mitigation measures, ongoing reclamation, air and water quality, environmental compliance, cultural resource protection, treatment of acid-forming materials, leaching operations and public safety.

A few special exceptions apply, for instance, mining activities within Areas of Critical Environmental Concern (ACEC), or areas known to contain proposed or listed species are required to have a plan of operations (BLM Manual Section 3809.11 part C(6)).

Plans of operations are required to comply with the ESA, and the operator must take such action as necessary to prevent adverse impacts to listed species. Habitat evaluation or surveys for new notice-level and plan-level operations will be done prior to commencement of operations.

*Notice*

Exploration operations that will exceed casual use but will disturb five acres or less, requires that an operator notify the BLM at least 15 calendar days before beginning operations. The notice must describe and show access routes and must describe the type of equipment to be use in the operations. The operator must also provide a reclamation plan and reclamation cost estimate.

*Plans*

A plan of operation must be filed for any mining activity greater than casual use. In addition a plan must be filed if exploration related surface disturbance (not disturbance to owls) will exceed five acres, if proposed operations exceed 1,000 tons in bulk sampling, if operations are proposed in various protected lands, are closed to off road vehicles. Plans must provide sufficient information so that BLM can make the determination that no unnecessary or undue degradation of the ground (not habitat) will occur. A reclamation plan and reclamation cost estimate must be provided.

Before approving a plan of operations, the BLM must complete an environmental review as required by NEPA.

*Suction Dredging*

The use of a 4" or less suction dredge is classified as casual use on BLM mining claims. Therefore the claimant does not need to notify the BLM if they are only suction dredging. However, the BLM does have an agreement with the state, for the use of suction dredges and the claimant is required get the following permits:

- From: Division of State Lands
- From: Department of Environmental Quality
- Must work within the guidelines and timing of in stream work. The work periods for dredging are determined by Oregon Department of Fish and Wildlife.

Most rock crushing operations take place in existing quarries. Most actions take place within the developed quarry limits. Standard operations include drilling; which takes approximately 2-3 weeks; blasting which is quick (less than one minute) but recur repeatedly may extend over several days; and crushing which takes 2-3 weeks. If the development is to go out side of the existing development limits a Categorical Exclusion (CE) or Environmental Assessment (EA) is undertaken.

Most quarry and mining projects are "no effect" because they do not occur in spotted owl habitat, nor are they adjacent to suitable habitat. Some quarries may be adjacent to owl habitat, and PDC ensure the project will not adversely effect known nesting owls.

**Adaptive Management**

The BLM practices adaptive management as described in the Northwest Forest Plan (NWFP). Adaptive management allows minor project variations to meet site-specific conditions or landscape objectives. Therefore, there may be minor deviations in the description of projects. This consultation will address these minor alterations in project activities if the following conditions are met:

1. Project complies with the NWFP.
2. Project complies with the RMP or LRMP to which it is tiered.
3. Impacts and extent of the project are within parameters of described activities in this BA.
4. Minor deviations are reviewed by the Level 1 team to ensure impacts to listed species remain the same or less than those described within this BA
5. Minimization measures proposed for the project are consistent with the intent and impacts of actions described in this BA

Medford BLM evaluates all actions through an interdisciplinary NEPA process. Evaluations often involve multiple field surveys and evaluations by various specialists and contract crews, evaluation of various alternatives that could be used to meet the "purpose and need" of the project. Separate consultation will be required to meet ESA compliance if the project cannot be revised to comply with this consultation, if site-specific NEPA evaluations indicate the project

may affect and will likely adversely affect the northern spotted owl or its critical habitat, or if the Level 1/Level 2 teams cannot reach consensus that the project deviation meets the intent, extent and impacts addressed in the BA and subsequent Letter of Concurrence (LOC).

The NEPA process can involve one or several alternatives that would have differing project "foot prints", prescriptions, minimization measures and treatment scenarios. For timber sales that have completed the NEPA process, the exact prescriptions and acres are firm and are reported in the Proposed Action. For timber sales that have yet to complete the NEPA process, this BA analyzes effects that could occur in the alternative with the greatest chance of impact to northern spotted owls or their critical habitat. In all cases, once NEPA is complete, the actual impacts to owls or their critical habitat will be equal or less than the effects predicted in this BA. Actual sale names, configuration of units, year of harvest etc may be subject to change to be responsive to public input and site-specific evaluations during the NEPA process. If any alternative were to exceed the effects analyzed in this BA, the BLM would reinitiate consultation or consult on the additional effects prior to completing that project.

Standard practices in forest management that occur in some or all projects that also serve as conservation measures to benefit northern spotted owls include the protection of snags and down wood when human safety is not an issue; trying to vary the timing and intensity of projects to "spread the impact" over a larger foot print or time frame; altering habitat treatments (leaving patches, varying treatment sizes and shapes, maintaining certain species of hardwoods such as madrone, reducing road use in some cases, pre-defining skid trails, protecting stream quality and riparian conditions, protecting soil permeability and integrity, protecting the fragile bark of remaining trees during thinning sales, leaving the primary nutrients of a tree (leaves, needles and small branches on site) to maintain the site productivity, reducing excessive fuel loads to reduce the intensity of wild fire risks, leaving brush patches and some piled vegetation treatments unburned or untreated for habitat for small mammals, birds and reptiles and many other site-specific conservation measures. See NWFP ROD, Section C, Standards and Guidelines, April 1994 (USDA, USDI 1994).

**Table 1: Proposed Actions Summary**

| **Project Category** | | **Estimated Scope—Acres, Land Use Allocations** | |
|---|---|---|---|
| **Project Acres** | | | |
| | | NRF[1] Treated and Maintained | Dispersal Treated and Maintained |
| Timber Harvest (including stewardship, forest products), hazard trees | | 5100 | 4400 |
| | LSR subset | 2500 | 1200 |
| | CHU subset | 3700 | 1900 |
| Vegetation Management and Fuels Reduction | | 22,900 | 18,900 |
| | LSR subset | 6900 | 2900 |
| | CHU subset | 8100 | 4300 |
| Watershed Restoration | | NLAA Disturbance only | NLAA Disturbance only |

Medford BA on Activities that will Maintain Spotted Owl Habitat

| | | |
|---|---|---|
| Recreation | NLAA Disturbance only | NLAA Disturbance only |
| Road Maintenance and Construction | Habitat treatments are listed in timber NLAA Disturbance only | Habitat treatments are listed under in timber NLAA Disturbance only |
| Mining and Quarries | NLAA Disturbance only | NLAA Disturbance only |
| Activities in non-habitat that could have some insignificant noise or smoke and would not adversely disturb owls. | NON-HABITAT acres Up to 50,000/yr | |

**Table 2: Proposed Action Details**

| Project Category | Description |
|---|---|
| Harvest treatments designed to treat and maintain existing owl habitat | Selection harvest, thinning, stewardship projects, small pole sales, including some special forest products. Timber harvest could occur across all land use allocations and CHU.<br>Hazard trees may be treated along roads as safety requires, and are reported under timber. Not all hazard trees are sold. Many will be left on site to function as down wood. No significant change of habitat would result from these actions. No nest trees would be removed under the NLAA proposed action. Hazard trees could occur in any Section 7 watershed, CHU or LSR.<br>No more than seven percent of any watershed would be treated over the life of the programmatic. Most watersheds would have much less treatment.<br>POC treatment up to 150 acres associated with harvest activities in the Applegate watershed.<br>PDC apply. |

Medford BA on Activities that will Maintain Spotted Owl Habitat

| | |
|---|---|
| Vegetation management including silviculture | Pre-commercial thinning, brushing, pruning, site preparation designed to release residual trees to accelerate their growth: Acres are determined by the footprint of treatment, and may have inclusions of non-habitat.<br>Could occur in all land use allocations and CHU and riparian (See Tables).<br>Understory brush treatments, thinning of overly- dense trees, reduction of ladder fuels, pile-and-burn, underburn or occasionally broadcast burn.<br>Overall goals of vegetation management are to restore young stands to conditions that are more ecologically sustainable. In many cases, the goal is to create structural conditions that would be expected prior to the suppression of wild fire, i.e., more open stands with less brush and dense understory.<br>Much of the vegetation management treatments could be considered May Affect, Beneficial Effect or No effect, if it occurs in non-habitat. Due to some insignificant NLAA disturbance, we determine this activity as NLAA.<br>Planting: 6,150 acres/year<br>Fertilization: No more than 22,000 acres of fertilizer applied over the life of the BA (approximately 11,000 acres/year). Could occur across all land use allocations and CHU. Matrix would be emphasized for planting and site preparation following timber sales. Treatments in LSR would be designed to improve LSR conditions.<br>Approximately 12,000 acres/year of vegetation management and fuels treatments could occur in non-habitat with some slight potential that noise could result in insignificant disturbance in NRF stands adjacent to the treatment area.<br>There may be some insignificant noise or prey effects in adjacent habitat, but PDC will ensure no adverse impacts would result. Other conservation measures such as patchiness, work being concentrated into short duration, or scheduling work over a period of years (e.g. fuels) will further ensure no adverse effects.<br>POC treatment up to 350 acres associated with fuels reduction, all within the Applegate watershed.<br>PDC apply. |
| Watershed/ riparian restoration | Stream structures: 15 structures/ year. Culvert replacement/repair: 12 large fish passage culverts/ year; 50 cross-culverts/year.<br>Riparian Restoration 100 acres/year.<br>General wildlife enhancement/ year: Tree top blasting; snag development: Up to 500 trees annually in 07 and 08.<br>Could occur across all land allocations and CHU. Emphasis in riparian reserves and LSR. Long term impacts to owls would be beneficial by design.<br>PDC apply. |
| Recreation | Facility development— construction or reconstruction could occur on up to 50 acres/year. Estimate no more than 10 projects per year.<br>Trail maintenance/campgrounds: 100 miles and 50 acres per year of campgrounds and other facilities.<br>New trail construction/year; 10 miles/ year.<br>Could occur across all land use allocations and CHU.<br>Sports car road race. 1 event per year.<br>Limestone Challenge special recreation permit to hold a one-day equestrian event (plus 1-3 days for preparation) for approximately 30-60 participants using BLM land and BLM-owned and controlled roads.<br>PDC apply |

Medford BA on Activities that will Maintain Spotted Owl Habitat

| | |
|---|---|
| Road maintenance and construction (outside of timber sales) | Up to 500 miles of road maintenance and repair a year.<br>Reconstruction and maintenance of existing roads and existing ROW's.<br>Some potential of hazard tree removal (see timber). Up to 2 miles of ditches could be installed and 5 miles of ditches repaired. Some narrow utility trenching.<br><br>Perpetua ROW road construction, GLRA in Matrix and Chu OR-32.<br>Any greater impacts would be reported under tree harvest.<br>ROW projects implemented:<br><br>Could occur across all land use allocations and CHU.<br>All disturbances would remain NLAA.<br>PDC apply. |
| Mining and quarry operations | Notice-level operations: 10/year less than 30 acres total. Plan-level operations: 3 /year no more than 40 acres. Rock permits (existing quarries): 50/year; No new quarries are planned in 07 or 08. Mine reclamations up to 1-5/year, as money allows.<br>Could occur across all land use allocations and CHU.<br>PDC apply. |

[1]Nesting, Roosting Foraging Habitat; [2] Late Successional Reserve; [3] Critical Habitat Unit; [4] Project Design Criteria,

## EFFECTS OF THE ACTION: SPOTTED OWL NRF HABITAT

No more than 28,000 acres of NRF habitat are proposed to be treated and maintained as a result of implementation of this proposed action. This maintenance of NRF habitat will occur among nine Section 7 watersheds. Section 7 watersheds are hydrologically defined units that were specifically by the joint SW Oregon USFWS, BLM and USFS fish and wildlife Level 1 teams after the completion of the NWFP as appropriate size to assess the scale of impacts to listed wildlife and fish species. Section 7 watersheds are equivalent to hydrologic unit codes (HUC) 4, and range in size from 100,000 to 600,000 acres (all ownerships). (Table 3).

**Table 3: Treated acres of NRF Habitat within the Action Area by Section 7 Watershed that will be maintained.**

| Watershed | Federal NRF Acres in Watershed[1,2] | Acres of Treatment (no change in habitat) | Percent of total federal (FS and BLM) NRF treated and maintained |
|---|---|---|---|
| Applegate | 114,362 | 5000 | 4.3% |
| Bear | 21174 | 100 | 0.5% |
| Cow Upper | 43657 | 8800 | 20.0% |
| Illinois | 135772 | 6200 | 3.5% |
| Klamath | 16820 | 600 | 3.6% |
| Little Butte Creek | 39719 | 200 | Less than 0.1 % |
| Rogue Lower Wild | 105073 | 10 | Less than 0.1% |
| Rogue Middle | 88774 | 6900 | 7.0% |
| Rogue Upper | 180071 | 200 | 0.1% |
| **Total** | **745,422** | **28,010** | **3.8%** |

1 From 06-08 BA Environmental Baseline Tables, USDI, USDA 2006.

2. BLM ownership by Section 7 watershed (all acres) is shown in Appendix B.

Specific projects scheduled to occur within NRF habitat include:

Harvest treatments in NRF harvest that will maintain habitat.
Up to 4830 acres of NRF habitat will be treated and maintained among nine Section 7 watersheds as a result of selective harvest treatments or stewardship projects (Table 4). Light to moderate thinning would reduce the average canopy cover of the stand to no less than 60 percent. Selective harvest may affect NRF habitat by removing some horizontal and vertical structure. However, features such as nest trees, multi-layered canopies, and dead and down wood that support prey species habitat will remain within a given project area post-harvest, retaining the ability to provide for the nesting, roosting, foraging and dispersal of spotted owls. POC sanitation treatments are a type of harvest incorporated into timber harvest. POC sanitation treatments are implemented as a protective measure to limit the spread of disease, benefiting the overall forest health of affected watersheds. No more than 150 acres total habitat will be affected by selection harvest within the Applegate watershed as a result of treatments designed to prevent the spread of *Phytophora laterallis* (POC root rot) generally consists of removal of infected or dead POC trees. POC rarely contain suitable nest structures for either spotted owls. POC treatments will be incorporated into thinning activities and could occur in NRF or dispersal habitat. Acres are reported under NRF treatment for purposes of this analysis. No change to the amount of owl habitat will result.

Road maintenance and hazard tree removal in NRF habitat that maintains habitat.
Up to 1000 acres of NRF habitat may be treated and maintained as a result of road maintenance or hazard tree removal activities. These activities will be dispersed across the Action Area spatially and temporally. Hazard tree removal will consist primarily of single tree removal along the District's extensive road system. Actual acres would be much less. Most of these activities would occur along the road prism and would focus on individual trees. At the specific project level, depending on the situation, some road work, including hazard tree removal may have no effect. There might be some heavy equipment or chainsaw use for short periods of time, but would be scheduled to avoid adverse disturbance impacts. Any road work that could not avoid adverse effects would be consulted on in the LAA BA or separate consultation.

**Table 4: Acres of NRF Habitat treated by Harvest Treatments, hazard tree removal, and POC selection harvest compared to Section 7 Watershed—no change to habitat.**

| Section 7 Watershed | Federal Acres of NRF in Section 7 watershed | Acres of treatment (no change of habitat) | Percent of Federal NRF habitat within each Section 7 Watershed treated and maintained |
|---|---|---|---|
| Applegate | 114,362 | 1000 | 0.8% |
| Bear | 21174 | 100 | 0.5% |
| Cow Upper | 43657 | 3000 | 6.8% |
| Illinois | 135772 | 10 | Less than 0.1 % |
| Klamath | 16820 | 200 | 1.2% |

Medford BA on Activities that will Maintain Spotted Owl Habitat

| | | | |
|---|---|---|---|
| Little Butte | 39719 | 200 | Less than 0.1% |
| Rogue Lower Wild | 105073 | 10 | Less than 0.1% |
| Rogue Middle | 88774 | 300 | Less than 0.1% |
| Rogue Upper | 180071 | 10 | Less than 0.1% |
| **Total** | **745,422** | **4830** | **0.7%** |

1 From 06-08 BA Environmental Baseline Tables, USDI, USDA 2006.

Effects to spotted owls as a result of the implementation of harvest treatments within spotted owl NRF habitat will be insignificant to spotted owls for the following reasons:

1. Canopy cover will be maintained at 60 percent.
2. Decadent woody material, such as large snags and down wood will remain post-treatment.
3. All multi-canopy, uneven aged tree structure that was present pre-treatment will remain post-treatment.
4. NRF habitat treatments will be distributed both spatially and temporally throughout the nine affected watersheds.
5. Activities will be distributed both spatially and temporally across BLM.
6. No nest trees will be removed.
7. POC treatments will help avoid the spread of POC root rot that could reduce the health of the infected and adjoining watersheds. Ecological health would be improved in terms of owl habitat.
6. PDC will avoid adverse disturbance.

Vegetation treatments of NRF habitat, including silviculture and fuels reduction, that maintain habitat.

These treatments are designed to reduce the severity and rate of spread of large, stand-replacement fires that could remove many acres of spotted owl habitat. Fuels reduction projects that include prescribed fire can also stimulate forage plants important to spotted owl prey. Fuels reduction projects can help restore ecological health in stands that normally experience high fire frequency, but have had many years of wild fire controls.

**Table 5:** Acres of NRF Habitat treated through vegetation management compared to Section 7 Watershed --No change to habitat.

| **Section 7 Watershed** | **Federal Acres of NRF in Section 7 watershed** | **Acres of treatment (no change of habitat)** | **Percent of Federal NRF habitat within each Section 7 Watershed treated and maintained** |
|---|---|---|---|
| Applegate | 114,362 | 4000 | 3.5% |
| Bear | 21174 | 0 | 0 |
| Cow Upper | 43657 | 6000 | 14.0%% |
| Illinois | 135772 | 6200 | 4.6% |
| Klamath | 16820 | 400 | 2.4% |

Medford BA on Activities that will Maintain Spotted Owl Habitat

| | | | |
|---|---|---|---|
| Little Butte | 39719 | 0 | 0 |
| Rogue Lower Wild | 105073 | 0 | 0 |
| Rogue Middle | 88774 | 6600 | 7.4% |
| Rogue Upper | 180071 | 200 | 0.1% |
| **Total** | **745,422** | **23,400** | **3.1%** |

1 From 06-08 BA Environmental Baseline Tables, USDI, USDA 2006.

Treating 23,400 NRF habitat acres with vegetation management, including silvicultural and fuels reduction, will be insignificant to the nesting, roosting, foraging of spotted owls within the action area because:

1. Overall canopy cover of affected NRF timber stands will be maintained at 60 percent or greater.
2. Decadent woody material, such as large snags and down wood will remain post-treatment.
3. Multi-canopy, uneven-aged tree structure will remain post-treatment.
4. Activities will be distributed both spatially and temporally across BLM.
5. Vegetation treatments will improve ecological health of the stand, reduce the chance of tree loss due to suppression mortality because the stand has more trees than the site can support over the long-term, and will reduce the intensity and risk of wildfire by removing excess fuels.
6. No nest trees will be removed.
7. PDC will avoid potential of adverse disturbance.

## EFFECTS TO LATE SUCCESSIONAL RESERVES (LSRs)

Management activities proposed to occur within LSRs have been designed to contribute to the development of late seral forest conditions and maintain or improve existing owl habitat (see definitions). The total amount of NRF habitat treated and maintained within the affected LSRs is displayed in Table 6. There may be a few hazard trees removed from any of the LSR's in Medford District. Since these result from blow-down or other unforeseen situations, they are not portrayed on the table by LSR number. No more than a few acres could be expected to be treated for hazard tree removal in each LSR. No change of owl habitat would result. In many cases, in LSR, hazard trees may be used in the LSR to supplement existing down wood.

**Table 6: Effects to LSR**.

| Late-Successional Reserve | Total NRF Habitat Federal Acres[1] | Acres of Vegetation Treatment in LSR | Acres of Harvest Treatment in LSR | Total NRF Acres of treatment-no change of habitat | Total NRF habitat treated and maintained as a Percent of Federal NRF Habitat |
|---|---|---|---|---|---|
| RO223 | 33,804 | 5000 | 2500 | 7500 | 22.2% |

Medford BA on Activities that will Maintain Spotted Owl Habitat

| | | | | | |
|---|---|---|---|---|---|
| RO249 | 40,224 | 1600 | 0 | 1600 | 4.0% |
| RO258 | 33,641 | 250 | 50 | 300 | Less than 0.1% |
| **Total** | **107,669** | 6850 | 2550 | **9400** | **8.7%** |

1 From 06-08 BA Environmental Baseline Tables (USDA, USDI 2006).

Treating 9400 acres NRF in LSR will be insignificant for the following reasons:

1. NRF Canopy cover will be maintained at 60 percent or greater.
2. Decadent woody material, such as large snags and down wood will remain post-treatment.
3. Any multi-canopy, uneven aged tree structure that was present prior to the treatment will remain post-treatment.
4. Treatments in NRF habitat will be distributed both spatially and temporally throughout three LSRs within the Medford BLM District Boundary.
5. NRF treatments are designed to maintain or improve late-successional habitat. Thinning and vegetation management will help accelerate the stand towards conditions more favorable to owls and other late-successional species.
6. Plantations that currently provide dispersal habitat will continue to function as dispersal and be on an accelerated trajectory to late seral forest conditions.
7. No nest trees will be removed.
8. PDC will avoid adverse disturbance effects.

