

Medford BA on Activities that will Maintain Spotted Owl Habitat

MEDFORD BUREAU of LAND MANAGEMENT (BLM) 2009-2010 BIOLOGICAL ASSESSMENT THAT MAY AFFECT BUT WILL NOT ADVERSELY AFFECT SPOTTED OWLS AND MARBLED MURRELETS OR CRITICAL HABITAT

I. INTRODUCTION

This Biological Assessment (BA) evaluates projects that “may affect and are not likely to adversely affect” (NLAA) northern spotted owls, marbled murrelets, and spotted owl and marbled murrelet critical habitat. We seek concurrence from the US Fish and Wildlife Service (Service), that these projects are not likely to adversely affect listed species or their federally designated critical habitat.

The projects and acres described in the Proposed Action of this BA are proposed to commence in 2009 or 2010. We expect completion within 7 years. The effects of projects on plants through 2008 are evaluated in the FY 2009-2013 Programmatic Assessment for Activities that May Affect the listed endangered plant species Gentner’s Fritillary, Cook’s Lomatium, McDonald’s rockcress, and large-flowered wooly meadowfoam (USDI 2008a). Listed fish are evaluated in separate project level consultations. Listed fish are consulted upon separately. No other listed species or designated critical habitat will be affected by the activities identified in this BA.

Description of the Action Area

The Action Area is 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 Bureau of Land Management (BLM) and all areas subject to increased ambient noise levels caused by activities associated with the proposed action. Habitat baseline in this document includes habitat on federal ownership on Medford BLM only.

The Medford District BLM encompasses approximately 862,964 acres of public land in a checkerboard pattern of mixed private and federal ownership acres (GIS calculations DA BA FH 11_2008, USDI 2008b). Not all of these lands are capable of providing owl or murrelet habitat. The proposed projects (actions) are located within the Oregon Klamath Mountains and Oregon Western Cascades Physiographic Provinces.

Natural plant community types within the Action Area are diverse. In the lower elevations Oregon white oak woodlands and grasslands, chaparral, scattered ponderosa pine, and Douglas-fir occur up to about 2,400 feet in the interior valleys. Above this on the Klamath Mountain side of the valley is the mixed evergreen zone, dominated with Douglas-fir and madrone up to about 4,500 feet, and a mixed conifer zone on the Cascade side dominated by ponderosa pine, Douglas-fir, incense cedar, and white fir in more mesic sites. In both areas, dense, chaparral (sclerophyllous type) communities can occupy large patches of the landscape, composed primarily of wedge-leaf ceanothus (*Ceanothus cuneatus*) and manzanita (*Arctostaphylos* species). Above 4,500 feet is the white fir zone, grading into a Shasta red-fir zone up to about

6,500 feet. Above this, areas of mountain hemlock and whitebark pine can be found up to open rocky herbaceous grasslands on the highest peaks above timberline.

The ecological diversity of communities and species of the BLM is attributed to its physiographic setting at the confluence of the Klamath and the Cascade ecoregions. Many eastern Cascade and Great Basin species are on the periphery of their range in the Klamath sub-basin and spill into the southern edge of the Rogue valley from the east. The juxtaposition of these regions has led to a diverse array of species including species whose distributions are centered south into the Sierras of California, east into the Great Basin, or north up the Cascades and the Coast range.

The BLM recently revised land use allocations (LUA) and developed a new Resource Management Plan RMP. The Record of Decision (ROD) for that plan was signed December 30, 2008 (USDI 2008c). LUA categories in the ROD include Late Successional Management Area (LSMA), Riparian Management Area (RMA), Timber Management Area (TMA), Deferred Timber Management Area (DTMA) and Uneven-aged Management Area (UEM).

The Proposed Action in this BA proposes no adverse habitat treatments in former LSR or current LSMA and no adverse impacts to CHU. There is no owl or murrelet habitat removal or downgrade proposed in this BA. No project that reduces dominant, co-dominant, or intermediate canopy will occur within 300 meters of any owl site (See PDC). All projects were planned under the Northwest Forest Plan (NWFP), (USDA, USDI 1994a, 1994b) objectives and standards and guides. All projects will follow those NWFP guidelines. Although the ROD revised locations, acres and management direction of land use allocations, none of the projects proposed in this BA implement those changes. Subsequent formal consultations would evaluate any proposed removal of habitat from any NWFP RMP land use allocation specified in the ROD. Projects proposed in this BA will maintain all owl and murrelet habitat located in the former NWFP reserves, riparian areas and former critical habitat units. Any habitat changes to NWFP reserves will be evaluated in future consultations on projects developed under the Resource Management Plan (USDI 2008c).