**EFFECTS: SPOTTED OWL DISPERSAL HABITAT**

Up to 23,200 acres of dispersal habitat will be treated and maintained under the proposed action in nine watersheds (Table 7). There is no dispersal habitat removal in the proposed action as a NLAA activity. The projects analyzed in this BA will be designed to maintain dispersal habitat characteristics post-project because trees over 11 inches will retain 40 percent canopy cover, a value widely used as dispersal function threshold (Thomas *et al.* 1990). Flying space will be maintained or improved. Selective harvest in spotted owl dispersal habitat is not anticipated to diminish the ability of spotted owls to move through treated stands. Treatments in dispersal will help restore a more ecologically-sustainable density in these stands. Residual young trees rapidly respond to increased space and light following treatment and develop increased bole and crowns. Suppression mortality, a condition where unnaturally crowded trees suppress growth and viability of those trees, would be avoided. Wild fire resiliency would be improved. Remaining trees would have more water, space and light to be healthier and grow faster, and develop more structural diversity. The results of these treatments could have long-term beneficial effects to spotted owls by reducing the risks of loss to fire or suppression mortality of the stand, and setting the stand to a trajectory more favorable to use by spotted owls.

Medford BA on Activities that will Maintain Spotted Owl Habitat

**Table 7: Dispersal Habitat Treated and Maintained by Section 7 Watershed.**

| Section 7 Watershed | Federal All-Dispersal Habitat[1] | Treatment Acres (no change in owl habitat) | Percent of habitat treated and maintained |
|---|---|---|---|
| **Applegate** | 192550 | 6200 | 3.2% |
| **Bear** | 31526 | 400 | 1.3% |
| **Cow Upper** | 52471 | 1700 | 3.2% |
| **Illinois** | 210,183 | 5700 | 2.7% |
| **Klamath** | 32628 | 400 | 1.2% |
| **Little Butte** | 54093 | 200 | 0.4% |
| **Rogue Lower Wild** | 138273 | 1200 | 0.9% |
| **Rogue Middle** | 134917 | 7000 | 5.2% |
| **Rogue Upper** | 292031 | 400 | 0.1% |
| **Total** | **1,138,680** | **23,200** | **2.0%** |

1 From 06-08 BA Appendix F, (USDA, USDI 2006).

Harvest treatments in Dispersal Habitat that will maintain dispersal.

Selective harvest is planned within dispersal habitat in densely-spaced stands that provide dispersal habitat. These stands may be previously managed stands that could be residual mixed-age stands from partial fire, or could be mixed-conifer/hardwood stands that meet the criteria that 40 percent of the stand has trees at least 11 inch diameter and allows flying space but lacks NRF structural components. They could also be older stands, possibly up to 120 years on average, of dense trees that are beginning to experience suppression mortality, and are beginning to lose "flying space". These stands typically consist of little structural or tree species diversity and currently function as marginal dispersal habitat for spotted owls. Harvest in dispersal habitat is designed to promote tree growth in areas designated for timber harvest. These treatments would cause an indirect beneficial effect for spotted owls by accelerating the development of late-successional elements, such as large diameter trees, multiple canopy layers, flying space and hunting perches in the long term. The additional light in the stand improves vigor of residual trees, but can also provides light to some of the forage plants important to spotted owl prey, if structural components are retained to provide prey cover habitat. Additionally, post-project snag and coarse woody debris standards will help minimize impacts to spotted owl prey species that utilize these features. Effects to spotted owls as a result of the implementation of selective harvest treatments within spotted owl dispersal habitat will be insignificant to spotted owls for the following reasons:

1. Canopy cover will be maintained at 40 percent.
2. Decadent woody material, such as large snags and down wood will be maintained during these treatments.
3. If thinned stands are allowed to develop into late-seral conditions, they will develop structural diversity more rapidly than an unthinned stand because residual trees will grow faster in more ecologically-sustainable conditions.

4. Very dense stands will be opened by thinning, thereby improving conditions for dispersing spotted owls.
5. Thinning dispersal habitat could reduce the rate of spread and intensity of wildland fires common to Medford BLM.
6. No nest trees will be removed.
7. PDC will avoid adverse disturbance impacts.

Road maintenance and hazard trees in dispersal habitat that will maintain habitat.

Up to 1000 acres of dispersal habitat could be treated and maintained within nine affected watersheds as a result of road maintenance or hazard tree removal. These activities will be dispersed across the Action Area spatially and temporally. Hazard tree removal will consist primarily of single tree removal along the District's extensive road system. Actual acres would be much less. Most of these activities would occur along the road prism and would focus on individual trees. At the specific project level, depending on the situation, some road work, including hazard tree removal may have no effect. There might be some heavy equipment or chainsaw use for short periods of time, but would be scheduled to avoid adverse disturbance impacts. Any road work that could not avoid adverse effects would be consulted on in the LAA BA or separate consultation. The impacts of this activity will be insignificant to the dispersal of spotted owls within the action area because:

1. Overall canopy cover of affected dispersal habitat will be maintained at 40 percent.
2. Decadent woody material, such as large snags and down wood will remain post-treatment.
3. Multi-canopy, uneven aged tree structure will remain post-treatment if it was present pre-treatment.
4. Activities will be distributed both spatially and temporally across Medford BLM.
5. PDC will avoid adverse disturbance impacts.

Vegetation Management, including silvicultural treatments and fuels reduction that will maintain dispersal habitat.

These activities usually consist of the removal of surface fuels, brush or small trees, 3 inches in diameter or less, and the removal of ladder fuels or crowded conifers or hardwoods up to 12 inches in diameter. Necessary components of spotted owl dispersal habitat will be retained. Effects to spotted owls as a result of fuels reduction activities will be insignificant because:

1. Canopy cover within affected stands will be maintained at 40 percent.
2. Very dense stands will be opened by thinning, thereby improving conditions for dispersing spotted owls, and their prey.
3. Thinning dispersal habitat could reduce the rate of spread and intensity of wildland fires common to Medford BLM.
4. The treated stand will be more ecologically sustainable, by avoiding or removing vegetation that could cause suppression mortality in the stand as a whole.
5. No nest trees will be removed.
6. PDC will avoid adverse disturbance impacts.

Additionally, long term benefits to spotted owl habitat may be realized, as these treatments are designed to reduce the severity and rate of spread of large, stand-replacement fires capable of removing many acres of spotted owl habitat and common to the Action Area. Thinning also provides more resources for residual trees, allowing them to grow larger faster. Additional light can improve food for some prey species in some situations if residual habitat is retained to provide prey cover. This potential beneficial effect will vary by project. In many cases, these treatments occur in non-owl habitat, but could result in some insignificant noise that could carry into adjacent stands. PDC will protect known owl sites. Activities along the edge of habitat would be short duration and low intensity. Only activities that have no adverse impacts are included in this BA. POC Sanitation is another type of vegetation thinning that could be implemented within the Applegate watershed as a result of treatments designed to prevent the spread of *Phytophora laterallis* (POC root rot). Acres of POC treatment are included in vegetation management in Table 7. This treatment generally consists of removal of all POC trees within 50 feet of major roads. POC rarely make up the majority of the overstory canopy in the Applegate watershed. Canopy contribution ranges from 5 to 20 percent on upland sites and occasionally up to 50 percent of the total canopy in riparian areas. POC rarely provide the structural conditions necessary for spotted owl nests. Affected stands will retain the physical structures necessary to support dispersal of spotted owls. Vegetation management treatments in dispersal habitat that maintains habitat would be insignificant because:

1. Overall canopy cover of affected dispersal timber stands will be maintained at 40 percent.
2. Any decadent woody material, such as large snags and down wood that was present pre-treatment will remain post-treatment.
3. Any multi-canopy, uneven aged tree structures that were present pre-treatment will remain post-treatment.
4. Treatments will improve ecological health, reduce the spread of POC (where POC treatments occur), and improve the fire resiliency of the habitat in treated areas.
5. No nest trees will be removed.

**EFFECTS to PREY**

Harvest and vegetation treatments may improve foraging habitat conditions for prey. Lemkuhl et al (2006) confirmed the importance of maintaining snags, down wood and mistletoe. Gomez et al (2005) noted that commercial thinning in young stands of Coastal Oregon Douglas-fir (35-45 yr) did not have a measurable short-term effect on density, survival or body mass of northern flying squirrels, another important prey species for spotted owls. Gomez et al (2005) also noted the importance of fungal sporocarps, which were positively associated with large down wood.

Residual trees, snags and down wood that are retained in the thinned stands will provide some cover for prey species over time, and will help minimize harvest impacts to some prey species. Some arboreal prey species will venture into harvest units a short distance for food. Northern spotted owls seldom venture far into non-forested stands to hunt. However, edges can be areas of good prey availability and potentially increased vulnerability (i.e. better hunting for owls) (Zabel

1995). The retained trees may respond favorably to more light and resources and gain height and canopy over time.

Projects described in this BA are designed to maintain existing owl habitat, and in many cases improve it by opening the stand, improving ecological sustainability and reducing fire risks. Treatments would retain habitat for prey. Prey animals may be more exposed in the disturbed area or may move away from the disturbed area over the short term. Some minor changes in prey availability may occur as cover is disturbed and animals move around in the understory. They may become more vulnerable and exposed. The disturbance might attract other predators such as other owls, hawks and mammalian predators. This may increase competition for owls in the treatment area, but the exposure of prey may also improve prey availability for northern spotted owls. The spacing, timing and standards and guidelines of the projects described in this BA, are designed to ensure there would be no adverse impacts on spotted owls.

Some disturbance of habitat may improve forage conditions, provided under-story structure and cover are retained. Removal of some tree canopy, provided it is not too extreme, will bring more light and resources into the stand, stimulating forbs, shrubs and other prey food. Once the initial impact of disturbance recovers (6 months to two years), the understory habitat conditions for prey food would increase over the next few years, until shrubs and residual trees respond to again close in the stand.

## EFFECTS TO OWLS DUE TO DISTURBANCE

No disturbance associated with Vegetation Management Activities, Watershed/Riparian Restoration, Recreation, Road Maintenance and Construction and Mining and Quarry Operations (as described in Table 1) will adversely affect known spotted owl nest sites because BLM will apply the mandatory PDC. Standards and guides from the Medford RMP will be applied. Additional conservation measures may be implemented at the site specific project level by the ID teams reviewing these projects, and projects will be evaluated to ensure the project won't cause adverse affects. Some owls may notice noise or activity, but due to the PDC, these noises and activities would not cause "*significant impairment to feeding, breeding and sheltering such that harm would occur." (USFWS ESA Handbook, version 3).*

## EFFECTS TO DESIGNATED SPOTTED OWL CRITICAL HABITAT

NRF Habitat in CHU

The Assessment describes the affects of treating and maintaining up to 11,900 acres of spotted owl NRF habitat among eight individual CHUs by the treatment types depicted (Table 8).

**Table 8: Effects to Spotted Owl Critical Habitat (NRF)**

| Critical Habitat Units | Federal Acres of NRF in Critical Habitat[1] | NRF Treated and maintained | Percent of CHU treated and maintained |
|---|---|---|---|
| **OR 32** | **20,287** | **7700** | **38.0%** |
| Veg treatment | | 5200 | |
| Harvest treatments | | 2500 | |

Medford BA on Activities that will Maintain Spotted Owl Habitat

| | | | |
|---|---|---|---|
| **OR 38** | **14,120** | **200** | **1.4%** |
| Veg treatment | | 200 | |
| Harvest treatments | | 0 | |
| **OR 65** | **39,680** | **700** | **1.8%** |
| Veg treatment | | 400 | |
| Harvest treatments | | 300 | |
| **OR 72** | **18,465** | **1600** | **8.7%** |
| Veg treatment | | 1600 | |
| Harvest treatments | | 0 | |
| **OR 74** | **9,859** | **1100** | **11.2%** |
| Veg treatment | | 450 | |
| Harvest treatments | | 650 | |
| **OR 75** | **4,949** | **300** | **6.1%** |
| Veg treatment | | 300 | |
| Harvest treatments | | 0 | |
| **Total all treatments** | **107,360** | **11,600** | **10.8%** |
| Total Veg treatment | | 8150 | 7.6% (of total NRF in these CHU's) |
| Total Harvest treatments | | 3450 | 3.2% (of total NRF in these CHU's) |
| *** CHU OR 34 has treatments scheduled in dispersal, but not in NRF (see Table 8)** | | | |

1 Appendix B, 06-08 BA, (USDA, USDI 2006).

Harvest treatments of NRF in CHU

Up to 3450 acres of NRF habitat in six CHUs will be treated through selective harvest methods as depicted in Table 8. Some of this treatment might include POC treatments in CHU-72. Five acres of NRF hazard tree removal could occur in each CHU, but none of the criteria used to define primary constituent elements of critical habitat would change. These treatments will be insignificant to spotted owl critical habitat because:

1. The primary constituent elements of critical habitat that make up NRF will be maintained, and improved over the long term. Treated stands will be more ecologically sustainable and fire resilient.
2. Canopy cover within treated NRF stands will be retained at or above 60 percent.
3. Decadent woody material in the treatment area, such as large snags and down wood will remain post-treatment.
4. Any multi-canopy, uneven aged tree structure that was present prior to treatment will remain post-treatment.
5. POC treatments will prevent disease from being transferred to other areas. Ecological health would be improved.
6. No nest trees will be removed.

Vegetation Management Treatments of NRF in CHU

Medford BA on Activities that will Maintain Spotted Owl Habitat
Up to 8150 acres of NRF habitat will treated through silvicultural and fuels reduction projects, including some vegetation management POC sanitation treatments and will be maintained as NRF habitat in the CHUs as depicted in Table 8. These treatments will be insignificant to spotted owl critical habitat because:

1. The primary constituent elements of critical habitat that make up NRF will be maintained, and improved over the long term. Treated stands will be more ecologically sustainable and fire resilient. No change to the amount of owl habitat will occur. No habitat categories will change.
2. Canopy cover within affected NRF stands will be maintained at 60 percent.
3. Collectively, no more than 7.6 percent of the NRF habitat within the CHUs listed in Table 8 will be treated and maintained as a result of vegetation management projects.
4. POC treatments will help avoid POC root rot disease from being transferred to other areas. Ecological health would be improved.
5. NRF Treatments are distributed both spatially and temporally throughout six CHUs.

Vegetation treatments are designed to ensure the residual stand is more ecologically sustainable, Treated stands reduce the risk of wildfire, and decrease intensity of any fires that do occur, which will help to reduce the chance of loss of owl habitat to wild fire or suppression mortality.

**CHU Dispersal Habitat**
There is proposed treatment and maintenance of dispersal habitat depicted in Table 9.

**Table 9: Effects to Dispersal Habitat within designated Critical Habitat Units.**

| Critical Habitat Units | Federal Dispersal by CHU Habitat | Dispersal-only habitat CHU treated and maintained within all federal habitat | Percent treated |
|---|---|---|---|
| **OR 32** | **24558** | **1,200** | **4.9%** |
| Veg treatments | | 100 | |
| Harvest treatments | | 1100 | |
| **OR-34** | **28,462** | **25** | **Less than 0.1 %** |
| Veg treatments | | 0 | |
| Harvest treatments | | 25 | |

Medford BA on Activities that will Maintain Spotted Owl Habitat

| | | | |
|---|---|---|---|
| **OR 38** | **23,669** | **100** | **0.4%** |
| Veg treatments | | 100 | |
| Harvest treatments | | 0 | |
| **OR 65** | **65,784** | **1950** | **3.0%** |
| Veg treatments | | 1250 | |
| Harvest treatments | | 700 | |
| **OR 67** | **66,355** | **75** | **0.2%** |
| Veg treatments | | 0 | |
| Harvest treatments | | 75 | |
| **OR 72** | **40,807** | **1,900** | **4.7%** |
| Veg treatments | | 1900 | |
| Harvest treatments | | 0 | |
| **OR 74** | **19,597** | **300** | **1.5%** |
| Veg treatments | | 300 | |
| Harvest treatments | | 0 | |
| **OR 75** | **9,531** | **215** | **2.3%** |
| Veg treatments | | 215 | |
| Harvest treatments | | 0 | |
| **Total** | **256,663** | **5765** | **2.3%** |
| Total Veg subset | | 3865 | **1.5%** |
| Total harvest subset | | 1900 | **0.7%** |

Harvest treatments of dispersal habitat in CHU that will maintain habitat.

Table 9 depicts that up to 1900 acres of dispersal will be treated and maintained through selective harvest treatments within the eight CHUs noted. Up to five acres of hazard tree removal could occur in dispersal habitat in each CHU. The hazard tree removal would not change the habitat conditions used to define critical habitat would change. There would be no loss of primary constituent elements in CHUs resulting from these actions. BLM will maintain the characteristics that classify a stand as dispersal throughout the treatments for no loss of dispersal habitat. No primary constituent elements of critical habitat will be compromised as a result of any or all of these treatments, by design. These stands will continue to provide at least 40 percent canopy, flying space, and trees greater than 11 inches on average. Effects to spotted dispersal habitat within critical habitat units will be insignificant because:

1. Canopy cover will be maintained at 40 percent.
2. Decadent woody material, such as large snags and down wood will be retained as a result of selective harvest treatments, if they were present pre-treatment.
3. Very dense stands will be opened by thinning, thereby improving conditions for dispersing spotted owls.
4. Thinning stands that currently provide poor quality dispersal habitat will improve the dispersal function for spotted owls by providing more “flying space”, and encouraging residual trees to develop more size and structural diversity. Foraging in treated dispersal stands could improve.
5. Treatments will be distributed both spatially and temporally throughout the watersheds depicted in Table 8.

Medford BA on Activities that will Maintain Spotted Owl Habitat

6. Thinning treatments could reduce the rate of spread and intensity of wildland fires common to the Medford BLM.
7. No more than 0.7 percent of the dispersal habitat within the affected CHUs will be treated and maintained as a result of selective harvest activities.

Vegetation Management including Silviculture and Fuels Reduction Treatments in dispersal habitat within CHU that maintain primary constituent elements of CHU

Up to 3865 acres of dispersal habitat will be treated and maintained through vegetation management treatments in the CHUs depicted in Table 9.

1. Canopy cover will be maintained at 40 percent.
2. Decadent woody material, such as large snags and down wood will be retained as a result of selective harvest treatments.
3. Very dense stands will be opened by thinning, thereby improving conditions for dispersing spotted owls.
4. Thinning treatments within plantations that currently function poorly as dispersal habitat will improve the dispersal function for spotted owls.
5. Treatments will be distributed both spatially and temporally throughout the eight CHUs where dispersal treatment will take place.
6. Thinning treatments could reduce the rate of spread and intensity of wildland fires common to the Medford BLM.
7. No more than 1.5 percent of the dispersal habitat within the affected CHUs will be treated and maintained as a result of selective harvest activities.

**CONCLUSION**

Medford BLM has determined that the combined treatments described in the BA will not change the amount of spotted owl habitat, and may affect and will not likely affect spotted owls or designated critical habitat.

**Spotted Owls and Spotted Owl Habitat**

Wild fire resiliency would be improved. Ecological sustainability would be enhanced. Remaining trees would have more water, space and light to be healthier and grow faster, and develop more structural diversity.

The results of these treatments in NRF could have long-term beneficial effects to spotted owls by reducing the risks of loss to fire or suppression mortality of the stand, and setting the stand to a trajectory more favorable to use by spotted owls.

The results of these treatments in dispersal could have long-term beneficial effects to spotted owls by reducing the risks of loss to fire or suppression mortality of the stand, and setting the stand to a trajectory more favorable to use by spotted owls. Flying space will be improved. These treatments are designed to reduce the severity and rate of spread of large, stand-replacement fires capable of removing many acres of spotted owl habitat and common to the Action Area.

Adverse disturbance is avoided by implementing PDC.

**Critical Habitat**

The results of these treatments in spotted owl habitat may affect and will not likely affect critical habitat because all primary constituent elements will be retained. There will be no change in the amount of dispersal or NRF in critical habitat. The critical habitat will be more ecologically sustainable. All large snags and down wood will be retained in conformance with the NWFP and the Medford RMP. Critical habitat will continue to provide the same habitat conditions as prior to treatment. The risk of wildfire that could remove habitat would be decreased as a result of these treatments. Long-term benefits could be expected through less risk to fire and suppression mortality.

**Literature Cited**

GOMEZ, D., R G. ANTHONY, AND J.P. HAYES. 2005. Influence of thinning of Douglas-fir forests on population parameters and diet of northern flying squirrels. Journal of Wildlife Management 69(4):1670–1682.

LEMKUHL, J., K.D. KISTLER AND J.S. BEGLEY. 2006. Bushy-tailed woodrat abundance in dry forests of eastern Washington. Journal of Mammalogy 87(2).

THOMAS, J.W.; E.D. FORSMAN; J.B. LINT; E.C. MESLOW; B.R. NOON; AND J. VERNER. 1990.
A conservation strategy for the northern spotted owl: a report of the Interagency Scientific committee to address the conservation of the northern spotted owl. Portland, Oregon. U.S. Department of Agriculture, Forest Service; U.S. Department of Interior, Bureau of Land Management, U.S. Fish and Wildlife Service, National Park Service. 427 pp.

USDA/USDI (U.S. FOREST SERVICE, BUREAU OF LAND MANAGEMENT). 2006. Rogue River/South Coast FY 2006-2008 Timber Sale Projects Programmatic Biological Assessment.

USDI, BLM (BUREAU OF LAND MANAGEMENT). 1992. Draft Resource Management Plan, Medford District Office. Medford, Oregon.

USDI BLM (Bureau of Land Management). 1995. Record of Decision, Resource Management Plan, Medford District Office. Medford, Oregon.

USFWS (U.S. Fish and Wildlife Service). 2002. Endangered Species Act Consultation Handbook, Interagency cooperation regulations 50CF Part 401 and Endangered Species Act, Draft Version 3.

USFWS (U.S. Fish and Wildlife Service). 2003a. Rogue River-South Coast FY 04-08 Biological Opinion, FWS Log # 1-15-03-F-511.

USFWS (U.S. Fish and Wildlife Service). 2003b. Estimates of distances at which incidental take of murrelets and spotted owls due to harassment are anticipated from sound-generating, forest-management activities in Olympia National Forest. Fish and Wildlife Service, Lacey, WA.

ZABEL, C. J., K.MCKELVEY, AND J. P. WARD, JR. 1995.Influence of primary prey on home range size and habitat use patterns of Spotted Owls (*Strix occidentalis*). Canadian Journal of Zoology 73:433–439.

ZABEL, C. J., J.R. DUNK, H.B. STAUFFER, L.M. ROBERTS, B.S. MULDER, AND A. WRIGHT. 2003. Northern spotted owl habitat models for research and management application in California (USA). Ecological Applications 13(4):1027-1040.

Medford BA on Activities that will Maintain Spotted Owl Habitat

**Appendix A: Project Design Criteria**

Project design criteria (PDC) are measures applied to project activities designed to minimize potential detrimental effects to proposed or listed species. PDC usually include seasonal restrictions and may also include clumping of retention trees around nest trees, establishment of buffers, dropping the unit(s)/portions, or dropping the entire project. Use of project design criteria may result in a determination of no effect for a project which would have otherwise been not likely to adversely affect. In other cases, project design criteria have resulted in a determination of not likely to adversely affect for a project which might have otherwise been determined to be likely to adversely affect. The goal of project design criteria is to reduce adverse effects to listed or proposed threatened or endangered species.

Physical impacts to habitat and disturbances to individual species will be reduced or avoided with PDC. Listed are species-specific project design criteria designed for the programmatic impacts discussed in the *Effects of the Action* section below. For each species, project design criteria have been separated into those that reduce or avoid habitat removal and those that reduce or avoid disturbance and/or disruption. Under the proposed action, the unit wildlife biologist may increase or decrease the disturbance distance-related project design criteria, based on site-specific conditions, subject to Level 1 concurrence.

Medford BLM and the Rogue River-Siskiyou National Forest retain discretion to halt and modify all projects, anywhere in the process, should new information regarding proposed and listed threatened or endangered species arise. Minimization of impacts would then, at the least, include an appropriate seasonal restriction; and could include clumping of retention trees around the nest trees, establishment of buffers, dropping the unit(s)/portions, or dropping the entire project.

The seasonal or daily restrictions listed below may be waived at the discretion of the decision maker if necessary to protect public safety (as in the case of emergency road repairs or hazard tree removal). Emergency consultation with the Service will then be initiated in such cases, where appropriate.

Should new information arise that significantly changes impacts to listed threatened or endangered species, the Action Agencies retain discretion to halt and modify all projects, anywhere in the process. Modifications could include an appropriate seasonal restriction; clumping of retention trees around the nest trees, establishment of buffers, dropping the unit(s)/portions, or dropping the entire project.

PDC may be waived at the discretion of the decision-maker, if necessary to protect public safety (as in the case of emergency road repairs). The FWS will be notified of all such occurrences to determine if emergency consultation is required and to adjust environmental baselines if necessary. The Action Agencies will be prudent in evaluating public safety deviations. They will attempt to predict potential problems (such as road failures) such that remedies can occur during times and using methods that minimize impacts to the extent possible. In the event emergency consultation is initiated, the Action Agencies will act prudently and efficiently to complete or close consultation in a timely manner, preferably within 6 months or less of the emergency action.

There are two types of PDC:

**Mandatory:** must be incorporated in all projects to reduce adverse affects to listed species – required unless a specific exemption is mentioned in a “recommended” PDC and

Mandatory PDC are incorporated in all appropriate planned actions. The effects determination reflects their implementation. Projects unable to incorporate mandatory PDC will be analyzed under separate consultation.

**Recommended:** discretionary; incorporated in projects where appropriate to further reduce adverse affects.

In some cases, application of PDC may reduce the impact of the projects to listed species and may change the effects determinations (from LAA to NLAA, or from LAA or NLAA to NE). In all cases, effects determinations for projects have been made using applicable PDC. The goal is to reduce the detrimental effects of any projects which "may affect" any endangered or threatened species. Some PDC apply to multiple species although most PDC apply to specific species. PDC are described by project type.

This consultation effort updates some PDC that were used on projects covered by previous consultation efforts. These updated PDC will be incorporated into actions covered under previous consultations that have not yet been implemented, unless incorporating new PDC is not practical. In those cases, PDC in place under the previous consultation will apply.

The PDC in this consultation will be incorporated into those projects that will be implemented, in FY06-08.

Fire firefighter safety must be taken into account at all times when using the **PDC.** If implementation of PDC might cause human safety risks, the Action Agencies will respond to the human safety threat and will determine if that response is grounds for reconsultation.

| Impacts | Species: **Northern Spotted Owl** |
|---|---|
| | Any of the following Mandatory PDC may be waived in a particular year if nesting or reproductive success surveys conducted according to the FWS-endorsed survey guidelines reveal that spotted owls are non-nesting or that no young are present that year. Waivers are valid only until March 1 of the following year. Previously known sites/activity centers are assumed occupied unless protocol surveys indicate otherwise. |
| Disturbance | **Mandatory 1)** Work activities (such as tree felling, yarding, road construction, hauling on roads not generally used by the public, prescribed fire, muffled blasting) that produce loud noises above ambient levels, or produce thick smoke that would enter the stand, will not occur within specified distances (see table below) of any nest site or activity center of known pairs and resident singles or unsurveyed NRF between 1 March and 30 June (or until two weeks after the fledging period) – unless protocol surveys have determined the activity center to be not occupied, non-nesting, or failed in their nesting attempt. The restricted zone is 1.0 mile for any unmuffled blasting. This distance may be shortened if significant topographical breaks or blast blankets (or other devices) muffle sound traveling between the blast and nest sites. March 1 – June 30 is considered the critical early nesting period; the action agency biologist has the option to extend the restricted season during the year of harvest, based on site-specific knowledge (such as a late or recycle nesting attempt). The boundary of the prescribed area may be modified by the |

| | |
|---|---|
| | action agency biologist using topographic features or other site-specific information. The restricted area is calculated as a radius from the assumed nest site (point). See Appendix F of the Assessment for a discussion of the rational for the 30 June restriction date. See Fuels management PDC for direction regarding site preparation and prescribed fire. |
| Disturbance | **Mandatory** 2) If an active spotted owl nest or activity center is located within or *adjacent* to a project area, delay the project activity until September 30th or until an action agency biologist determines that young are not present. For a given situation, the "adjacent" distance is determined by the action agency biologist – if needed, contact Level 1 team for guidance. If any project activity is so close to a known or suspected owl site that the disturbance would flush a nesting spotted owl, curtail the project activity until September 30. The field biologist has the discretion to conduct surveys and determine fledging activity. |
| **Fuels reduction** | **Mandatory** 1) Burning will not take place within 0.25 mile of known active northern spotted owl nests or unsurveyed NRF between 1 March and 30 June (or until two weeks after the fledging period) unless smoke will not drift into the nest stand. |
| | |
| **Restoration projects** | **Mandatory 1)** To minimize the number of potential spotted owl nest trees used for instream structures, only the following sources shall be used:<br><br>(I) Trees already on the ground in areas where large woody material is adequate;<br><br>(II) Trees lacking suitable nesting structure for spotted owls or contributing to trees with suitable nesting structure, as determined by an action agency wildlife biologist. |
| **Wildfire** | **Mandatory 1)**<br>Whenever possible, protect known nest sites of any listed species from high intensity fire. Update Resource Information Book annually; incorporate new nests or sites as soon as possible. |
| **Wildfire** | **Mandatory 2)**<br>(I) From 1 March – 30 June noise disturbance should be minimized inside occupied stands and within 0.25 mile of the edge of these stands. In order to accomplish this objective, minimize repeated aircraft flights that are less than 1,500 feet Above Ground Level (AGL). Also, minimize the use of fire line explosives within 1 air mile of occupied stands during the protection period. |
| **Wildfire** | **Recommended 1)** Light Hand Tactics or Minimize Impact Suppression Tactics (MIST) should receive consideration for use within the protection zones for northern spotted owls. |
| **Quarries** | **Mandatory** 1) For active nest sites or unsurveyed suitable habitat within 65 yards of the quarry operation (120 yards or 1.0 mile for blasting—see chart below), restrict operation of the quarry from March 1 through June 30 (unless protocol surveys demonstrate non-nesting). |

| | |
|---|---|
| | **Recommended 1)**<br>2) For active nest sites or unsurveyed suitable habitat within 0.25 mile of the quarry operation, restrict operation of the quarry from March 1 through September 30 (unless protocol surveys demonstrate non-nesting). |

**Harassment distances from various activities for spotted owls.**

| **Type of Activity** | **Distance at which spotted owl may flush or abort a feeding attempt** |
|---|---|
| a blast larger than 2 pounds of explosives | 1 mile |
| a blast of 2 pounds or less | 120 yards |
| an impact pile driver, a jackhammer, or a rock drill | 65 yards |
| a helicopter or a single-engine airplane | 120 yards for small helicopters;<br>0.25 miles for Type 1 or 2 helicopters |
| chainsaws (hazard trees, precommercial and commercial thinning) | 65 yards |
| heavy equipment | 35 yards |

Above-ambient noises further than these Table 11 distances from spotted owls are expected to have ether negligible effects or no effect to spotted owls. The types of reactions that spotted owls could have to noise that the Service considers to have a negligible impact, include flapping of wings, the turning of a head towards the noise, hiding, assuming a defensive stance, etc. (USFWS 2003).

**Wildland Fire - General PDC – All Species**

a. Resource Advisors/Environmental Specialists will advise Line Officers and Incident Commanders to minimize impact to listed species and their habitat during suppression activities.
b. Information on species and habitat location will be available to fire staff through pre-suppression briefings, through maps showing areas of concerns (readily accessible through GIS), and pertinent species management plans, *i.e.*, bald eagle site management plans. With this information, fire staff can determine possible needs during initial attack, if the behavior of the fire dictates the need for emergency fire suppression action.
c. Resource specialists, resource advisers, advisors/environmental specialists will give biological input to personnel in charge of fire suppression activities. The resource advisor/environmental specialist will work for the Line Officer and with the Incident Commander to relay biological concerns.
d. Whenever possible, protect known nest sites of any listed species from high intensity fire.

**Appendix B**

Approximate BLM ownership by Section 7 Watershed.
Acres below include all habitat conditions, including non-habitat. Remaining federal ownership is USFS Rogue River-Siskiyou National Forest. Calculations are from Medford GIS: 4/15/07.

| | |
|---|---|
| Applegate: | 148,260 acres |
| Bear: | 26239 |
| Cow-Upper | 80312 |
| Illinois | 66635 |
| Klamath | 66681 |
| Little Butte | 54291 |
| Rogue Lower Wild | 100234 |
| Rogue Middle | 214221 |
| Rogue Upper | 108939 |

**Attachment 1 - Consultation spreadsheet key USFWS info req 5_25_07.doc**
Key for spreadsheets titled: *NLAA information request by USFWS 5_25_07.*

Definitions of terms used in the project spreadsheet for consultation.
***Section 7 Watershed***: Section 7 Watersheds (major sub-basins which combine several HUC 5 watersheds) Section 7 watersheds are hydrologically defined units that were specifically by the joint SW Oregon USFWS, BLM and USFS fish and wildlife Level 1 teams after the completion of the NWFP as appropriate size to assess the scale of impacts to listed wildlife and fish species. Section 7 watersheds, and range in size from 100,000 to 600,000 acres (all ownerships).

**Year***:* Year the project will be sold, if its a harvest unit; or the year the project is likely to occur if it is a vegetation management, fuels treatment or other project that has no "sale" date. 7=Fiscal Year (FY) 07; X indicates the project was analyzed in a previous consultation and has remaining acres that remain to be implemented.

**Project ID*:*** These are the proposed projects as of the analysis period for the consultation in question. They represent the footprint of the project area at that time. The plan of timber sales and project boundaries and acres, as well as type of harvest activity, may change as a result of NEPA analysis, field review, watershed and other resource protection, and workload scheduling. Although individual project activities and names may vary, the overall projections of suitable habitat loss will be equal or less within the amounts predicted in the biological assessment by the categories depicted: owl habitat, CHU (Critical Habitat Unit) habitat subset, LSR (Late Successional Reserve) habitat subset, Section 7 watershed.

**Project type*:*** T=Timber sale or other harvest activity, F=Fuels projects under the National Fire Plan, V=Vegetation management such as silviculture. O=Other includes a variety of activities such as ROWs, recreation, non-habitat projects with the possibility of disturbance etc.

**Land Allocation**: A=Adaptive Management Area; M=Matrix; L=Late Successional Reserve. Note: AMA can occur in LSR or Matrix.

**RA**: Resource Area. AS=Ashland; GP=Grants Pass; GL=Glendale; BF=Butte Falls

**OWL HABITAT-Habitat acres**: Total acres of the project area that are likely to be spotted owl habitat at the time the project is proposed and analyzed in the consultation. Total habitat acres include the sum of NRF and dispersal-only.

**OWL HABITAT-NRF remove**: Total predicted acres of NRF (Nesting, roosting and foraging) habitat to be removed when the proposed project is implemented. (Usually pre-NEPA acres). NRF habitat was sometimes also called "suitable" habitat in the consultation document.

**Removal of habitat** means to alter spotted owl suitable or dispersal habitat, so that the habitat no longer supports nesting, roosting, foraging, or dispersal. Removal of NRF is considered a may affect likely to adversely affect (LAA).

**OWL HABITAT-NRF downgrade*:*** Downgrading NRF habitat means to alter the function of spotted owl suitable habitat so that the habitat no longer supports nesting, roosting, *and* foraging behavior and still provides adequate dispersal habitat. The project acres which are anticipated to change from NRF to dispersal. Downgrading habitat often means reducing canopy cover to below 60 percent and retaining at least 40 percent. Downgraded suitable habitat will continue to support spotted owl dispersal. The effects determination for downgrading of habitat is may affect, likely to adversely affect (LAA) the spotted owl because spotted owls would not use the stand as before. Thinning allows residual trees to grow bigger faster, and opens the understory, which can be a long term benefit to owl habitat. In some cases, heavy thinning that qualifies as "downgraded NRF" is necessary to reduce abnormally high tree densities that threaten to suppress the stand (causing suppression mortality) or abnormally increase the both the risks of wild fire and the chance of excessive damage in the event of wild fire due to excess fuel build up. If the thinned stands are allowed to develop over time, they will regain conditions to provide NRF.

**OWL HABITAT-NRF T&M (Treat and Maintain)*:*** To treat the habitat in such a way that some trees or understory vegetation may be removed, but the habitat continues to retain the conditions that were present in the stand as habitat prior to treatment. Owls would be expected to use the habitat post-treatment in the same way they used the habitat pre-treatment. This usually requires the retention of at least 60 percent canopy cover and structural conditions that qualify the stand as NRF. This terminology has been changed in recent consultations from "degrade" because "degrade" erroneously implies a negative change to the habitat. The term "treat and maintain" more accurately reflects what this column represents. Treatment may occur, but there is no loss of habitat function and no change to quantity of pre-treatment habitat from the treatments we formerly called "degrade". Many of these treatments would have long-term beneficial effects in reducing fire risk and making post-treatment stands more ecologically healthy and sustainable. This treatment type would usually be considered a may affect not likely to adversely affect. (NLAA).

**OWL HABITAT-Dispersal remove:** Removal of habitat means to alter spotted owl suitable or dispersal habitat, so that the habitat no longer supports nesting, roosting, foraging, or dispersal. A stand thinned to below 40 percent canopy cover would no longer functions (for the short term) as dispersal habitat, according to definitions by Thomas et al (1990). Dispersal removal outside of CHU is generally considered a may affect, not likely to adversely affect (NLAA) because some dispersal removal in a landscape that has much dispersal would not cause adverse affects to an owl.

**OWL HABITAT-Dispersal T&M (Treat and Maintain):** To treat the habitat in such a way that some trees or understory vegetation may be removed, but the habitat continues to retain the conditions that qualified the stand as dispersal habitat prior to treatment.

Owls would be expected to use the habitat post-treatment in the same way they used the habitat pre-treatment. This usually requires the retention of at least 40 percent canopy cover. This terminology has been changed in recent consultations because "degrade" erroneously implies a negative change to the habitat. The term "treat and maintain" more accurately reflects what this column represents. Treatment may occur but there is no loss of habitat function and no change to quantity of pre-treatment habitat from the treatments we formerly called "degrade". Many of these treatments would have long-term beneficial effects in reducing fire risk and making post-treatment stands more ecologically healthy and sustainable. Treatments that maintain dispersal are generally considered "may affect, not likely to adversely affect" (NLAA) owls because there is no change to the quantity of owl habitat, and dispersal habitat is not considered to be a factor that causes adverse effects to an owl.

**Action will occur after June 30 (Y/N):** Indicates the project will occur outside of the critical breeding period (March 15-June 30) which is the timeframe the USFWS considers adverse disturbance could occur to nesting owls. Y would generally mean a NLAA or NE for disturbance. N would mean that additional factors would need to be implemented through PDCs if the project is a NLAA.

**CHU HABITAT-CHU: CHU ID** number if any part of that project is proposed to occur in CHU or "not" if no CHU is involved.

**CHU HABITAT-NRF remove:** Subset of OWL HABITAT columns. The subset portion of the NRF removal that occurs in CHU but still maintains the primary constituent elements of each affected critical habitat unit to allow it to function for the purposes it was designated. NRF remove-CHU subset: Total predicted acres of NRF habitat to be removed from CHU when the proposed project is implemented. (Usually pre-NEPA acres). Removal of some NRF habitat from CHU is considered a May affect, likely to adversely affect CHU.

**CHU HABITAT-Regen part of NRF remove**: Subset of the NRF removal acres in CHU that are proposed to be treated with regeneration harvest.

**CHU HABITAT-NRF dwngrd (downgrade)**: Subset of the OWL HABITAT NRF downgrade acres that occur in CHU and that would reduce the primary constituent elements (NRF) of each affected critical habitat. Downgrade of some NRF habitat from CHU is considered a may affect, likely to adversely affect CHU because it reduces the total NRF habitat. The amount of All-Dispersal remains the same. Dispersal-only acres would increase because NRF is changed to dispersal-only.

**CHU HABITAT –NRF T&M (Treat and maintain):** Subset of the OWL HABITAT NRF T&M acres that occur in CHU and that would maintain the primary constituent elements of each affected critical habitat unit to allow it to function for the purposes it was designated. There is no change in the quantity of NRF habitat in projects that maintain habitat. This terminology has been changed in recent consultations because the

former term “degrade” erroneously implies a negative change to the habitat. The term “treat and maintain” more accurately reflects what this column represents. Treatment may occur but there is no loss of habitat function nor change to quantity of pre-treatment habitat from the treatments we formerly called “degrade”. Many of these treatments would have long-term beneficial effects in reducing fire risk and making post-treatment stands more ecologically healthy and sustainable. To treat the habitat in such a way that some trees or understory vegetation may be removed, but the habitat continues to retain the conditions that qualified the stand as habitat prior to treatment. Owls would be expected to use the habitat post-treatment in the same way they used the habitat pre-treatment. This usually requires the retention of at least 60 percent canopy cover. Treatments that maintain NRF in CHU is considered a “may affect, not likely to adversely affect” spotted owl critical habitat, NLAA, because there is no change to the quantity of NRF CHU habitat and quality sometimes improves as a result of this treatment.

**CHU HABITAT- Disp remove**: Subset of the OWL HABITAT Dispersal remove acres that occur in CHU, and reduces one of the primary constituent elements of each affected critical habitat unit. Since dispersal is a primary function of CHU, dispersal removal in CHU has the potential for a May affect, likely to adversely affect CHU (LAA). In site-specific situations, some dispersal removal would not change how an owl could disperse across CHU and could be a may affect, not likely to adversely affect CHU (NLAA). Some removal of dispersal does not preclude the functionality of the dispersal habitat in CHU. At the programmatic level, we usually call CHU dispersal removal a LAA, but project level conditions may be NLAA.

**CHU HABITAT-DispT&M (Treat and Maintain)**: Subset of the OWL HABITAT dispersal acres that are treated and occur in CHU and that maintain the primary constituent elements of each affected critical habitat unit and allow it to function for the purposes it was designated. To treat the habitat in such a way that some trees or understory vegetation may be removed, but the habitat continues to retain the conditions that qualified the stand as dispersal habitat prior to treatment. Owls would be expected to use the habitat post-treatment in the same way they used the habitat pre-treatment, and there would be no change in the CHU function. This usually requires the retention of at least 40 percent canopy cover. This terminology has been changed in recent consultations because “degrade” erroneously implies a negative change to the habitat. The term “treat and maintain” more accurately reflects what this column represents. Treatment may occur, but there is no loss of habitat function nor change to quantity of pre-treatment habitat from the treatments we formerly called “degrade”. Many of these treatments would have long-term beneficial effects in reducing fire risk and making post-treatment stands more ecologically healthy and sustainable. Treatments that maintain dispersal in CHU are usually considered “may affect, not likely to adversely affect” CHU actions because the amount of dispersal habitat doesn’t change (NLAA). In some cases, the long term impacts would be beneficial.

**All CHU acres**: Sum of all project acres (all habitat categories) within CHU. Subset of total owl habitat acres of the project.

**LSR name:** Name Identifier of the LSR if a portion of the project could occur in LSR. "NOT" implies none of the project acres would occur in LSR.