Private lands

BLM-managed lands are generally intermingled with private lands. Human populations are centered on the cities of Medford, Grants Pass, and Ashland. Private lands comprise approximately 50 percent of the total Action Area. Private forested lands managed for timber production will typically be harvested between 40 and 60 years of age, in accordance with State Forest Practices Act standards. These lands are typically not expected to provide long-term spotted owl nesting, roosting and foraging habitat, or marbled murrelet habitat, although some habitat occurs in private ownership. The conversion of intact suitable habitat in the low elevation woodlands and grasslands into pastures, vineyards, orchards, and home sites is increasing throughout the Rogue Valley.

II. DEFINITIONS

NW Forest Plan Land Use Allocations (USDA USDI 1994b). All projects in this BA were planned under NWFP land use allocations and standards and guidelines and follow the guidelines in place at the time of planning. They comply with the new ROD and will be implemented as NWFP projects under the interim guidance of the ROD, which references former NWFP projects that were in planning when the ROD was finalized (ROD pg 3 USDI 2008c).

Late-Successional Reserves 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.

Medford Resource Management Plan (RMP) Land Use Allocations (USDI 2008c).

Late-Successional Management Areas (LSMAs) are managed to maintain and develop habitat for the northern spotted owl and marbled murrelet. These areas are designed to recover economic value from timber harvested after a stand-replacement disturbance. Thinning and other silvicultural treatments would be applied to promote development of mature or structurally complex forests, and reduce the potential for uncharacteristic wild fire (USDI 2008c). LSMAs were designed to correspond with spotted and owl and marbled murrelet critical habitat units.

Riparian Management Areas (RMAs) are areas along all streams, wetlands, ponds, lakes Managed for conservation of special status fish species, riparian and aquatic conditions that supply stream channels with shade, sediment, filtering, leaf litter and large down wood, managed to maintain and restore water quality and maintain and restore access to stream channels for all life stages of fish species. Thinning and other silvicultural treatments would be applied to speed development of large trees and to reduce the potential for characteristic wildfire. No thinning would occur within 60 feet of high water mark for perennial and intermittent fish bearing and perennial non-fish bearing and up to 50% canopy could be removed, and no thinning would occur within 35 feet of high water line of intermittent non-fish bearing streams. Harvested trees would be available for sale.

National Landscape Conservation System includes the Cascade-Siskiyou National Monument, Pacific Crest National Scenic Trail, and the Rogue Wild and Scenic River. Management direction is to maintain the conditions consistent with the designation of these areas. Specifics are summarized in FEIS Pgs 2-25-26 (USDI 2008c)

Administratively withdrawn areas include Areas of Critical Environmental Concern and Research Natural areas, roads, buildings and quarries or other infrastructure and facilities,

recreational sites, areas identified as withdrawn in the timber production capability classification system (TPCC). Other than ACEC's, there are no specific management objectives or directions. They may be managed similarly to the adjacent or surrounding land use allocations if those uses are not incompatible with the reason for which those lands were withdrawn.

Deferred Timber Management Areas are also managed for permanent forest production under sustained yield principles. Deferred areas are mapped on Map 2-2 (*Land use allocations under the PRMP*) of the FEIS (USDI 2008c). Timber harvest would be deferred on these areas until after 2023. Fire and fuels treatments would be applied to vegetation under 8 inches diameter breast height. Trees could be removed for safety and operational reasons, including road construction and maintenance. After stand-replacement disturbance, these lands would revert back to the underlying land use allocation: either Uneven age Timber Management Area or the Timber Management Area.

Timber Management Area (TMA) consists of those federal lands not in the categories above. For the BLM this is the general direction for Matrix lands: All merchantable material would be removed from the harvest units. Minimum age class of harvest areas is 40 year age class. Commercial thinning would recover anticipated mortality and would maintain stand densities necessary to occupy the site, but below densities that would reduce stand vigor and health. Historic conifer stands that are currently producing brush or hardwoods will be converted to conifer unless hardwoods would produce a higher net monetary gain. Fertilizer and pruning would be applied where enhanced timber value would result.

Uneven-Aged Management Area (UEM) are established as shown on Map 2-2C of the FEIS (USDI 2008c) and would be managed by harvest methods including thinning, single tree selection and group selection to support the removal and sale of timber and biomass designed to promote growth and vigor of the stand, to adjust stand composition or dominance; to recover anticipated mortality; to reduce stand susceptibility to natural disturbance; to improve merchantability and value and to promote multi-structural conditions in stands. An overstory component would be retained to promote the development of fire-resilient forests, in an approximate relative density between 25 and 55. (*Appendix R of FEIS Vegetation Modeling provides assumptions for modeled Relative Density, Curtis, 1982*).