**LSR#:** Numerical Identifier of the LSR if a portion of the project could occur in LSR. "not" implies none of the project acres would occur in LSR

**LSR- NRF remove**: Subset of OWL HABITAT NRF acres that may be removed and that occur in LSR. LSR treatments do not have a separate effects call. (See OWL HABITAT NRF remove).

**LSR-NRF dwngrd**: Subset of OWL HABITAT NRF acres that may be downgraded and that occur in LSR. LSR treatments do not have a separate effects call. (See OWL HABITAT NRF downgrade).

**LSR-NRF T&M (Treat and Maintain**): Subset of OWL HABITAT NRF acres that may be treated and maintained and that occur in LSR. LSR treatments do not have a separate effects call. (See OWL HABITAT NRF T&M).

**LSR-Disp remove**: Subset of OWL HABITAT Dispersal acres that may be removed and that occur in LSR. LSR treatments do not have a separate effects call. (See OWL HABITAT Dispersal remove).

**LSR-Disp T&M ( Treat and Maintain)**: Subset of OWL HABITAT Dispersal acres that may be treated and maintained and that occur in LSR. LSR treatments do not have a separate effects call. (See OWL HABITAT Dispersal T&M).

**All LSR acres**: Subset of OWL HABITAT acres and summary of all spotted owl habitat acres that are projected to be treated in LSR.

**Comment**. Y indicates a clarifying comment about the project or assumptions about how acres were submitted. Blank implies no comment.

Further definitions of terms used in spreadsheet.

**Dispersal-only habitat** (**northern spotted owl**) is a subcategory of dispersal habitat for northern spotted owls. (Note: NRF also provides dispersal habitat for spotted owls) The term dispersal-only is used throughout this document to refer to habitat that doesn't meet the criteria to be NRF (nesting, roosting or foraging) habitat, but has adequate cover to facilitate movement between blocks of suitable NRF habitat. Generally, dispersal-only habitat is defined as forested habitat greater than 40 years old, with canopy closure at least 40 percent and average diameters greater than 11 inches, and that has flying space for owls in the understory and lacks the structural condition necessary for NRF. Dispersal-only provides temporary shelter for owls moving through the area between NRF habitat and may offer some opportunities for owls to find prey, but does not provide all of the requirements to support an owl throughout its life. Medford BLM defines

dispersal-only habitat as Habitat 5 and 6. These classifications were part of the 1991-1992 Resource Management Plan. Habitat 5 lacks NRF structure, provides dispersal-only function and has the potential to develop into NRF habitat. Habitat 6 lacks NRF structure, provides dispersal-only function and does not have the potential to develop into NRF habitat. The Rogue River-Siskiyou defines dispersal-only habitat as forest that is at least 11 inches DBH at the stand level and having a minimum of 40 percent canopy closure (USDI 1992a).

**Critical Habitat** for the **northern spotted owl** was designated in *Federal Register 57* and includes the primary constituent elements that support nesting, roosting, foraging, and dispersal. Designated Critical Habitat also includes forest land that is currently unsuitable, but has the capability of becoming suitable habitat in the future (FR57 (10):1796-1837).

Medford BLM NLAA information request by USFWS 5/25/07

NLAA spreadsheet NO DISTURBANCE

| | | | | | | | OWL HABITAT | | | | | | | | | CHU HABITAT | | | | | | | | | LSR Habitat | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Section 7 Watershed | Year (7 or 8 or X for previousl yrs) | project occur in 08 also (rec proj only)? | Project ID | Project Type | Land allocation | RA | Habitat acres | NRF remove | NRF dwngrd | NRF T&M | Disp remove | Disp T&M | OWL EFFECT | **Project occurs after June 30 (Y/N)*** | CHU EFFECTS | CHU | NRF remove | Regen part of NRF remove | NRF dwngrd | NRF T&M | Disp remove | Disp T&M | all CHU acres | LSR Name | LSR# | NRF remove | NRF dwngrd | NRF T&M | Disp remove | Disp T&M | all LSR acres | |
| Applegate | X | | Joint Fire Science | F | A | AS | 20 | 0 | 0 | 20 | 0 | 0 | NLAA | Y | NLAA | OR-75 | 0 | 0 | 0 | 20 | 0 | 0 | 20 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Applegate | X | | Applegate Fuels | F | A | AS | 30 | 0 | 0 | 0 | 0 | 30 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | X | | Rogue Middle Fuels | F | M | AS | 100 | 0 | 0 | 40 | 0 | 60 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Applegate | X | | Eaststar '07 | T | A | AS | 650 | 0 | 0 | 650 | 0 | 0 | NLAA | Y | NLAA | OR-74 | 0 | 0 | 0 | 650 | 0 | 0 | 650 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Applegate | 7 | | Star Gulch Fish Project | R | A | AS | 60 | 0 | 0 | 60 | 0 | 0 | NLAA | Y | NLAA | 0R-74 | 0 | 0 | 0 | 60 | 0 | 0 | 60 | | | | | | | | | | |
| Applegate | 7 | | Misc. Forest Products | T | A | AS | 25 | 0 | 0 | 0 | 0 | 25 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Bear | 7 | | Misc. Forest Products | T | M | AS | 25 | 0 | 0 | 0 | 0 | 25 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | 7 | | Misc. Forest Products | T | M | AS | 25 | 0 | 0 | 0 | 0 | 25 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Klamath | 7 | | Misc. Forest Products | T | M | AS | 25 | 0 | 0 | 0 | 0 | 25 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Little Butte | 7 | | Misc. Forest Products | T | M | AS | 25 | 0 | 0 | 0 | 0 | 25 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Applegate | 7 | | Roadside Hazard Trees | T | A | AS+ | 40 | 0 | 0 | 20 | 0 | 20 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Little Butte | | | Roadside Hazard Trees | T | M | AS+ | 20 | 0 | 0 | 10 | 0 | 10 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | 7 | Y | Slick Sand | F | M | BF | 120 | 0 | 0 | 120 | 0 | 0 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | 7 | Y | R. Fork Sardine | F | M | BF | 300 | 0 | 0 | 0 | 0 | 300 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | 7 | Y | Misc. Forest Products | T | M | BF | 50 | 0 | 0 | 0 | 0 | 50 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | 7 | Y | Misc. Forest Products | T | M | BF | 50 | 0 | 0 | 0 | 0 | 50 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Little Butte | 7 | Y | Misc. Forest Products | T | M | BF | 25 | 0 | 0 | 0 | 0 | 25 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | | Y | Ranch Stew | T | M | BF | 350 | 0 | 0 | 0 | 0 | 350 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | 7 | Y | Trail/Evans Ck. Fish | O | M | BF | 25 | 0 | 0 | 0 | 0 | 25 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | 7 | Y | Elk Ck. Fish Habitat | O | L | BF | 10 | 0 | 0 | 0 | 0 | 10 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Elk | R0224 | 0 | 0 | 0 | 0 | 10 | 10 | |
| Rogue | 7 | N | Roadside Hazard Trees | T | M | BF | 150 | 0 | 0 | 75 | 0 | 75 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | 7 | N | Roadside Hazard Trees | T | M/L | BF | 20 | 0 | 0 | 10 | 0 | 10 | NLAA | Y | NE | OR-34 | 0 | 0 | 0 | 5 | 0 | 5 | 10 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Little Butte | 7 | N | Roadside Hazard Trees | T | M | BF | 10 | | | 5 | | 5 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Cow Upper | X | | Westside Fuels | F | M | GL | 300 | 0 | 0 | 300 | 0 | 0 | NLAA | Y | NLAA | OR-32 | 0 | 0 | 0 | 200 | 0 | 0 | 200 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Cow Upper | 7 | | Boney Skull fuels | F | M | GL | 100 | 0 | 0 | 100 | 0 | 0 | NLAA | Y | NLAA | OR-65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | X | | Bear Pen Fuels | F | M | GL | 150 | 0 | 0 | 0 | 0 | 150 | NLAA | Y | NLAA | OR-65 | 0 | 0 | 0 | 0 | 0 | 150 | 150 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | X | | Kelsey Whiskey | F | M/L | GL | 500 | 0 | 0 | 500 | 0 | 0 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Fishhoo | RO-258 | 0 | 0 | 250 | 0 | 0 | 250 | |
| Rogue | 7 | | Roadside Hazard Trees | T | M | GL | 20 | 0 | 0 | 15 | 0 | 5 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Cow Upper | 7 | | Roadside Hazard Trees | T | M | GL | 20 | 0 | 0 | 15 | 0 | 5 | NLAA | Y | NLAA | OR-32 | 0 | 0 | 0 | 10 | 0 | 5 | 15 | Galesvil | RO-223 | 0 | 0 | 10 | 0 | 5 | 15 | |
| Rogue | 7 | | Roadside Hazard Trees | T | M | GL | 20 | 0 | 0 | 15 | 0 | 5 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Cow Upper | X | | Middle Cow "Eastside" (Incl Healthy | T | L | GL | 470 | 0 | 0 | 470 | 0 | 0 | NLAA | Y | NLAA | OR-32 | 0 | 0 | 0 | 470 | 0 | 0 | 470 | Galesvil le South | RO-223 | 0 | 0 | 470 | 0 | 0 | 470 | |
| Applegate | X | | Scattered Apples Fuels | F | M | GP | 800 | 0 | 0 | 500 | 0 | 300 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Illinois | 7 | | Selma North NFP - pvt | F | M | GP | 20 | 0 | 0 | 0 | 0 | 20 | NLAA | Y | NE | NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Illinois | X | | 3+3 Fuels | F | M | GP | 200 | 0 | 0 | 200 | 0 | 0 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Illinois | X | | Deer Mom Fuels | F | M | GP | 350 | 0 | 0 | 200 | 0 | 150 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Illinois | X | | Anderson West Fuels | F | M | GP | 900 | 0 | 0 | 700 | 0 | 200 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Illinois | X | | West Fork Fuels | F | M | GP | 2,710 | 0 | 0 | 1700 | 0 | 1010 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Illinois | X | | South Deer Fuels | F | M | GP | 3,050 | 0 | 0 | 2000 | 0 | 1050 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | 7 | | Peco Fuels | F | M | GP | 10 | 0 | 0 | 0 | 0 | 10 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | X | | Shiney Queen Fuels | F | M | GP | 10 | 0 | 0 | 0 | 0 | 10 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | X | | Maple Syrup Fuels | F | M | GP | 20 | 0 | 0 | 0 | 0 | 20 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | 7 | | Pinnon Fuels | F | M | GP | 60 | 0 | 0 | 0 | 0 | 60 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | X | | Savage Green Fuels | F | M | GP | 110 | 0 | 0 | 0 | 0 | 110 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | X | | Pickett Snake Fuels | F | M | GP | 150 | 0 | 0 | 0 | 0 | 150 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | X | | Granite Horse Fuels | F | M | GP | 370 | 0 | 0 | 200 | 0 | 170 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | X | | Stratton Hog Fuels | F | M | GP | 500 | 0 | 0 | 300 | 0 | 200 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | X | | Berlin Mummer Fuels | F | M | GP | 600 | 0 | 0 | 400 | 0 | 200 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | X | | Pickett Charge Fuels | F | M | GP | 1,000 | 0 | 0 | 800 | 0 | 200 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue | X | | Birdseye Jones Fuels | F | M | GP | 2,800 | 0 | 0 | 1800 | 0 | 1000 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Applegate | 7 | | Penny Stew | T | M | GP | 20 | 0 | 0 | 0 | 0 | 20 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | not | not | 0 | 0 | 0 | 0 | 0 | 0 | |

Medford BLM NLAA information request by USFWS 5/25/07

NLAA spreadsheet NO DISTURBANCE

| | | | | | | | OWL HABITAT | | | | | | | | | CHU HABITAT | | | | | | | | | LSR Habitat | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Section 7 Watershed | Year (7 or 8 or X for previousl yrs) | project occur in 08 also (rec proj only)? | Project ID | Project Type | Land allocati on | RA | Habitat acres | NRF remove | NRF dwngrd | NRF T&M | Disp remov e | Disp T&M | OWL EFFECT | **Project occurs after June 30 (Y/N)*** | CHU EFFECTS | CHU | NRF remove | Regen part of NRF remove | NRF dwngrd | NRF T&M | Disp remo ve | Disp T&M | all CHU acres | LSR Name | LSR# | NRF remove | NRF dwngrd | NRF T&M | Disp remov e | Disp T&M | all LSR acres |
| Applegate | 7 | | Two Bit Stewardship | T | M | GP | 60 | 0 | 0 | 0 | 0 | 60 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Applegate | X | | Scattered Apples (#1) | T | A | GP | 448 | 0 | 0 | 172 | 0 | 276 | NLAA | N | NE | NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Illinois | 7 | | Anderson West | T | M | GP | 50 | 0 | 0 | 0 | 0 | 50 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | 7 | | Rich and Rocky | T | L | GP | 20 | 0 | 0 | 0 | 0 | 20 | NLAA | N | NLAA | OR-65 | 0 | 0 | 0 | 0 | 0 | 20 | 20 | Fishhoo | RO-258 | 0 | 0 | 0 | 0 | 20 | 20 | 20 |
| Rogue | 7 | | Rum Creek | T | T | GP | 41 | 0 | 0 | 0 | 0 | 41 | NLAA | N | NLAA | OR-65 | 0 | 0 | 0 | 0 | 0 | 41 | 41 | Galice | RO258 | 0 | 0 | 0 | 0 | 41 | 41 | 41 |
| Rogue | 7 | | Rum Creek Stewardship | T | L | GP | 210 | 0 | 0 | 0 | 0 | 210 | NLAA | N | NLAA | OR-65 | 0 | 0 | 0 | 0 | 0 | 210 | 210 | Fishhoo | RO-258 | 0 | 0 | 0 | 0 | 210 | 210 | 210 |
| Rogue | X | | Birdseye Jones | T | M | GP | 250 | 0 | 0 | 50 | 0 | 200 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Illinois | 7 | | Roadside Hazard Trees | T | M/L | GP | 5 | 0 | 0 | 2 | 0 | 3 | NLAA | Y | NE | OR-72 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | East | RO-249 | 0 | 0 | 1 | 0 | 1 | 2 | 2 |
| Rogue | 7 | | Roadside Hazard Trees | T | M/L | GP | 5 | 0 | 0 | 2 | 0 | 3 | NLAA | Y | NE | OR-65 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | Fishhoo | RO-258 | 0 | 0 | 1 | 0 | 1 | 2 | 2 |
| Rogue | 7 | | Roadside Hazard Trees | T | M/L | GP | 5 | 0 | 0 | 2 | 0 | 3 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Applegate | 7 | | Roadside Hazard Trees | T | M/L | GP | 5 | 0 | 0 | 2 | 0 | 3 | NLAA | Y | NE | OR-72 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | East | RO-249 | 0 | 0 | 1 | 0 | 1 | 2 | 2 |
| Applegate | X | | North Murphy Fuels | F | M | GP | 80 | 0 | 0 | 0 | 0 | 80 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Applegate | 7 | | Williams Biomass NFP- | F | M | GP | 30 | 0 | 0 | 0 | 0 | 30 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Illinois | 7 | | Misc. Forest Products | T | M | GP | 10 | 0 | 0 | 0 | 0 | 10 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | 7 | | Misc. Forest Products | T | M | GP | 10 | 0 | 0 | 0 | 0 | 10 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | 7 | | Misc. Forest Products | T | M | GP | 10 | 0 | 0 | 0 | 0 | 10 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Applegate | 7 | | Misc. Forest Products | T | M | GP | 10 | 0 | 0 | 0 | 0 | 10 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL | | | | | | | 18,664 | 0 | 0 | 11,455 | 0 | 7,209 | | | | | 0 | 0 | 0 | 1,418 | 0 | 434 | 1,852 | | | 0 | 0 | 733 | 0 | 289 | 1,022 | |

Projects that occur before June 30 (N) would be NLAA because RA bios implement PDCs at the project level

Instructions: Include only yr 7 and x projects. Report year as 7 (for 2007 fiscal year). Put calendar year or X for previous projects from previous consultations. T&M is Treat and Maintain (not "degrade". Sorted by RA then project type. Make sure All FUELS are separate and cor

Count footprint of fuels project once (not for each entry). Timbersales include all parts of project from planning to successful replant--count acres once for entire thing. Veg treatment: count footprint of treatment for each entry. Habitat acres (yellow) is total of all acres of NRF and

This spreadsheet shows NLAA projects for FY 07 that occur in NON habitat.
Note you need to make an effects call for CHU AND NSO and both must be NLAA or one NLAA and one NE.
Projects listed as being completed before June 30 are NLAA because site-specific PDC compliance (distance, surveys, non-nesting etc) will avoid any likely disturbance

| | | | | | | | OWL HABITAT | | | | | | | | | CHU HABITAT | | | | | | | | | LSR Habitat | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | List total habitat acres ( LSR, CHU, MATRIX) | | | | | | | | | List acres of project that occur in CHU only. | | | | | | | | | List all acres of project that occur in LSR | | | | | | | |
| Section 7 Watershed | Year 7 or X for previous yrs) | Column will be used later | Project ID | Project Type (f-fuels, v-veg, t-timber, o- | Land allocation | RA | Habitat acres | NRF remove | NRF dwngrd | NRF T&M | Disp remove | Disp T&M | OWL EFFECT--ck for LAA dist | Project will occur after June 30 (Y/N) | CHU EFFECTS | CHU | NRF remove | Regen part of NRF remove | NRF dwngrd | NRF T&M | Disp remove | Disp T&M | all CHU acres | LSR Name | LSR# | NRF remove | NRF dwngrd | NRF T&M | Disp remove | Disp T&M | all LSR acres | |
| Cow U | | | Fuels | F | M/L | GL | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | OR-32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Galesville | RO-223 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Cow U | 7 | | Silviculture | V | M | GL | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Cow U | X | | Road | O | M | GL | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y/N | NE | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue L | X | | Fuels | F | M/L | GL | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | OR-65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Fishhook | RO-258 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue L | 7 | | Silviculture | V | M | GL | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue L | X | | Road | O | M | GL | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y/N | NE | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue M | X | | Fuels | F | M | GL | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue M | 7 | | Silviculture | V | M | GL | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue M | X | | Road | O | M | GL | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y/N | NE | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Little Butte | X | | Road | O | M | BF | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y/N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Little Butte | 7 | | Misc. | O | M | BF | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Little Butte | 7 | | Fuels | F | M | BF | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Little Butte | X | | Silviculture | V | M | BF | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue M | X | | Road | O | M | BF | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y/N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue M | 7 | | Misc. | O | M | BF | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue M | 7 | | Fuels | F | M | BF | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue M | X | | Silviculture | V | M | BF | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue U | X | | Camp Stew | T | M | BF | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue U | X | | Road | O | M | BF | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y/N | NE | OR-34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Elk Ck. | RO-224 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue U | 7 | | Misc. | O | M | BF | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Rogue U** | 7 | | **Fuels** | **F** | **M** | **BF** | **0** | **0** | **0** | **0** | **0** | **0** | **NLAA** | **Y** | **NE** | **not** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **NOT** | **not** | **0** | **0** | **0** | **0** | **0** | **0** | |
| Rogue U | X | | Silviculture | V | M | BF | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Elk Ck. | RO-224 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue M | X | | Road | O | M | AS | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y/N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue M | X | | Silviculture | V | M | AS | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue M | X | | Fuels | F | M | AS | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Bear | 7 | | Sundance | O | M | AS | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | OR-38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Little Butte | X | | Road | O | M | AS | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y/N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Little Butte | 7 | | Sports Car | O | M | AS | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Little Butte | X | | Plantation | T | M | AS | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NLAA | OR-38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Little Butte | X | | Silviculture | V | M | AS | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Applegate | X | | Applegate | F | A | AS | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Applegate | X | | Applegate | V | A | AS | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Applegate | X | | Road | O | A | AS | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Applegate | 7 | | Silviculture | V | M/L | GP | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Applegate | 7 | | Road | O | M/L | GP | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Illinois | 7 | | Silviculture | V | M/L | GP | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Illinois | 7 | | Road | O | M/L | GP | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue Lowe | 7 | | Silviculture | V | M/L | GP | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue Lowe | 7 | | Road | O | M/L | GP | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue Midd | 7 | | Road | O | M/L | GP | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue Midd | 7 | | Silviculture | V | M/L | GP | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Applegate | 7 | | Fuels | F | M/L | GP | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Applegate | 7 | | Misc.Forest | O | M/L | GP | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Illinois | 7 | | Fuels | F | M/L | GP | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Illinois | 7 | | Misc. | O | M/L | GP | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue Lowe | 7 | | Fuels | F | M/L | GP | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue Lowe | 7 | | Misc. | O | M/L | GP | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue Midd | 7 | | Fuels | F | M/L | GP | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue Midd | 7 | | Misc.Forest | O | M/L | GP | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Rogue Midd | 7 | | Trail maint. | O | M/L | GP | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Illinois | 7 | | Trail maint. | O | M/L | GP | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |
| Applegate | 7 | | Trail maint. | O | M/L | GP | 0 | 0 | 0 | 0 | 0 | 0 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 | |

# United States Department of the Interior

BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT OFFICE
3040 Biddle Road
Medford, Oregon 97504
email address: or110mb@or.blm.gov

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:
6841 (OR-110)

USFWS - Roseburg Field Office

APR 30 2007

APR 27 2007

Mr. Craig Tuss
US Fish and Wildlife Service
Roseburg Field Office
2900 Stewart Parkway
Roseburg, OR 97470

Dear Mr. Tuss:

The Medford District of the Bureau of Land Management (BLM) requests the US Fish and Wildlife Service (Service) review of the attached Biological Assessment (BA) to comply with responsibilities under the Endangered Species Act of 1973 (Act), as amended, (16 U.S.C 1531 *et seq.*) and offer concurrence that the activities described in that BA "May Affect and are Not Likely to Adversely Affect (NLAA) northern spotted owls (Strix occidentalis)" and "May Affect and are Not Likely to Adversely Affect (NLAA) designated spotted owl critical habitat."

The activities under consultation are proposed to occur on the Medford BLM District through Calendar year 2008. They include NLAA projects that are not yet completed and had been evaluated under previous consultations that have been withdrawn due to litigation. The Level 1 team assisted in the writing and review of this BA. Should you require additional information, please contact Carole Jorgensen, Medford District Biologist at 541-618-2496.

Sincerely,

Timothy B. Reuwsaat
District Manager, Medford

1 Attachment
1 – Biological Assessment (39 pp)

# United States Department of the Interior

FISH AND WILDLIFE SERVICE

Roseburg Field Office
2900 NW Stewart Parkway
Roseburg, Oregon 97470
Phone: (541) 957-3474 FAX: (541)957-3475

In Reply Refer To: 8330.10133(07)
Filename: MED BLM LOC
Tails #: 13420-2007-I-0133
TS#: 07-1492

May 23, 2007

**Memorandum**

To: District Manager, Medford District Office of the Bureau of Land Management, Medford, Oregon.

From: Craig A Rieus
Field Supervisor, Roseburg Fish and Wildlife Office, Roseburg, Oregon.

Subject: Endangered Species Act Section 7 Consultation regarding Calendar Year 2007 through 2008 Activities that may affect northern spotted owls (*Strix occidentalis caurina*) (spotted owl) and designated spotted owl critical habitat on Public Lands administered by the Medford District Office of the Bureau of Land Management.

After reviewing your April 27, 2007 request for written concurrence, along with the associated Biological Assessment, we have determined that prior to issuing a letter of concurrence; we will require additional specificity on the projects proposed. In particular, please provide us with the following specific information for each individual project proposed: project name; project location, by watershed; project treatment type and description; project acreage and type of owl habitat affected within each land use allocation and designated critical habitat; and seasonal timing of each project.

We look forward to working with you and your staff to expeditiously complete this consultation. If you have any questions regarding this matter please contact me at (541) 957-3470.

cc: Terry Rabot, FWS-RO, Portland, (e)

# United States Department of the Interior

FISH AND WILDLIFE SERVICE

Roseburg Field Office
2900 NW Stewart Parkway
Roseburg, Oregon 97470
Phone: (541) 957-3474 FAX: (541)957-3475

In Reply Refer To:8330.I0133(07)
Filename: MED BLM LOC 6-13-2007.doc
Tails #: 13420-2007-I-0133
TS#: 07-1492
Xref: 1-7-01-F-032, Xref: 1-15-03-F-511
Xref: 1-15-05-I-582, Xref: 1-15-05-F-0581
Xref: 1-15-06-I-165

June 13, 2007

**Memorandum**

To: District Manager, Medford District BLM, Medford, Oregon.

From: Field Supervisor, Roseburg Fish and Wildlife Office, Roseburg, Oregon.

Subject: Endangered Species Act Section 7 Consultation regarding Calendar Year 2007 Activities that may affect Listed Species on Public Lands administered by the Medford District of the Bureau of Land Management

This responds to your April 27, 2007 request for the U.S. Fish and Wildlife Service's (Service) written concurrence on the Medford District of the Bureau of Land Management's (District) determination that the District's proposed forest management activities for calendar year 2007 may affect, but are not likely to adversely affect the threatened northern spotted owl (*Strix occidentalis caurina*) (spotted owl) and its designated critical habitat. We received your April 27, 2007 request for concurrence and a Biological Assessment (Assessment) on April 30, 2007 (USDI-BLM 2007). This response was prepared in accordance with the implementing regulations for section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1536 *et seq.*) (Act), as amended, and is based on information provided in the Assessment, phone discussions and meetings between Service and District staff.

## CONSULTATION HISTORY

Many of the activities included in the subject proposed action, which considered effects to the spotted owl and its critical habitat, were addressed in previous concurrence documents. For some actions, the concurrences were embedded in the corresponding biological opinions (log #s 1-7-01-F-032 and 1-15-03-F-511) (USFWS 2001 and 2003a). For other activities, the Service completed two stand-alone concurrence letters (log #s 1-15-0-I-582 and 1-15-06-I-165) (USFWS 2005a and 2006b).

On October 12, 2001, the Service issued a no-jeopardy-no-adverse-modification biological opinion with an imbedded letter of concurrence addressing actions that the District determined may affect, but are not likely to adversely affect spotted owls or their designated critical habitat for fiscal year (FY) 2001-2003 timber sale projects (log # 1-7-01-F-032) (USFWS 2001).

On October 20, 2003, the Service issued a no-jeopardy-no-adverse-modification biological opinion with an imbedded letter of concurrence addressing actions that the District determined may affect, but are not likely to adversely affect spotted owls or their designated critical habitat to the District for FY 2004-2008 timber sale projects and non-timber sale projects (log # 1-15-03-F-511) (USFWS 2003a).

On July 28, 2005, the Service issued a letter of concurrence to the District regarding timber sale projects that may affect spotted owls and spotted owl critical habitat (log # 1-15-05-I-582) (USFWS 2005a).

On August 31, 2005, the Service issued a no-jeopardy-no-adverse-modification biological opinion to the District regarding activities that may affect spotted owls and designated critical habitat for proposed actions in the Rogue River Basin (log # 1-15-05-F-0581) (USFWS 2005b).

On August 21, 2006, the Service issued a no-jeopardy-no-adverse-modification biological opinion to the District regarding FY 2006-2008 timber sale projects and non-timber sale projects (log # 1-15-06-F-162) (USFWS 2006b).

On August 22, 2006, the Service issued a letter of concurrence to the District regarding FY 2006-2008 timber sale projects and non-timber sale projects (log# 1-15-06-I-165) (USFWS 2006b).

On March 1, 2007, the Incidental Take Statement (ITS) of the August 31, 2005, biological opinion (log # 1-7-01-F-0581) was withdrawn by the Service in response to the Ninth Circuit Court of Appeals decision in the ONRC v Allen case (No. 35830), which invalidated the ITS (USFWS 2005b). After further review, On March 13, 2007, we withdrew the entire biological opinion as it pertains to the spotted owl and spotted owl designated critical habitat.

The following biological opinions were also withdrawn by the Service in response to the Ninth Circuit Court of Appeals decision in the ONRC v Allen case:

- On March 15, 2007 the Service withdrew and requested re-initiation of biological opinion (log # 1-15-03-F-0511) (USFWS 2003a) as related to spotted owls.

- On March 26, 2007 the Service withdrew and requested re-initiation of biological opinion (log # 1-15-06-F-0162) (USFWS 2006a) and letter of concurrence (log # 1-15-06-I-0165) (USFWS 2006b) as related to spotted owls.

- On May 3, 2007 the Service withdrew and requested re-initiation of biological opinion (log # 1-7-01-F-032) (USFWS 2001) as related to spotted owls.

On April 30, 2007, the Service received a request for concurrence, dated April 27, 2007. Included with the request was the Assessment.

On May 23, 2007 the Service submitted a letter to the District requesting specific information for each individual proposed project. The Service received the District's response to the request on May 30, 2007.

## DESCRIPTION OF THE PROPOSED ACTION

The Assessment includes a detailed description of the proposed action, and is herein incorporated by reference. Table 1 describes activity types and descriptions of the proposed action. For additional information regarding specific projects proposed and described by the District, see Appendix A.

Please note the term "degrade" has been replaced by the terms "suitable or dispersal maintained" (see Definitions section below). This change in terminology reflects the need to avoid confusion with the common usage of the word degrade and to better describe the types of activities that have insignificant effects on spotted owl habitat. Although activities encompassed under this definition may result in a change to stand structure, the functionality of habitat for use by spotted owls remains intact (USFWS in prep. 2007).

### Project Design Criteria

PDC are conservation measures developed to reduce impacts to listed species. Conservation measures may include implementation of seasonal restrictions to reduce impacts during critical breeding seasons, retention of known nest trees and/or restricting activities within a certain distance of know sites to reduce impacts of disturbance. Mandatory PDC will be applied to all activities associated with this proposed action. Recommended PDC will be incorporated during project implementation when practical. Detailed descriptions of the PDC, as provided by the District, are provided in Appendix B.

## DESCRIPTION OF THE ACTION AREA

The Action Area is defined in the implementing regulations for section 7 of the Act as all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action (50 CFR 402). For this consultation, the action area includes all public lands managed by the District, as well as all areas subject to increased ambient noise levels caused by activities associated with the proposed action.

**Table 1: Proposed Action.**

| Project Category | Estimated Scope—Acres, Land Use Allocations | |
|---|---|---|
| **Habitat Modification** | | |
| **Treatment Type** | **Suitable (NRF[1]) Habitat Maintained (acres)** | **Dispersal Habitat Maintained (acres)** |
| Harvest:Activities: (includes stewardship, forest products, hazard tree removal, selection harvest, and Port Orford Cedar (POC) sanitation treatments). | **1,515** | **1,664** |
| LSR[2] Subset | 483 | 279 |
| CHU[3] Subset | 1,133 | 284 |
| Vegetation Management: (includes Fuels Reduction Projects, pre-commercial thinning, brushing, pruning, site preparation, and POC sanitation treatments). | **9,940** | **5,545** |
| LSR subset | 250 | 10 |
| CHU subset | 280 | 150 |

| Project Category | Description |
|---|---|
| Harvest treatments designed to treat and maintain existing spotted owl habitat | ▪ Selection harvest, thinning, salvage, stewardship projects, small pole sales, including some special forest products. Timber harvest could occur across all land use allocations and within designated spotted owl CHUs.<br>▪ Hazard trees may be treated along roads as safety requires, and are reported under timber. Not all hazard trees are sold. Many will be left on site to function as down wood. No spotted owl nest trees would be removed. Hazard trees could occur in any section 7 watershed, designated spotted owl CHUs or LSR.<br>▪ Project Design Criteria (PDC) apply (Appendix B). |
| Mining and quarry operations | ▪ Notice-level operations: 10. Plan-level operations: 3, with no more than 40 acres total. Rock permits (existing quarries): 50; No new quarries are planned in 2007. Mine reclamations up to 5, as money allows.<br>▪ Could occur across all land use allocations and designated spotted owl CHUs.<br>▪ PDC (Appendix B) apply. |

| Project Category | Description |
|---|---|
| Vegetation management including silviculture | ▪Pre-commercial thinning, brushing, pruning, site preparation designed to release residual trees to accelerate their growth: Acres are determined by the footprint of treatment, and may have inclusions of non-habitat.<br>▪Could occur in all land use allocations and designated spotted owl CHUs (See Tables 5, 8, & 9, and Appendix A).<br>▪ Understory brush treatments, thinning of overly dense trees, reduction of ladder fuels, pile-and-burn, under burn or occasionally broadcast burn.<br>▪ Overall goals of vegetation management are to restore young stands to conditions that are more ecologically sustainable. In many cases, the goal is to create structural conditions that would be expected prior to the suppression of wild fire, i.e., more open stands with less brush and dense understory.<br>▪ Planting: 6,150 acres.<br>▪ The Matrix land use allocation would be emphasized for planting and site preparation following timber sales. Treatments in LSR would be designed to improve LSR conditions.<br>▪ PDC (Appendix B) apply. |
| Watershed/ riparian restoration | ▪ Stream structures: 15 structures. Culvert replacement/repair: 12 large fish passage culverts; 50 cross-culverts.<br>▪ Riparian Restoration 100 acres.<br>▪ General wildlife enhancement: Tree top blasting; snag development: Up to 500 trees in 2007.<br>▪ Could occur across all land allocations and designated spotted owl CHUs. Emphasis in riparian reserves and LSR.<br>▪ PDC (Appendix B) apply. |
| Recreation | ▪ Facility development— construction or reconstruction could occur on up to 50 acres. Estimate no more than 10 projects.<br>▪ Trail maintenance/campgrounds: 100 miles and 50 acres of campgrounds and other facilities.<br>▪ New trail construction: 10 miles.<br>▪ Could occur across all land use allocations and CHU.<br>▪ Sports car road race. 1 event.<br>▪ Limestone Challenge special recreation permit to hold a one-day equestrian event (plus 1-3 days for preparation) for approximately 30-60 participants using BLM land and BLM-owned and controlled roads.<br>▪ PDC (Appendix B) apply |
| Road maintenance and construction (outside of timber sales) | ▪ Up to 500 miles of road maintenance and repair.<br>▪ Reconstruction and maintenance of existing roads and existing Rights of Way's (ROW). Some potential of hazard tree removal (see timber). Up to two miles of ditches could be installed and five miles of ditches repaired. Some narrow utility trenching.<br>▪ Perpetua ROW road construction, within the Glendale Resource Area in the Matrix LUA and CHU OR-32. Any greater impacts would be reported under tree harvest.<br>▪ ROW projects implemented: Could occur across all land use allocations and designated spotted owl CHUs.<br>▪ PDC (Appendix B) apply. |

[1]Nesting, Roosting Foraging Habitat; [2]Late Successional Reserve; [3]Critical Habitat Unit; [4]Project Design Criteria

## EFFECTS OF THE ACTION

### Definitions

The following terms are used in this analysis:

*Spotted owl suitable habitat*: consists of stands used by spotted owls for nesting, roosting and foraging. Generally these stands are conifer-dominated, 80 years old or older, multi-storied in structure, and have sufficient snags and down wood to provide opportunities for spotted owl nesting, roosting and foraging. The canopy closure generally exceeds 60 percent. This may alternatively be referred to as nesting, roosting, and foraging (NRF) habitat throughout this document.

*Spotted owl dispersal habitat*: consists of stands which support spotted owl movement across the landscape but lacks the optimal structural characteristics to support nesting. At a minimum, dispersal habitat is comprised of conifer and mixed mature conifer-hardwood habitats with a canopy cover greater than or equal to 40 percent and conifer trees greater than or equal to 11 inches average diameter breast height (dbh). Generally, spotted owls use dispersal habitat to move between blocks of suitable habitat, roost, forage and survive until they can establish a nest territory. Juvenile spotted owls also use dispersal habitat to move from natal areas.

*Disturbance distance*: the distance from the project boundary outward within which the action is likely to cause a spotted owl, if one was present, to be distracted from its normal activity (**Error! Reference source not found.**2).

*Disruption distance*: the distance from the project boundary outward within which the action is likely to cause a spotted owl, if one was present, to be distracted to such an extent as to significantly disrupt its normal behavior and create the likelihood of injury. The disruption distance is a subset of the disturbance distance (Table 2).

*Spotted owl suitable or dispersal habitat-maintained*: refers to spotted owl habitat affected by silvicultural activities that alter forest stand characteristics but maintain the components of spotted owl habitat within the stand such that spotted owls can continue to have their life history requirements supported (i.e., the function of habitat for use by spotted owls remains intact post silvicultural activity).

For spotted owl suitable habitat (also known as NRF) this means a canopy cover of greater than 60 percent within affected stands along with other habitat elements, including snags, down wood, tree-height class-diversity, and older hardwoods. These habitat elements will be maintained post silvicultural activity, in accordance with the District's RMP (USDI BLM 1995), and in a manner that adequately provides for spotted owl nesting, roosting, and foraging within the stand.

For spotted owl dispersal-only habitat, this means a post-project canopy cover of greater than 40 percent within affected stands along with other habitat elements, such as snags, down wood, tree-height class-diversity, and older hardwoods. These habitat elements will be maintained post project in accordance with the District's Resource Management Plan (RMP) (USDI BLM 1995).

The administrative unit biologist, in collaboration with interdisciplinary team members, the District's Resource Area staff, and the District Manager, is responsible for ensuring that proposed silvicultural activities that are described as being in this category will maintain the characteristics of spotted owl suitable and dispersal habitat in affected stands for each site-specific action. In addition, in the case of suitable-maintained, the administrative unit biologist makes recommendations to the appropriate decision makers responsible for assessing the juxtaposition[1] of the affected stand within the surrounding forest landscape to ensure appropriate effects to spotted owls are documented.

The term "degrade"[2] is being replaced by "suitable or dispersal-maintained" to avoid the incorrect perception that this category of silvicultural activities is likely to cause changes in the function of spotted owl habitat within affected stands. The Service tracks, in the spotted owl database, what was formerly called degraded suitable habitat and what will now be called suitable-maintained habitat. Because suitable-maintained habitat activities result in the maintenance of the components within the stand that support spotted owl nesting, roosting, and foraging, these affected acres are not subtracted from the suitable habitat baseline, but are tracked to monitor effect determinations. On the other hand, dispersal-maintained habitat, formerly called dispersal degraded habitat, has not been tracked in the database because the components of dispersal spotted owl habitat are maintained, which allows spotted owl dispersal through the area, post treatment, and the effect calls are always not likely to adversely affect. One of the main threats to the spotted owl is the past and continued loss of habitat due to timber harvest across its range. The effects of habitat modification activities on spotted owl habitat depend upon the type of silvicultural prescriptions (e.g., clearcut, shelterwood, heavy to light thinning) used and the location of the harvest relative to suitable habitat. For example, much anecdotal evidence and a few limited studies have demonstrated that spotted owls will continue to use their habitat subsequent to light-moderate thinning (See Habitat Effects on page 8).

*Implementation of project/activity*:

- Sale date: For timber harvest activities that will be sold in FY 07;
- Letter of Concurrence date for uncompleted timber harvest activities that were sold in previous years, evaluated under previous consultations, and will be implemented under this LOC.
- For activities with a fiscal year (FY) 2007 Decision Record, the date of the Decision Record.
- For uncompleted activities (other than harvest activities) that were evaluated under previous consultations identified in the Consultation History section of this document, implementation will occur following signature of this LOC.

[1] Site-specific information may reveal a local concern for a spotted owl pair that is relying on the harvest unit. An example: a spotted owl pair's home range contains sub optimal levels of foraging habitat that any impact, even when minor, may contribute to the inability of the spotted owl pair to support successful reproduction.

[2] This change in terminology replaces the word degrade and its definition as used in the Biological Assessment in order to avoid confusion with the common usage of degrade and to better describe the types of activities that have insignificant effects on spotted owl habitats. Although activities encompassed under this definition may result in a change to stand structure, the functionality of habitat for use by spotted owls remains intact (Service in prep. 2007).

**Table 2: Disturbance/Disruption Distances for Northern Spotted Owls during the Breeding Period (March 1 – September 30) (see PDC Appendix B).**

| Type of Activity | Distance at which spotted owl may flush or abort a feeding attempt |
|---|---|
| a blast larger than 2 pounds of explosives | 1 mile |
| a blast of 2 pounds or less | 120 yards |
| an impact pile driver, a jackhammer, or a rock drill | 65 yards |
| a helicopter or a single-engine airplane | 120 yards for small helicopters;<br>0.25 miles for Type 1 or 2 helicopters |
| chainsaws (hazard trees, pre-commercial and commercial thinning) | 65 yards |
| heavy equipment | 35 yards |

## Habitat Effects

Available scientific literature provides support for the finding that forest stands can be altered in a manner that does not necessarily change the habitat function for spotted owls (e.g., Forsman *et al*. 1984, Service in prep. 2007; see discussion below). Examples of activities that may fall into this category are light-moderate thinning, salvage, individual tree removal, mechanical fuels removal, and prescribed burning.

Forsman *et al*. (1984) noted that of the spotted owl pairs found in old-growth or mixed old-growth and mature forests, four pairs occupied stands that had been selectively logged prior to the initiation of the study and nine pairs occupied stands that were selectively logged after they were first located. In their study, selective logging is a harvest method in which canopy density is reduced by removing some of the overstory trees. The understory is either left intact or thinned. Of the four pairs occupying previously logged sites, three nested in stands that had been logged 30-40 years earlier. The nest of the fourth pair was in an unharvested old-growth stand, 5 meters from the edge of an area that had been selectively logged about 10 years earlier. In the former stands, young trees had since filled in many of the openings created by harvest, resulting in multilayered stands that were similar to unlogged old-growth stands except that the density of over-story trees was reduced.

Forsman *et al.* (1984) also found that of the nine sites that were selectively logged after the spotted owls were located, seven sites were subjected to relatively light overstory removal and two were "heavily" thinned. At six of the seven sites subjected to light overstory removal, timber sales were laid out so that a small patch (2.6-10 hectares) of unlogged, old-growth was left around the nest tree of the resident spotted owls. On the latter sites, three pair subsequently used their old nest trees in one or more years following harvest. The other three pairs remained in the same general areas after harvest, but the researchers were unable to document nesting. On the two sites where overstory and understory trees were heavily thinned, the spacing between the trees in the spotted owl nest areas increased from 10-20 meters as a result of the harvest. Canopy closure was reduced to less than 50 percent. One of these spotted owl pairs subsequently disappeared. The other pair shifted their activities to an unlogged old-growth stand bordering the

harvested area; a new nest was located in the unlogged area four years after harvest of the original nest area.

Irwin *et al*. (1989) reported that many private forest managers in northern California observed spotted owl pairs nesting successfully following partial harvest that retained relatively continuous forest canopies and important structures believed to influence spotted owls and/or their prey. Unfortunately, Irwin *et al*. (1989) provided no information on the age or structure or canopy cover of the stands to ascertain the magnitude of the thinning or remaining structures.

King (1993) compared vegetation characteristics between spotted owl use sites (foraging and roosting) and random sites in the Eastern Cascades, Washington on managed forests in the Yakama Indian Reservation. Nearly all stands in the study area had been selectively harvested a few years prior to the study (uneven age management). According to the authors, spotted owls used sites within the managed forests that retained higher canopy cover. However, the authors did not provide quantitative stand information to determine the extent of the thinning or retained structures.

Buchanan *et al*. (1995) reported that partial harvesting had occurred at 23 percent of 83 nest sites where spotted owl had reproduced successfully in prior years in the eastern Washington Cascades. The harvests there apparently occurred 40 or more years prior to the study, so it was unknown if the managed stands had been used by spotted owls continually.

Hicks *et al.* (1999) conducted telemetry work on 14 spotted owls. The authors documented the 14 spotted owls occasionally roosted in stands recently managed, either through selective harvest or pre-commercial thinning. In both cases the spotted owls were found in the managed stand within six months after ground operations. The partial harvest occurred in an older stand in which larger over-story trees were removed to release suppressed trees of moderate age. Pre-commercial thinning occurred over a large area immediately adjacent to the nest stand of one pair of spotted owls. The male from this pair territory was observed in the thinned forest on several occasions. Very little stand information was provided by Hicks *et al.* (1999) to conclude the extent of the thinning.

Irwin *et al*. (2005) is in the progress of evaluating spotted owl fidelity to home ranges following silvicultural treatments and relative use of specific forest stands that received silvicultural treatments. To date, at least 19 thinning and partial harvest (implemented with varying landowner objectives and densities of retained trees) treatments in young stands, foraging habitat, have occurred in spotted owl home ranges within their study area(s). Preliminary results suggest that while some seasonal movements occurred outside of breeding season home ranges, Irwin *et al* (2005) found that no spotted owls vacated their home ranges after treatments were applied. For the only two case examples provided in Irwin's progress report, spotted owl use frequency of stands pre- and post-treatment remained similar. The pre- and post-harvest conditions have not yet been measured for most of their study areas, although, canopy retention was above 60 percent.

Studies by Miller 1989 and Miller *et al*. (1997) provide information on habitat use by dispersing juvenile spotted owls. Although Miller's studies do not directly address the relationship between

habitat thinning and dispersal, he found spotted owl dispersal use of open sapling-pole stands (2.5 to 53 cm dbh and > 40 % and < 60% closure), supporting the use of the 40 percent canopy cover value for dispersal habitat.

Based on the above information, the Service concludes actions affecting

- Spotted owl NRF habitat within a stand that retains at least 60 percent canopy cover and other spotted owl habitat elements such as snags, down wood, tree species and height diversity post-treatment, and contains the presence of a hardwood element are not likely to cause any adverse effects to the spotted owl because the affected stand is likely to adequately provide for spotted owl nesting, roosting, and foraging activities; and,
- Spotted owl dispersal habitat within a stand that retains at least 40 percent canopy cover along with other habitat elements, such as snags, down wood, tree-height class-diversity, and older hardwoods is likely to adequately provide for spotted owl dispersal.

**Effects of the Action on Spotted Owl NRF Habitat**

The District proposes to treat up to 11,455 acres of NRF habitat through various vegetation management activities. Detailed descriptions of the individual treatments may be found in the Assessment (USDI-BLM 2007). Proposed projects will occur in seven section 7 watersheds (hydrologically defined units) (watersheds) (Table 3).

**Table 3: Effects to Spotted Owl NRF Habitat within the Action Area by Watershed.**

| Section 7 Watershed | Federal NRF Habitat Acres in Watershed[1] | Acres of Treatment[2] | Percent of NRF habitat treated |
|---|---|---|---|
| Applegate | 114,362 | 1,424 | 1.25 |
| Cow Upper | 43,657 | 885 | 2.02 |
| Illinois | 135,772 | 4,802 | 3.54 |
| Little Butte Creek | 39,719 | 15 | 0.03 |
| Rogue Lower Wild | 105,073 | 17 | 0.02 |
| Rogue Middle | 88,774 | 4,302 | 4.85 |
| Rogue Upper | 180,071 | 10 | 0.01 |
| **Total** | **745,422** | **11,455** | **1.54** |

1 From 06-08 BA Environmental Baseline Tables, USDA/USDI 2006, 2. From spreadsheet Appendix A.

Types of projects scheduled to occur within NRF habitat include:

Vegetation treatments, including silviculture and fuels reduction.
Some vegetation treatments are designed to reduce the severity and rate of spread of large, stand-replacement fires that could adversely impact spotted owl habitat. Other treatments are designed to improve the health of trees remaining post-treatment. These activities will be dispersed across the Action Area both spatially and temporally to reduce disproportionate impacts to an individual area. Fuels reduction projects that include prescribed fire can also stimulate forage plants, such as young conifer saplings and a variety of shrub, herbs and grass species, important to spotted owl prey. Fuels reduction projects can help restore ecological health in stands that would normally experience high fire frequency in the absence of effective wildland fire suppression.

Harvest treatments.
Selective harvest treatments or stewardship projects consist of light-moderate thinning which would maintain a canopy cover, at the stand level, of no less than 60 percent. Selective harvest may affect NRF habitat by removing some horizontal and vertical structure. Features such as nest trees, multi-layered canopies, and dead and down wood that support prey species habitat will remain within a given project area post-harvest, retaining the ability to provide for the nesting, roosting, foraging and dispersal of spotted owls.

Road maintenance and hazard tree removal that maintains habitat.
Road maintenance or hazard tree removal activities will be dispersed across the Action Area both spatially and temporally. Hazard tree removal will consist primarily of single tree removal along the District's extensive road system. Most of these activities would occur along the road prism and would focus on individual trees. At the specific project level, depending on the situation, some road work, including hazard tree removal may have no effect. There might be some heavy equipment or chainsaw use for short periods of time, but these activities would be scheduled to avoid adverse disturbance impacts. Any road work that could not avoid adverse effects would be analyzed in a separate consultation. The spreadsheet in Appendix A identifies a number of potential hazard tree treatments in each watershed, critical habitat unit (CHU) and late-successional reserve (LSR). These events cannot be predicted in great detail in advance, however, these activities have historically occurred in isolated areas, are isolated temporally and unlikely to occur within each watershed, CHU or LSR unit.

Fish habitat improvement projects.
The fish habitat improvement projects analyzed in the Assessment are designed to maintain spotted owl NRF habitat as well as avoid disturbance to spotted owls. They may include culvert repair/replacement, road restoration or decommissioning, slope stabilization, upland habitat improvement projects, and in-stream habitat improvement projects. Individual treatments may consist of tree lining/felling, as well as down wood and snag creation that would contribute to the maintenance of spotted owl NRF habitat. Expected activities and effects specific to roads are evaluated under road construction and maintenance (above). Any potentially disturbing impacts from these proposed projects to spotted owls would be reduced by the application of mandatory PDC (Appendix B).

Table 4 displays the number of acres of the above treatments in spotted owl NRF habitat by individual section 7 watersheds.

**Table 4: Treatment Types in Spotted Owl NRF habitat by Section 7 Watersheds.**

| Section 7 Watershed | Fuels/Vegetation Management Treatment Acres[1] | Harvest Treatment Acres[1] | Road Maintenance/ Hazard Tree Removal Treatments[1] | Fish Habitat Improvement Treatments[1] | Total Treatment Acres |
|---|---|---|---|---|---|
| Applegate | 520 | 822 | 22 | 60 | 1,424 |
| Cow Upper | 400 | 470 | 15 | 0 | 885 |
| Illinois | 4,800 | 0 | 2 | 0 | 4,802 |
| Little Butte Creek | 0 | 0 | 15 | 0 | 15 |
| Rogue Lower Wild | 0 | 0 | 17 | 0 | 17 |
| Rogue Middle | 4,160 | 50 | 92 | 0 | 4,302 |
| Rogue Upper | 0 | 0 | 10 | 0 | 10 |
| **Total** | **9,880** | **1,342** | **173** | **60** | **11,455** |

1 From spreadsheet Appendix A.

The Medford District Manager, after detailed analysis by Resource Area Biologists and Field Managers has determined effects to spotted owls caused by the above harvest treatments within spotted owl NRF habitat will be insignificant because the location, type, and timing of these activities have been designed to maintain the function of spotted owl habitat and are likely to achieve the following outcomes:

1. Overall canopy cover of affected NRF habitat timber stands will be maintained at 60 percent or greater.
2. Existing decadent woody material, such as large snags and down wood will remain post-treatment.
3. Existing multi-canopy, uneven aged tree structure will remain post-treatment.
4. Treatments will be dispersed both spatially and temporally across the action area.
5. No spotted owl nest trees will be removed.

The following beneficial effects may be realized as a result of implementation of the proposed action:

1. Vegetation treatments will improve ecological health of the stand, reduce the chance of tree loss due to suppression mortality, and will reduce the intensity and risk of wildfire by removing excess fuels.
2. Application of mandatory PDC will avoid adverse disturbance to spotted owls.

For the above reasons, the Service concurs with the District's finding that these proposed treatments are not likely to adversely affect the spotted owl.

**Effects to Late Successional Reserves (LSRs)**

NRF Habitat

Up to 733 acres of management activities are proposed within spotted owl NRF habitat in three individual LSRs (Table 5). These treatments have been designed to contribute to the development of late seral forest conditions and maintain or improve existing spotted owl habitat (see definitions above).

**Table 5: Effects to spotted Owl NRF Habitat in Individual Late Successional Reserves**.

| Late-Successional Reserve | Total NRF Habitat Federal Acres[1] | Fuels/Vegetation Management Treatment Acres[2] | Harvest Treatment Acres[2] | Road Maintenance/ Hazard Tree Removal Treatments[1] | Total NRF Acres Treated | Percent NRF Habitat Treated |
|---|---|---|---|---|---|---|
| RO223 | 33,804 | 0 | 470 | 10 | 480 | 1.42 |
| RO249 | 40,224 | 0 | 2 | 0 | 2 | 0.005 |
| RO258 | 33,641 | 250 | 1 | 0 | 251 | 0.74 |
| **Total** | **107,669** | **250** | **473** | **10** | **733** | **0.68** |

1 Table C-1, 06-08 Assessment (USDA/USDI 2006), 2 From spreadsheet Appendix A.

The Medford District Manager, after detailed analysis by Resource Area Biologists and Field Managers has determined, as set forth in the Assessment, that the above proposed treatment of 733 acres of NRF habitat in three individual LSR units will have insignificant effects to the nesting, roosting, and foraging of spotted owls within the action area due to the location, type, and timing of these activities, and because projects have been designed to maintain the function of spotted owl habitat. Project implementation is likely to achieve the following outcomes:

1. NRF habitat canopy cover will be maintained at 60 percent or greater.
2. Existing decadent woody material, such as large snags and down wood will remain post-treatment.
3. Any multi-canopy, uneven aged tree structure that was present prior to the treatment will remain post-treatment.
4. Treatments in NRF habitat will be dispersed spatially throughout the three affected LSRs within the Action Area.
5. No spotted owl nest trees will be removed.
6. Application of mandatory PDC will avoid disturbance to spotted owls.

The following beneficial effects may be realized as a result of implementation of the proposed action:

1. All LSR treatments are designed to maintain or improve late successional objectives, in accordance with the Northwest Forest Plan (USDA-USDI 1994).
2. Thinning and vegetation management will help accelerate the stand towards conditions more favorable to spotted owls and other late-successional species.

3. Vegetation management treatments will improve ecological health of the stand, reduce the chance of tree loss due to suppression mortality, and will reduce the intensity and risk of wildfire by removing excess fuels.

For the above reasons, the Service concurs with the District's finding that these proposed treatments are not likely to adversely affect the spotted owl.

**Effects to Spotted Owl Dispersal-only Habitat**

The District proposes to treat up to 7,209 acres of spotted owl dispersal habitat through various activities. Detailed descriptions of the individual treatments may be found in the Assessment (USDI-BLM 2007), which is herein incorporated by reference. These projects will occur in nine watersheds, and will affect up to 0.63 percent of the extant 1,138,680 acres of dispersal habitat within those affected watersheds (Table 6).

**Table 6: Spotted Owl Dispersal Habitat Treated by Section 7 Watershed.**

| Section 7 Watershed | Federal Acres of Dispersal Habitat[1] | Dispersal Habitat Treatment Acres[2] | Percent of habitat treated. |
|---|---|---|---|
| **Applegate** | 192,550 | 854 | 0.44 |
| **Bear** | 31,526 | 25 | 0.002 |
| **Cow Upper** | 52,471 | 5 | 0.009 |
| **Illinois** | 210,183 | 2,493 | 1.19 |
| **Klamath** | 32,628 | 25 | 0.08 |
| **Little Butte** | 54,093 | 65 | 0.12 |
| **Rogue Lower Wild** | 138,273 | 439 | 0.3 |
| **Rogue Middle** | 134,917 | 2,883 | 2.14 |
| **Rogue Upper** | 292,039 | 420 | 0.14 |
| **Total** | **1,138,680** | **7,209** | **0.63** |

1. From 06-08 BA Appendix F, (USDA/USDI 2006), 2. From spreadsheet Appendix A.

Specific projects scheduled to occur within spotted owl dispersal habitat include:

Vegetation Management, Including Silvicultural Treatments and Fuels Reduction that Will Maintain Dispersal Habitat.

These activities usually consist of the removal of surface fuels, brush or small trees and the removal of ladder fuels or crowded conifers or hardwoods up to 12 inches in diameter. The defined components of spotted owl dispersal habitat will be retained in treated areas.

Harvest Treatments that will Maintain Dispersal Habitat

Selective harvest is planned within dispersal habitat in densely-spaced stands that provide dispersal habitat. These stands may be previously managed stands, residual mixed-age stands that have resulted from low to moderate intensity wildland fire, or could be mixed-conifer/hardwood stands that meet the criteria that 40 percent of the stand has trees at least 11 inch diameter and allows flying space but lacks NRF habitat structural components. They could also be older stands, possibly up to 120 years on average, of dense trees that are beginning to

experience suppression mortality, and are beginning to lose "flying space". These stands typically consist of little structural or tree species diversity and currently function as marginal dispersal habitat for spotted owls. Harvest in dispersal habitat is designed to promote tree growth in areas designated for timber harvest. These treatments would cause an indirect beneficial effect for spotted owls by accelerating the development of late-successional elements, such as large diameter trees, multiple canopy layers, flying space and hunting perches in the long term. The additional light in the stand improves vigor of residual trees, but can also provide light to some of the forage plants important to spotted owl prey, if structural components are retained to provide prey cover habitat. Additionally, post-project snag and coarse woody debris standards will help minimize impacts to spotted owl prey species that utilize these features.

Road Maintenance and Hazard Trees Removal

Road maintenance or hazard tree removal activities will be dispersed across the Action Area both spatially and temporally. Hazard tree removal will consist primarily of single tree removal along the District's road system. Actual acres would be much less. Most of these activities would occur along the road prism and would focus on individual trees. At the specific project level, depending on the situation, some road work, including hazard tree removal may have no effect to spotted owls. There might be some heavy equipment or chainsaw use for short periods of time, but activities would be scheduled to avoid disturbance impacts to spotted owls. Any road work that could not avoid adverse effects to spotted owls would be subject to a separate consultation.

Fish Habitat Improvement Projects

The fish habitat improvement projects analyzed in the Assessment are designed to maintain spotted owl dispersal habitat as well as avoid disturbance to spotted owls. They may include culvert repair/replacement, road restoration or decommissioning, slope stabilization, up-land habitat improvement projects, and in-stream habitat improvement projects. Individual treatments may consist of tree lining/felling, as well as down wood and snag creation that would contribute to the maintenance of spotted owl dispersal habitat. Expected activities and effects specific to roads are evaluated under road construction and maintenance (above). Any potentially disturbing impacts from these proposed projects to spotted owls would be reduced by the application of mandatory PDC.

Table 7 displays the number of acres of the above treatments by individual section 7 watersheds.

The Medford District Manager, with input from the Resource Area biologists and Field Managers, has determined effects to spotted owls as a result of the implementation of selective harvest treatments within spotted owl dispersal habitat will be insignificant for the following reasons:

1. Canopy cover will be maintained at 40 percent.
2. Existing decadent woody material, such as large snags and down wood will be maintained post-treatment.
3. No spotted owl nest trees will be removed.
4. Application of PDC will avoid disturbance to spotted owls.

**Table 7: Treatment Types in Spotted Owl Dispersal Habitat by Section 7 Watersheds.**

| Section 7 Watershed | Fuels/Vegetation Management Treatment Acres[1] | Harvest Treatment Acres[1] | Road Maintenance/ Hazard Tree Removal Treatments[1] | Fish Habitat Improvement Treatments[1] | Total Treatment Acres |
|---|---|---|---|---|---|
| Applegate | 440 | 391 | 23 | 0 | 854 |
| Bear | 0 | 25 | 0 | 0 | 25 |
| Cow Upper | 0 | 0 | 5 | 0 | 5 |
| Illinois | 2,430 | 60 | 3 | 0 | 2,493 |
| Klamath | 0 | 25 | 0 | 0 | 25 |
| Little Butte Creek | 0 | 50 | 15 | 0 | 65 |
| Rogue Lower Wild | 150 | 281 | 8 | 0 | 439 |
| Rogue Middle | 2,490 | 285 | 83 | 25 | 2,883 |
| Rogue Upper | 0 | 400 | 10 | 10 | 420 |
| **Total** | **5,510** | **1,517** | **147** | **35** | **7,209** |

1 From spreadsheet Appendix A.

The following beneficial effects may be realized as a result of implementation of the proposed action:

1. Thinned stands allowed to develop into late-seral conditions, will develop structural diversity more rapidly than un-thinned stands, because residual trees will grow faster in more ecologically-sustainable conditions.
2. Very dense stands will be opened by thinning, thereby improving conditions for dispersing spotted owls.
3. Thinning dispersal habitat could reduce the rate of spread and intensity of wildland fires common to the Action Area.
4. Treatments designed to reduce the spread of POC where POC treatments occur will improve the overall condition of treated stands.

For the above reasons, the Service concurs with the District's finding that these proposed treatments are not likely to adversely affect the spotted owl.

**Effects to Spotted Owl Prey Species**

The Assessment presents a finding that the proposed harvest and vegetation treatments are likely to maintain or improve foraging habitat conditions for spotted owl prey species. Lemkuhl *et al*. (2006) confirmed the importance of maintaining snags, down wood and mistletoe to support populations of spotted owl prey species. Gomez *et al.* (2005) noted that commercial thinning in young stands of coastal Oregon Douglas-fir (35-45 yr) did not have a measurable short-term effect on density, survival or body mass of northern flying squirrels, an important prey species

for spotted owls. Gomez *et al.* (2005) also noted the importance of fungal sporocarps, which were positively associated with large down wood.

Residual trees, snags and down wood that are retained in the thinned stands will provide some cover for prey species over time, and will help minimize harvest impacts to some prey species. Some arboreal prey species will venture into harvest units a short distance for food. Spotted owls seldom venture far into non-forested stands to hunt. However, edges can be areas of good prey availability and potentially increased vulnerability (i.e., better hunting for spotted owls) (Zabel 1995). The retained trees may respond favorably to more light and resources and gain height and canopy over time.

The proposed projects considered herein are designed to maintain existing spotted owl habitat at the stand level, and in many cases improve it by opening the stand, improving ecological sustainability and reducing fire risks. Treatments are also designed to retain habitat for spotted owl prey. Spotted owl prey animals may be more exposed in treatment areas, or may move away from the area over the short term. As prey move around in response to the proposed treatments they may become more vulnerable and exposed to predation by spotted owls. The disturbance might attract other predators such as other owls, hawks and mammalian predators, which may increase competition for spotted owls in the treatment area.

Some changes to habitat features caused by the proposed action may improve forage conditions for spotted owls, provided under-story structure and cover are retained. Removal of some tree canopy, provided it is not too extreme, will bring more light and resources into the stand, stimulating forbs, shrubs and other prey food. Once the initial impact of disturbance recovers (6 months to two years), the understory habitat conditions for prey food would increase over the next few years, until shrubs and residual trees respond to again close in the stand.

Overall, the spacing, timing and standards and guidelines for proposed projects described in the Assessment are likely to avoid adverse impacts to spotted owls with respect to prey availability by retaining habitat features in treated stands that support prey species populations although localized, short-term changes in prey species distribution and abundance are likely to occur within a treated stand. The dispersion of treatment sites over a large area is especially important in maintaining spotted owl prey populations within the action area. On this basis, the Medford District Manager, with input from Resource Area Biologists and Field Managers, has determined that effects to spotted owls, as described here, would be insignificant.

For the above reasons, the Service concurs with the District's finding that these proposed treatments are not likely to adversely affect the spotted owl.

**Effects to Spotted Owl Critical Habitat**

NRF Habitat

The Assessment describes the proposed extent of treatments within spotted owl NRF habitat in six CHUs (Table 8).

**Table 8: Effects to Spotted Owl NRF Habitat within CHUs.**

| Critical Habitat Units | Federal Acres of NRF[1] Habitat | Fuels/Vegetation Management Treatment Acres[2] | Harvest Treatment Acres[2] | Road Maintenance/ Hazard Tree Removal Treatments[1] | Fish Habitat Improvement Treatments[1] | Percent of CHU treated and maintained |
|---|---|---|---|---|---|---|
| OR 32 | 20,287 | 200 | 470 | 5 | 0 | 3.35 |
| OR 34 | 21,096 | 0 | 0 | 5 | 0 | 0.02 |
| OR 65 | 39,680 | 0 | 0 | 1 | 0 | 0.003 |
| OR 72 | 18,465 | 0 | 0 | 2 | 0 | 0.005 |
| OR 74 | 9,859 | 0 | 650 | 0 | 60 | 7.2 |
| OR 75 | 4,949 | 20 | 0 | 0 | 0 | 0.04 |
| **Total** | **114,336** | **220** | **1,120** | **13** | **60** | **1.24** |

1 From 06-08 BA Appendix B, (USDA/USDI 2006), 2 From spreadsheet Appendix A.

Harvest treatments in spotted owl designated critical habitat.

*NRF Habitat*

Up to 1,138 acres of NRF habitat in five CHUs will be treated through harvest methods, as depicted in Table 8. The Medford District Manager, with input from the Resource Area biologists and Field Managers, has determined these treatments will have an insignificant effect to spotted owl critical habitat because:

1. The primary constituent elements of critical habitat associated with NRF habitat will be maintained, and improved over the long-term. Treated stands are likely to be more ecologically sustainable and fire resilient.
2. Canopy cover within treated NRF habitat stands will be retained at or above 60 percent.
3. Decadent woody material in the treatment area, such as large snags and down wood, will remain post-treatment.
4. Any multi-canopy, uneven-aged tree structure that was present prior to treatment will remain post-treatment.
5. POC treatments will prevent disease from being transferred to other areas, and the ecological health of affected stands within critical habitat is likely to be improved.
6. No spotted owl nest trees will be removed.

For the above reasons, the Service concurs with the District's finding that these proposed treatments are not likely to adversely affect designated spotted owl critical habitat.

Fuels/Vegetation Management Treatments in spotted owl NRF habitat within designated critical habitat.

Up to 220 acres of NRF habitat in two CHUs will be treated through fuels/vegetation management methods as depicted in Table 8. An additional 60 acres of NRF habitat will be treated in CHU OR 74 for fish project work. Those trees would remain on site as down logs for stream improvements and would help to restore components important to riparian health. Five acres of NRF habitat hazard tree removal could occur in each CHU. In accordance with the

criteria used to define the primary constituent elements of critical habitat (USFWS 1992), none of these features would change as a result of the implementation of these actions.

The Medford District Manager, with input from the Resource Area biologists and Field Managers, has determined these treatments will have an insignificant effect to spotted owl critical habitat because:

1. Canopy cover within treated NRF habitat stands will be retained at or above 60 percent.
2. Decadent woody material in the treatment area, such as large snags and down wood, will remain post-treatment.
3. Any multi-canopy, uneven-aged tree structure that was present prior to treatment will remain post-treatment.
4. No spotted owl nest trees will be removed.

The following beneficial effects may be realized as a result of implementation of the proposed action:

1. The primary constituent elements of critical habitat associated with NRF habitat will be maintained, and improved over the long-term.
2. Treated stands are likely to be more ecologically sustainable because residual stands will be less susceptible to suppression mortality.
3. Fuels/vegetation management treatments are designed to reduce the intensity and rate of spread of large, stand replacement fires common to the action area.
4. POC treatments will prevent disease from being transferred to other areas, and the ecological health of affected stands within critical habitat is likely to be improved.

For the above reasons, the Service concurs with the District's finding that these proposed treatments are not likely to adversely affect designated spotted owl critical habitat.

*Dispersal Habitat*

The Assessment describes the affects of treating up to 434 acres of spotted owl dispersal habitat among four individual CHUs (Table 9).

**Table 9: Effects to Spotted Owl Dispersal Habitat within designated Critical Habitat Units.**

| Critical Habitat Units | Federal Acres of spotted owl dispersal habitat[1] | Fuels/Vegetation Management Treatment Acres[2] | Harvest Treatment Acres[2] | Percent of CHU treated and maintained |
|---|---|---|---|---|
| OR 32 | 24,558 | 0 | 5 | 0.02 |
| OR 34 | 28,462 | 0 | 5 | 0.02 |
| OR 65 | 65,784 | 150 | 272 | 0.64 |
| OR 72 | 40,807 | 0 | 2 | 0.005 |
| **Total** | **159,611** | **150** | **284** | **0.27** |

1. From 06-08 BA Appendix F, (USDA/USDI 2006), 2. From spreadsheet Appendix A.

Harvest treatments

Up to 284 acres of dispersal habitat will be treated through harvest treatments within four CHUs (Table 9). Up to five acres of hazard tree removal could occur in dispersal habitat in each CHU. According to the Assessment, the proposed selective harvest treatments and hazard tree removal have been designed to avoid adverse effects to the primary constituent elements of spotted owl critical habitat within the affected CHUs.

The Medford District Manager, with input from the Resource Area biologists and Field Managers has determined that the effects to spotted dispersal habitat within affected CHUs will be insignificant because:

1. Canopy cover within affected stands will be maintained at 40 percent or greater post-treatment.
2. Decadent woody material, such as large snags and down wood, will be retained in the same condition as prior to the treatment.
3. The proposed treatments will be dispersed in patches throughout the four CHUs to further minimize the potential for adversely affecting stand characteristics for dispersal habitat.

The following beneficial effects may be realized as a result of implementation of the proposed action:

1. Very dense stands will be opened by thinning, thereby improving the ability for spotted owls to disperse within these stands. Thinning stands that currently provide poor quality dispersal habitat will improve the dispersal function for spotted owls by providing more "flying space," and encouraging residual trees to develop more size and structural diversity.
2. The quality of spotted owl foraging habitat in treated stands may improve in response to the relatively more open structure of the treated stands.
3. Thinning treatments are likely to contribute to reducing the rate of spread and intensity of wildland fires common to the action area.

For the above reasons, the Service concurs with the District's finding that these proposed treatments are not likely to adversely affect the spotted owl.

Vegetation Management Treatments

Table 9 indicates that up to 150 acres of fuels/vegetation management treatments will occur in spotted owl dispersal habitat in one CHU. According to the Assessment, the proposed treatments have been designed to avoid adverse effects to the primary constituent elements of spotted owl critical habitat within the affected CHUs.

The Medford District Manager, with input from the Resource Area biologists and Field Managers has determined that the effects to spotted dispersal habitat within affected CHUs will be insignificant because:

1. Canopy cover will be maintained at 40 percent or greater post-treatment.
2. Decadent woody material, such as large snags and down wood, will be retained in the same condition as prior to the treatment.

The following beneficial effects may be realized as a result of implementation of the proposed action:

1. Very dense stands will be opened by thinning, thereby improving the ability for spotted owls to disperse within the stands.
2. Thinning treatments are likely to contribute to reducing the rate of spread and intensity of wildland fires common to the action area.

For the above reasons, the Service concurs with the District's finding that these proposed treatments are not likely to adversely affect designated spotted owl critical habitat.

**Effects to Spotted Owls due to Disturbance**

Effects to spotted owls resulting from noise, human intrusion, or smoke-related disturbance are largely unknown. In the most recent review of spotted owl research, none of these types of disturbance were considered a threat to the species (Courtney *et al*. 2004). However, at the individual level, based on anecdotal information and effects to other bird species (Wesemann and Rowe 1987, Delaney *et al*. 1999, Delaney and Grubb 2001, Swarthout and Steidl 2001, USFWS 2003b, USFWS 2005c), disturbance to spotted owls is negatively related to stimulus distance and positively related to noise level, similar to results reported for bald eagles (*Heliaeetus leucocephalus*, Grubb and King 1991), gyrfalcon (*Falco rusticolus*, Platt 1977), and other raptors (Awbrey and Bowles 1990). Therefore, the Service has concluded that significant noise, smoke and human presence in the canopy can result in a significant disruption of breeding, feeding, or sheltering behavior of the spotted owl such that it creates the potential for injury to the individuals (i.e., incidental take in the form of harass).

Although the Service has assumed disruption distances based on interpretation of best available information, the exact distances where different disturbances disrupt breeding are difficult to predict and can be influenced by a multitude of factors. Site-specific information (e.g., topographic features, project length/duration or frequency of disturbance to an area) would also influence the degree of the effects to spotted owls. The potential for noise producing activities creating the likelihood of injury to spotted owls is also dependent on the background or baseline levels in the environment. In areas that are continually exposed to higher ambient noise levels (e.g. areas near well-traveled roads, campgrounds), spotted owls are probably less susceptible to small increases in disturbances because they are accustomed to such activities. Spotted owls occur in areas near human activities and may habituate to certain levels of noise.

Potential disturbance that may result from the implementation of the proposed action is not likely to adversely affect known spotted owl nest sites because the District will apply mandatory PDC (Appendix B) that impose seasonal restrictions during the critical breeding season, and/or restrict activities within disturbance threshold distances of unsurveyed suitable habitat or known spotted owl nest sites. Opportunistic application of recommended PDC would further reduce the potential for disturbance impacts. Standards and guidelines from the Medford Resource Management Plan (USDI-BLM 1995) will be applied to projects implemented under the proposed action. Additional conservation measures may be implemented at the site-specific project level by the District Interdisciplinary Teams reviewing these projects. The Medford District Manager, with input from Resource Area Biologists and Field Managers, has determined that effects to spotted owls, as a result of potential disturbance associated with implementation of the proposed action, are likely to be insignificant because:

1. The District has determined effects from disturbance are very unlikely to occur close enough to active spotted owl nests to cause an adverse effect (USFWS 2003b) due to the application of mandatory PDC (Appendix B) to all projects analyzed in the Assessment.
2. The proposed action, as implemented with mandatory PDC, is likely to avoid adverse disturbance impacts to spotted owls because activities will likely not cause spotted owls to flush from their nest, abandon nests, cause juveniles to prematurely fledge, interrupt foraging activity or result in increased predation due to less protection when the adult flushes during the critical nesting season (USFWS 2003b).

For the above reasons, the Service concurs with the District's finding that the proposed action is not likely to adversely affect the spotted owl due to disturbance associated with the implementation of the proposed action.

**Aggregate Effects Analysis**

The Assessment considers the effect of the combined treatments described separately above and includes the District's determination that the proposed activities will not collectively change the amount of spotted owl NRF or dispersal habitat in the action area, or adversely affect the primary constituent elements of spotted owl critical habitat in the action area for the following reasons:

- The proposed action is not likely to change the key characteristics of NRF and dispersal habitats throughout the action area. Retention of these characteristics was considered in the design of the proposed activities. NRF habitat throughout the action area is expected to continue to exhibit 60 percent or greater canopy cover, and pre-project levels of decadent woody material and multi-canopy, uneven-aged tree structure.
- Wild fire resiliency in the action area is likely to be improved by the proposed thinning activities, which will reduce fuel-loading. Remaining trees will have more available water, space and light to be healthier and grow faster, and develop more structural diversity.
- The results of the proposed treatments in NRF habitat are likely to have long-term beneficial effects to spotted owls by reducing the risks of stand loss to fire or suppression mortality, and accelerating further development of NRF habitat characteristics within the

action area. Eighty-three percent (15,390 acres) of the 18,664 acres of treatments proposed were designed to reduce fuel loads that contribute to large, stand replacement fires.

- The results of the proposed treatments in dispersal habitat are likely to have long-term beneficial effects to spotted owls by reducing the risks of stand loss to fire or suppression mortality, and accelerating further development of dispersal habitat characteristics (e.g., improved "flying space" within existing very dense stands of trees) within the action area.

For the above reasons, the Service concurs with the District's finding that the proposed treatments, in aggregate, are not likely to adversely affect the spotted owl or its designated critical habitat.

**Concurrence**

The Service concurs with the effects determination made by the District that the above Proposed Action, as detailed in the Assessment and in the Description of the Proposed Action and Effects section of this letter, *may affect, is not likely to adversely affect* the spotted owl or designated spotted owl critical habitat. This concurrence is based on the fact that all projects, both individually and collectively, will implement the standards and guidelines of the Northwest Forest Plan, comply with the District's Resource Management Plans (USDI-BLM 1995), and will incorporate the mandatory PDC described in Appendix B. Application of recommended PDC will provide additional conservation benefits.

Incidental take is not expected and is not authorized for this consultation. Consultation on this action should be reinitiated if 1) new information reveals effects of the action that may affect listed species or designated critical habitat in a manner or to an extent not considered in this consultation; 2) the action is subsequently modified in a manner that causes an effect to a listed species or designated critical habitat that was not considered in this consultation; 3) and/or a new species or critical habitat is designated that may be affected by this project.

Because the proposed action is not likely to adversely affect spotted owls or their designated critical habitat within the action area, it is not necessary to consider whether the action will jeopardize the species or appreciably diminish the value of their designated critical habitat.

This response is prepared in accordance with section 7(a)(2) and 7(c) of the Act, and concludes informal consultation on the project pursuant to 50 CFR 402. If new information or project modification reveals that the proposed actions may affect listed species in a manner or to the extent not considered in your Assessment, or if a new species is listed or critical habitat is designated that may be affected by the actions, work should be halted and consultation reinitiated immediately.

If any questions arise concerning the contents of this concurrence letter, please contact Cynthia Donegan at 541-957-3469, or myself at (541) 957-3470.

cc: Carole Jorgensen, BLM, Medford, OR (e)
Office Files, FWS-OFWO, Portland, OR (e)
Brendan White, FWS-OFWO, Portland, OR (e)
Larry Salata, FWS-RO, Portland, OR (e)

## Literature Cited

Awbrey, F.T., and A.E. Bowles. 1990. The effects of aircraft noise and sonic booms on raptors: a preliminary model and a synthesis on the literature on disturbance. U.S. Air Force, Patterson Air Force Base, Ohio.

Buchanan, J.B., L.L. Irwin, and E.L. McCutchen. 1995. Within-stand nest site selection by spotted owls in the eastern Washington Cascades. Journal of Wildlife Management 59:301-310.

Courtney, S.P., J.A. Blakesley, R.E. Bigley, M.L. Cody, J.P. Dumbacher, R.C. Fleischer, A.B. Franklin, J.F. Franklin, R.J. Gutiérrez, J.M. Marzluff, and L. Sztukowski. 2004. Scientific evaluation of the status of the northern spotted owl. Sustainable Ecosystems Institute. Portland, Oregon. September 2004.

Delaney, D.K. and T.G. Grubb. 2001. Effects of off-highway vehicle noise on northern spotted owls: sound data results. A report to the Mendocino National Forest.A report to the Mendocino National Forest, Contract Number 43-91Z9-0-0055.

Delaney, D.K., T.G. Grubb, P. Beier, L.L Pater, and M.H. Reiser. 1999. Effects of helicopter noise on Mexican spotted owls. J. Wildlife Management 63(1):60-76.

Forsman, E.D., Meslow, E.C., Wight, H.M. 1984. Distribution and biology of the spotted owl in Oregon. Wildlife Monographs, 87:1-64.

Gomez, D., R G. Anthony, and J.P. Hayes. 2005. Influence of thinning of Douglas-fir forests on population parameters and diet of northern flying squirrels. Journal of Wildlife Management 69(4):1670–1682.

Grubb, T.G. and R.M. King. 1991. Assessing human disturbance of breeding bald eagles with classification tree models. Journal of Wildlife Management 55:501-512.

Hicks, L.L., H.C. Stabins, and D.R. Herter. 1999. Designing spotted owl habitat in a managed forest. J. Forestry 97(7):20-25.

Irwin, L.L., S. Self. and L. Smith. 1989. Status of northern spotted owls on managed forestlands in northern California. Unpublished Final Report. Timber Assoc. of CA. Sacramento, CA. 31pp.

Irwin, L.L., D. Rock, S. Rock. 2005. Adaptive Management Monitoring of Spotted Owls, 2004 Annual Progress Report. National Council for Air and Stream Improvement, Inc. Vancouver, WA. 47 pp.

King, G.M. 1993. Habitat characteristics of northern spotted owls in eastern Washington. M.S. thesis. University of California, Berkeley, CA.

Lemkuhl, J., K.D. Kistler and J.S. Begley. 2006. Bushy-tailed woodrat abundance in dry forests of eastern Washington. Journal of Mammalogy 87(2).

Miller, G.S. 1989. Dispersal of juvenile northern spotted owls in western Oregon. M.S. Thesis. Oregon State University, Corvallis, Oregon. 139 pages.

Miller, G.S., R.J. Small, and E.C. Meslow. 1997. Habitat selection by spotted owls during natal dispersal in western Oregon. J. Wildl. Manage. 61(1):140-150.Platt, J.B. 1977. The breeding behavior of wild and captive gyrfalcons in relation to their environment and human disturbance. Dissertation. Cornell Univ., Ithaca, New York, USA.

Platt, J.B. 1977. The breeding behavior of wild and captive gyrfalcons in relation to their environment and human disturbance. Dissertation. Cornell Univ., Ithaca, New York, USA.

Swarthout, E.C.H. and R.J. Steidl. 2001. Flush responses of Mexican spotted owls to recreationists. J. Wildlife Management 65(2):312-317.

Thomas, J.W.; E.D. Forsman; J.B. Lint; E.C. Meslow; B.R. Noon; and J. Verner. 1990. A conservation strategy for the northern spotted owl: a report of the Interagency Scientific Committee to address the conservation of the northern spotted owl. Portland, Oregon. U.S. Department of Agriculture, Forest Service; U.S. Department of Interior, Bureau of Land Management, U.S. Fish and Wildlife Service, National Park Service. 427 pp.

Turner, S. 1999. Letter on fledge data from the Central Cascades Study area. To Kit Hershey, U.S. Fish and Wildlife Service, Portland, Oregon.

USDA-USDI (U.S. Forest Service, Bureau of Land Management). 2006. Rogue River/South Coast FY 2006-2008 Timber Sale Projects Programmatic Biological Assessment.

USDI-BLM (Bureau of Land Management). 1995. Resource Management Plan, Medford District Office. Medford, Oregon.

USDI-BLM (Bureau of Land Management). 2007. FY 2007-2008 Programmatic Biological Assessment for Activities Not Likely to Adversely Affect Northern Spotted Owls.

USFWS (U.S. Fish and Wildlife Service). 1992. Endangered and Threatened Wildlife and Plants; determination of critical habitat for the northern spotted owl. Federal Register 57: 1796-1838.

USFWS (U.S. Fish and Wildlife Service). 2001. Rogue River-South Coast FY 01-03 Biological Opinion, FWS Log # 1-7-01-F-032.

USFWS (U.S. Fish and Wildlife Service). 2003a. Rogue River-South Coast FY 04-08 Biological Opinion, FWS Log # 1-15-03-F-511.

USFWS (U.S. Fish and Wildlife Service). 2003b. Estimates of distances at which incidental take of murrelets and spotted owls due to harassment are anticipated from sound-generating, forest-management activities in Olympia National Forest. Fish and Wildlife Service, Lacey, WA.

USFWS (U.S. Fish and Wildlife Service). 2005a. Rogue River-South Coast FY 01-03 re-initiation Letter of Concurrence, FWS Log # 1-15-05-I-582.

USFWS (U.S. Fish and Wildlife Service). 2005b. Rogue River-South Coast FY 01-03 re-initiation Biological Opinion, FWS Log # 1-15-05-F-581.

USFWS (U.S. Fish and Wildlife Service). 2005c. Draft: Disturbance and Disruption Distances for Northern Spotted Owls. Portland, OR. 8pp.

USFWS (U.S. Fish and Wildlife Service). 2006a. Rogue River-South Coast FY 06-08 Biological Opinion, FWS Log # 1-15-06-F-162.

USFWS (U.S. Fish and Wildlife Service). 2006b. Rogue River-South Coast FY 06-08 Letter of Concurrence, FWS Log # 1-15-06-I-165.

USFWS (U.S. Fish and Wildlife Service). 2007. In prep: What are the Effects of Habitat Thinning on Northern Spotted Owls? Literature Summarized through 2005. Portland, OR.

Wesemann and Rowe. 1987. Factors influencing the distribution and abundance of burrowing owls in Cape Coral, Florida. In Integrating man and nature in the metropolitan environment. Proceedings of the national symposium on urban wildlife, eds., L.W. Adams and D.L. Leedy, 129-137. National Institute for Urban Wildlife, Columbia, Maryland, USA.

Zabel, C. J., J.R. Dunk, H.B. Stauffer, L.M. Roberts, B.S. Mulder, and A. Wright. 2003. Northern spotted owl habitat models for research and management application in California (USA). Ecological Applications 13(4):1027-1040.

# APPENDIX A Spreadsheet of the Proposed Action (provided by Medford BLM)

Medford BLM NLAA information request by USFWS 5/25/07
NLAA spreadsheet NO DISTURBANCE

| | | | | | | | OWL HABITAT | | | | | | | | | CHU HABITAT | | | | | | | | | | LSR Habitat | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Section 7 Watershed | Year (7 or 8 or X for previous yrs) | project occur in 08 also (rec proj only)? | Project ID | Project Type | Land allocation | RA | Habitat acres | NRF remove | NRF dwngrd | NRF T&M | Disp remove | Disp T&M | OWL EFFECT | Project occurs after June 30 (Y/N)* | CHU EFFECTS | CHU | NRF remove | Regen part of NRF remove | NRF dwngrd | NRF T&M | Disp remove | Disp T&M | all CHU acres | LSR Name | LSR# | NRF remove | NRF dwngrd | NRF T&M | Disp remove | Disp T&M | all LSR acres |
| Applegate | X | | Joint Fire Science | F | A | AS | 20 | 0 | 0 | 20 | 0 | 0 | NLAA | Y | NLAA | OR-75 | 0 | 0 | 0 | 20 | 0 | 0 | 20 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Applegate | X | | Applegate Fuels | F | A | AS | 30 | 0 | 0 | 0 | 0 | 30 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | X | | Rogue Middle Fuels | F | M | AS | 100 | 0 | 0 | 40 | 0 | 60 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Applegate | X | | Eaststar '07 | T | A | AS | 650 | 0 | 0 | 650 | 0 | 0 | NLAA | Y | NLAA | OR-74 | 0 | 0 | 0 | 650 | 0 | 0 | 650 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Applegate | 7 | | Star Gulch Fish Project | R | A | AS | 60 | 0 | 0 | 60 | 0 | 0 | NLAA | Y | NLAA | 0R-74 | 0 | 0 | 0 | 60 | 0 | 0 | 60 | | | | | | | | |
| Applegate | 7 | | Misc. Forest Products | T | A | AS | 25 | 0 | 0 | 0 | 0 | 25 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Bear | 7 | | Misc. Forest Products | T | M | AS | 25 | 0 | 0 | 0 | 0 | 25 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | 7 | | Misc. Forest Products | T | M | AS | 25 | 0 | 0 | 0 | 0 | 25 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Klamath | 7 | | Misc. Forest Products | T | M | AS | 25 | 0 | 0 | 0 | 0 | 25 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Little Butte | 7 | | Misc. Forest Products | T | M | AS | 25 | 0 | 0 | 0 | 0 | 25 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | |
| Applegate | 7 | | Roadside Hazard Trees | T | A | AS+ | 40 | 0 | 0 | 20 | 0 | 20 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Little Butte | | | Roadside Hazard Trees | T | M | AS+ | 20 | 0 | 0 | 10 | 0 | 10 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | 7 | Y | Slick Sand | F | M | BF | 120 | 0 | 0 | 120 | 0 | 0 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | 7 | Y | R. Fork Sardine | F | M | BF | 300 | 0 | 0 | 0 | 0 | 300 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | 7 | Y | Misc. Forest Products | T | M | BF | 50 | 0 | 0 | 0 | 0 | 50 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | 7 | Y | Misc. Forest Products | T | M | BF | 50 | 0 | 0 | 0 | 0 | 50 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Little Butte | 7 | Y | Misc. Forest Products | T | M | BF | 25 | 0 | 0 | 0 | 0 | 25 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | | Y | Ranch Stew | T | M | BF | 350 | 0 | 0 | 0 | 0 | 350 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | 7 | Y | Trail/Evans Ck. Fish | O | M | BF | 25 | 0 | 0 | 0 | 0 | 25 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | 7 | Y | Elk Ck. Fish Habitat | O | L | BF | 10 | 0 | 0 | 0 | 0 | 10 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Elk | R0224 | 0 | 0 | 0 | 0 | 10 | 10 |
| Rogue | 7 | N | Roadside Hazard Trees | T | M | BF | 150 | 0 | 0 | 75 | 0 | 75 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | 7 | N | Roadside Hazard Trees | T | M/L | BF | 20 | 0 | 0 | 10 | 0 | 10 | NLAA | Y | NE | OR-34 | 0 | 0 | 0 | 5 | 0 | 5 | 10 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Little Butte | 7 | N | Roadside Hazard Trees | T | M | BF | 10 | | | 5 | | 5 | NLAA | Y | NE | NOT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Cow Upper | X | | Westside Fuels | F | M | GL | 300 | 0 | 0 | 300 | 0 | 0 | NLAA | Y | NLAA | OR-32 | 0 | 0 | 0 | 200 | 0 | 0 | 200 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Cow Upper | 7 | | Boney Skull fuels | F | M | GL | 100 | 0 | 0 | 100 | 0 | 0 | NLAA | Y | NLAA | OR-65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | X | | Bear Pen Fuels | F | M | GL | 150 | 0 | 0 | 0 | 0 | 150 | NLAA | Y | NLAA | OR-65 | 0 | 0 | 0 | 0 | 0 | 150 | 150 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | X | | Kelsey Whiskey | F | M/L | GL | 500 | 0 | 0 | 500 | 0 | 0 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Fishhoo | RO-258 | 0 | 0 | 250 | 0 | 0 | 250 |
| Rogue | 7 | | Roadside Hazard Trees | T | M | GL | 20 | 0 | 0 | 15 | 0 | 5 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Cow Upper | 7 | | Roadside Hazard Trees | T | M | GL | 20 | 0 | 0 | 15 | 0 | 5 | NLAA | Y | NLAA | OR-32 | 0 | 0 | 0 | 10 | 0 | 5 | 15 | Galesvil | RO-223 | 0 | 0 | 10 | 0 | 5 | 15 |
| Rogue | 7 | | Roadside Hazard Trees | T | M | GL | 20 | 0 | 0 | 15 | 0 | 5 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Cow Upper | X | | Middle Cow "Eastside" (Incl Healthy | T | L | GL | 470 | 0 | 0 | 470 | 0 | 0 | NLAA | Y | NLAA | OR-32 | 0 | 0 | 0 | 470 | 0 | 0 | 470 | Galesvil le South | RO-223 | 0 | 0 | 470 | 0 | 0 | 470 |
| Applegate | X | | Scattered Apples Fuels | F | M | GP | 800 | 0 | 0 | 500 | 0 | 300 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Illinois | 7 | | Selma North NFP - pvt | F | M | GP | 20 | 0 | 0 | 0 | 0 | 20 | NLAA | Y | NE | NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Illinois | X | | 3+3 Fuels | F | M | GP | 200 | 0 | 0 | 200 | 0 | 0 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Illinois | X | | Deer Mom Fuels | F | M | GP | 350 | 0 | 0 | 200 | 0 | 150 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Illinois | X | | Anderson West Fuels | F | M | GP | 900 | 0 | 0 | 700 | 0 | 200 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Illinois | X | | West Fork Fuels | F | M | GP | 2,710 | 0 | 0 | 1700 | 0 | 1010 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Illinois | X | | South Deer Fuels | F | M | GP | 3,050 | 0 | 0 | 2000 | 0 | 1050 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | 7 | | Peco Fuels | F | M | GP | 10 | 0 | 0 | 0 | 0 | 10 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | X | | Shiney Queen Fuels | F | M | GP | 10 | 0 | 0 | 0 | 0 | 10 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | X | | Maple Syrup Fuels | F | M | GP | 20 | 0 | 0 | 0 | 0 | 20 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | 7 | | Pinnon Fuels | F | M | GP | 60 | 0 | 0 | 0 | 0 | 60 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | X | | Savage Green Fuels | F | M | GP | 110 | 0 | 0 | 0 | 0 | 110 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | X | | Pickett Snake Fuels | F | M | GP | 150 | 0 | 0 | 0 | 0 | 150 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | X | | Granite Horse Fuels | F | M | GP | 370 | 0 | 0 | 200 | 0 | 170 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | X | | Stratton Hog Fuels | F | M | GP | 500 | 0 | 0 | 300 | 0 | 200 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | X | | Berlin Mummer Fuels | F | M | GP | 600 | 0 | 0 | 400 | 0 | 200 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | X | | Pickett Charge Fuels | F | M | GP | 1,000 | 0 | 0 | 800 | 0 | 200 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | X | | Birdseye Jones Fuels | F | M | GP | 2,800 | 0 | 0 | 1800 | 0 | 1000 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |

# APPENDIX A Spreadsheet of the Proposed Action (provided by Medford BLM)

Medford BLM NLAA information request by USFWS 5/25/07

NLAA spreadsheet NO DISTURBANCE

| | | | | | | | OWL HABITAT | | | | | | | | | CHU HABITAT | | | | | | | | | | LSR Habitat | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Section 7 Watershed | Year (7 or 8 or X for previous yrs) | project occur in 08 also (rec proj only)? | Project ID | Project Type | Land allocation | RA | Habitat acres | NRF remove | NRF dwngrd | NRF T&M | Disp remove | Disp T&M | OWL EFFECT | Project occurs after June 30 (Y/N)* | CHU EFFECTS | CHU | NRF remove | Regen part of NRF remove | NRF dwngrd | NRF T&M | Disp remove | Disp T&M | all CHU acres | LSR Name | LSR# | NRF remove | NRF dwngrd | NRF T&M | Disp remove | Disp T&M | all LSR acres |
| Applegate | 7 | | Penny Stew Stewardship | T | M | GP | 20 | 0 | 0 | 0 | 0 | 20 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | not | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Applegate | 7 | | Two Bit Stewardship (S. | T | M | GP | 60 | 0 | 0 | 0 | 0 | 60 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Applegate | X | | Scattered Apples (#1) | T | A | GP | 448 | 0 | 0 | 172 | 0 | 276 | NLAA | N | NE | NE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | NOT | 0 | 0 | 0 | 0 | 0 | 0 |
| Illinois | 7 | | Anderson West | T | M | GP | 50 | 0 | 0 | 0 | 0 | 50 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | 7 | | Rich and Rocky | T | L | GP | 20 | 0 | 0 | 0 | 0 | 20 | NLAA | N | NLAA | OR-65 | 0 | 0 | 0 | 0 | 0 | 20 | 20 | Fishhoo | RO-258 | 0 | 0 | 0 | 0 | 20 | 20 |
| Rogue | 7 | | Rum Creek | T | T | GP | 41 | 0 | 0 | 0 | 0 | 41 | NLAA | N | NLAA | OR-65 | 0 | 0 | 0 | 0 | 0 | 41 | 41 | Galice | RO258 | 0 | 0 | 0 | 0 | 41 | 41 |
| Rogue | 7 | | Rum Creek Stewardship | T | L | GP | 210 | 0 | 0 | 0 | 0 | 210 | NLAA | N | NLAA | OR-65 | 0 | 0 | 0 | 0 | 0 | 210 | 210 | Fishhoo | RO-258 | 0 | 0 | 0 | 0 | 210 | 210 |
| Rogue | X | | Birdseye Jones | T | M | GP | 250 | 0 | 0 | 50 | 0 | 200 | NLAA | N | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Illinois | 7 | | Roadside Hazard Trees | T | M/L | GP | 5 | 0 | 0 | 2 | 0 | 3 | NLAA | Y | NE | OR-72 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | East | RO-249 | 0 | 0 | 1 | 0 | 1 | 2 |
| Rogue | 7 | | Roadside Hazard Trees | T | M/L | GP | 5 | 0 | 0 | 2 | 0 | 3 | NLAA | Y | NE | OR-65 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | Fishhoo | RO-258 | 0 | 0 | 1 | 0 | 1 | 2 |
| Rogue | 7 | | Roadside Hazard Trees | T | M/L | GP | 5 | 0 | 0 | 2 | 0 | 3 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | NOT | 0 | 0 | 0 | 0 | 0 | 0 |
| Applegate | 7 | | Roadside Hazard Trees | T | M/L | GP | 5 | 0 | 0 | 2 | 0 | 3 | NLAA | Y | NE | OR-72 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | East | RO-249 | 0 | 0 | 1 | 0 | 1 | 2 |
| Applegate | X | | North Murphy Fuels | F | M | GP | 80 | 0 | 0 | 0 | 0 | 80 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Applegate | 7 | | Williams Biomass NFP- | F | M | GP | 30 | 0 | 0 | 0 | 0 | 30 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Illinois | 7 | | Misc. Forest Products | T | M | GP | 10 | 0 | 0 | 0 | 0 | 10 | NLAA | Y | NE | not | 0 | 0 | -0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | 7 | | Misc. Forest Products | T | M | GP | 10 | 0 | 0 | 0 | 0 | 10 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Rogue | 7 | | Misc. Forest Products | T | M | GP | 10 | 0 | 0 | 0 | 0 | 10 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| Applegate | 7 | | Misc. Forest Products | T | M | GP | 10 | 0 | 0 | 0 | 0 | 10 | NLAA | Y | NE | not | 0 | 0 | 0 | 0 | 0 | 0 | 0 | NOT | not | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL | | | | | | | 18,664 | 0 | 0 | 11,455 | 0 | 7,209 | | | | | 0 | 0 | 0 | 1,418 | 0 | 434 | 1,852 | | | 0 | 0 | 733 | 0 | 289 | 1,022 |

Projects that occur before June 30 (N) would be NLAA because RA bios implement PDCs at the project level

Instructions: Include only yr 7 and x projects. Report year as 7 (for 2007 fiscal year). Put calendar year or X for previous projects from previous consultations. T&M is Treat and Maintain (not "degrade". Sorted by RA then project type. Make sure All FUELS are separate and consistent with counterpart regs. Count footprint of fuels project once (not for each entry). Timbersales include all parts of project from planning to successful replant--count acres once for entire thing. Veg treatment: count footprint of treatment for each entry. Habitat acres (yellow) is total of all acres of NRF and dispersal in yellow. Haz trees are purple.

**Appendix B: Project Design Criteria**

Project design criteria (PDC) are measures applied to project activities designed to minimize potential detrimental effects to proposed or listed species. PDC usually include seasonal restrictions and may also include clumping of retention trees around nest trees, establishment of buffers, dropping the unit(s)/portions, or dropping the entire project. Use of project design criteria may result in a determination of no effect for a project which would have otherwise been not likely to adversely affect. In other cases, project design criteria have resulted in a determination of not likely to adversely affect for a project which might have otherwise been determined to be likely to adversely affect. The goal of project design criteria is to reduce adverse effects to listed or proposed threatened or endangered species.

Physical impacts to habitat and disturbances to individual species will be reduced or avoided with PDC. Listed are species-specific project design criteria designed for the programmatic impacts discussed in the *Effects of the Action* section below. For each species, project design criteria have been separated into those that reduce or avoid habitat removal and those that reduce or avoid disturbance and/or disruption. Under the proposed action, the unit wildlife biologist may increase or decrease the disturbance distance-related project design criteria, based on site-specific conditions, subject to Level 1 concurrence.

Medford BLM and the Rogue River-Siskiyou National Forest retain discretion to halt and modify all projects, anywhere in the process, should new information regarding proposed and listed threatened or endangered species arise. Minimization of impacts would then, at the least, include an appropriate seasonal restriction; and could include clumping of retention trees around the nest trees, establishment of buffers, dropping the unit(s)/portions, or dropping the entire project.

The seasonal or daily restrictions listed below may be waived at the discretion of the decision maker if necessary to protect public safety (as in the case of emergency road repairs or hazard tree removal). Emergency consultation with the Service will then be initiated in such cases, where appropriate.

Should new information arise that significantly changes impacts to listed threatened or endangered species, the Action Agencies retain discretion to halt and modify all projects, anywhere in the process. Modifications could include an appropriate seasonal restriction; clumping of retention trees around the nest trees, establishment of buffers, dropping the unit(s)/portions, or dropping the entire project.

PDC may be waived at the discretion of the decision-maker, if necessary to protect public safety (as in the case of emergency road repairs). The FWS will be notified of all such occurrences to determine if emergency consultation is required and to adjust environmental baselines if necessary. The Action Agencies will be prudent in evaluating public safety deviations. They will attempt to predict potential problems (such as road failures) such that remedies can occur during times and using methods that minimize impacts to the extent possible. In the event emergency consultation is initiated, the Action Agencies will act prudently and efficiently to complete or close consultation in a timely manner, preferably within 6 months or less of the emergency action.

There are two types of PDC:

**Mandatory:** must be incorporated in all projects to reduce adverse affects to listed species – required unless a specific exemption is mentioned in a "recommended" PDC and

Mandatory PDC are incorporated in all appropriate planned actions. The effects determination reflects their implementation. Projects unable to incorporate mandatory PDC will be analyzed under separate consultation.

**Recommended:** discretionary; incorporated in projects where appropriate to further reduce adverse affects.

In some cases, application of PDC may reduce the impact of the projects to listed species and may change the effects determinations (from LAA to NLAA, or from LAA or NLAA to NE). In all cases, effects determinations for projects have been made using applicable PDC. The goal is to reduce the detrimental effects of any projects which "may affect" any endangered or threatened species. Some PDC apply to multiple species although most PDC apply to specific species. PDC are described by project type.

This consultation effort updates some PDC that were used on projects covered by previous consultation efforts. These updated PDC will be incorporated into actions covered under previous consultations that have not yet been implemented, unless incorporating new PDC is not practical. In those cases, PDC in place under the previous consultation will apply.

The PDC in this consultation will be incorporated into those projects that will be implemented, in FY07-08.

Fire firefighter safety must be taken into account at all times when using the **PDC.** If implementation of PDC might cause human safety risks, the Action Agencies will respond to the human safety threat and will determine if that response is grounds for re-consultation.

| Impacts | Species: **Northern Spotted Owl** |
|---|---|
| | Any of the following Mandatory PDC may be waived in a particular year if nesting or reproductive success surveys conducted according to the FWS-endorsed survey guidelines reveal that spotted owls are non-nesting or that no young are present that year. Waivers are valid only until March 1 of the following year. Previously known sites/activity centers are assumed occupied unless protocol surveys indicate otherwise. |
| Disturbance | **Mandatory 1)** Work activities (such as tree felling, yarding, road construction, hauling on roads not generally used by the public, prescribed fire, muffled blasting) that produce loud noises above ambient levels, or produce thick smoke that would enter the stand, will not occur within specified distances (see table below) of any nest site or activity center of known pairs and resident singles or unsurveyed NRF habitat between 1 March and 30 June (or until two weeks after the fledging period) – unless protocol surveys have determined the activity center to be not occupied, non-nesting, or failed in their nesting attempt. The restricted zone is 1.0 mile for any un-muffled blasting. This distance may be shortened if significant topographical breaks or blast blankets (or other devices) muffle sound traveling between the blast and nest sites. March 1 – June 30 is considered the critical early nesting period; the action agency biologist has the option to extend the restricted season during the year of harvest, based on site-specific knowledge (such as a late or recycle nesting attempt). The boundary of the prescribed area may be modified by the action agency biologist using topographic features or other site-specific |

| | |
|---|---|
| | information. The restricted area is calculated as a radius from the assumed nest site (point). See Appendix F of the Assessment for a discussion of the rational for the 30 June restriction date. See Fuels management PDC for direction regarding site preparation and prescribed fire. |
| Disturbance | **Mandatory** 2) If an active spotted owl nest or activity center is located within or *adjacent* to a project area, delay the project activity until September 30th or until an action agency biologist determines that young are not present. For a given situation, the "adjacent" distance is determined by the action agency biologist – if needed, contact Level 1 team for guidance. If any project activity is so close to a known or suspected spotted owl site that the disturbance would flush a nesting spotted owl, curtail the project activity until September 30. The field biologist has the discretion to conduct surveys and determine fledging activity. |
| **Fuels reduction** | **Mandatory** 1) Burning will not take place within 0.25 mile of known active northern spotted owl nests or unsurveyed NRF habitat between 1 March and 30 June (or until two weeks after the fledging period) unless smoke will not drift into the nest stand. |
| **Restoration projects** | **Mandatory 1)** To minimize the number of potential spotted owl nest trees used for in-stream structures, only the following sources shall be used:<br><br>(I) Trees already on the ground in areas where large woody material is adequate;<br><br>(II) Trees lacking suitable nesting structure for spotted owls or contributing to trees with suitable nesting structure, as determined by an action agency wildlife biologist. |
| **Wildfire** | **Mandatory 1)**<br>Whenever possible, protect known nest sites of any listed species from high intensity fire. Update Resource Information Book annually; incorporate new nests or sites as soon as possible. |
| **Wildfire** | **Mandatory 2)**<br>(I) From 1 March – 30 June noise disturbance should be minimized inside occupied stands and within 0.25 mile of the edge of these stands. In order to accomplish this objective, minimize repeated aircraft flights that are less than 1,500 feet Above Ground Level (AGL). Also, minimize the use of fire line explosives within 1 air mile of occupied stands during the protection period. |
| **Wildfire** | **Recommended 1)** Light Hand Tactics or Minimize Impact Suppression Tactics (MIST) should receive consideration for use within the protection zones for northern spotted owls. |
| **Quarries** | **Mandatory** 1) For active nest sites or unsurveyed suitable habitat within 65 yards of the quarry operation (120 yards or 1.0 mile for blasting—see chart below), restrict operation of the quarry from March 1 through June 30 (unless protocol surveys demonstrate non-nesting).<br><br>**Recommended 1)** |

| | |
|---|---|
| | 2) For active nest sites or unsurveyed suitable habitat within 0.25 mile of the quarry operation, restrict operation of the quarry from March 1 through September 30 (unless protocol surveys demonstrate non-nesting). |

**Harassment distances from various activities for spotted owls.**

| Type of Activity | Distance at which spotted owl may flush or abort a feeding attempt |
|---|---|
| a blast larger than 2 pounds of explosives | 1 mile |
| a blast of 2 pounds or less | 120 yards |
| an impact pile driver, a jackhammer, or a rock drill | 65 yards |
| a helicopter or a single-engine airplane | 120 yards for small helicopters;<br>0.25 miles for Type 1 or 2 helicopters |
| chainsaws (hazard trees, precommercial and commercial thinning) | 65 yards |
| heavy equipment | 35 yards |

Above-ambient noises further than these Table 11 distances from spotted owls are expected to have ether negligible effects or no effect to spotted owls. The types of reactions that spotted owls could have to noise that the Service considers to have a negligible impact, include flapping of wings, the turning of a head towards the noise, hiding, assuming a defensive stance, etc. (USFWS 2003b).

**Wildland Fire - General PDC – All Species**

a. Resource Advisors/Environmental Specialists will advise Line Officers and Incident Commanders to minimize impact to listed species and their habitat during suppression activities.
b. Information on species and habitat location will be available to fire staff through pre-suppression briefings, through maps showing areas of concerns (readily accessible through GIS), and pertinent species management plans, *i.e.*, bald eagle site management plans. With this information, fire staff can determine possible needs during initial attack, if the behavior of the fire dictates the need for emergency fire suppression action.
c. Resource specialists, resource advisers, advisors/environmental specialists will give biological input to personnel in charge of fire suppression activities. The resource advisor/environmental specialist will work for the Line Officer and with the Incident Commander to relay biological concerns.
d. Whenever possible, protect known nest sites of any listed species from high intensity fire.