Level 1 Review

This BA was reviewed by the Level 1 team, which includes the USFS Forest Biologist, and the Medford BLM District Biologist. The Level 2 team includes the USFS Forest Supervisor, and the Medford BLM District Manager.

Northern Spotted Owls

Spotted Owl Sites

Documented Spotted Owl Sites are defined as locations with evidence of continued use by spotted owls, including breeding, repeated location of a pair or single birds during a single season or over several years, presence of young before dispersal, or some other strong indication of continued occupation. Documented spotted owl sites are tracked in the BLM's northern spotted owl database. The majority of the known sites were established through protocol surveys completed in the late 1980s and early 1990s. Protocol surveys are currently conducted only in demographic study areas. Protocol surveys are no longer required outside of the demographic study areas, but owl sites and survey data are recorded in an opportunistic manner. All documented sites receive seasonal protection, unless shown to be non-nesting as described in the Project Design Criteria (see Appendix A, PDC).

Generated ("G") Sites were created by the use of a methodology developed by an interagency team in order to estimate the number of northern spotted owls affected by a proposed federal action in areas where sufficient survey information is not available. The entire set of owl sites used for OEM (Owl Estimation Methodology) analysis includes the generated sites and documented sites. *Methodology for Estimating the Number of Northern Spotted Owls Affected by Proposed Federal Actions* (USDA et al. 2007, corrected 9/2008, Appendix B of DA BA FH USDI 2008b) was used to provide a reasonable basis for estimating potentially-occupied spotted owl nest sites on a given landscape. The OEM aids the Service in estimating of the number of northern spotted owls likely to occur within the area affected by proposed Federal actions.

The methodology relied on known spotted owl locations from spotted owl surveys as the foundation for the template. Survey data, in some cases, was insufficient to estimate the number and distribution of spotted owls on a given area. The known spotted owl locations were supplemented with generated spotted owl locations derived from an analysis of survey data from similar areas within the range of the spotted owl and information on the configuration of habitat in the subject area. Nearest-neighbor distances and known spotted owl density estimates were used to "place" potential spotted owl occupied sites in habitat. Both known spotted owl locations and habitat information were factored into the OEM process to provide the Service a more comprehensive accounting of likely owl distribution and potential adverse effects.

Provincial Home Range is defined as the circle around an activity center and represents the area owls are assumed to use for nesting and foraging in any given year. The home ranges of several owl pairs may overlap. Provincial home range radii vary based on the physiographic province in which they are located: Klamath Mountains Province = 1.3 miles (approximately 3,400 acres), and Cascades West Province = 1.2 miles (approximately 2,900 acres).

Core Area is a 0.5-mile radius circle (approximately 500 acres) from the nest or center of activity to delineate the area most heavily used by spotted owls during the nesting season; it is included in the provincial home range circle. Core areas represent the areas which are defended by territorial owls and generally do not overlap the core areas of other owl pairs. Recent

evaluation of owl telemetry literature indicates most spotted owl activities are focused within the 0.5-mile radius around the nest tree (OEM, Appendix B DA BA FH, USDI 2008b).

Nest Patch is the 300-meter radius area around a known or likely nest site; it is included in the core area. Disturbance or treatments that reduce canopy of habitat within this area could potentially affect the reproductive success of nesting birds. Exceptions to this are noted in some site-specific situations.

Owl Activity Periods

Table 1. Northern Spotted Owl Breeding Periods (see also PDC, Appendix A)		
Entire Breeding Period	Critical Breeding Period	Extended Breeding Period
March 1-September 30	March 1-June 30	July 1-September 30

Northern Spotted Owl Habitats

We defined four categories of forest land in this BA. These categories are distinct and non over-lapping.

Non-habitat

Capable

Dispersal

NRF (Nesting, Roosting and Foraging)

Nesting, Roosting, and Foraging (NRF) Habitat for the northern spotted owl consists of habitat used by owls for nesting, roosting, *and* foraging. NRF habitat also functions as dispersal habitat. Generally, this habitat is multistoried, 80 years old or more (depending on stand type and structural condition), 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 or age alone does not qualify a stand as NRF. Other attributes include a high incidence of large trees with various deformities (e.g., large cavities, broken tops, mistletoe infestations, and other evidence of decadence); large snags; large accumulations of fallen trees and other woody debris on the ground; and sufficient open space below the canopy for owls to fly (Thomas et al. 1990). NRF habitat in southwest Oregon is typified by mixed-conifer habitat, recurrent fire history, patchy habitat components, and a higher incidence of woodrats, a high quality spotted owl prey species in our area.

Forsman et al. (1984) described some of the differences in the Klamath Mountains Province, typical of large parts of the Medford District,

“Eighty-one percent of all nests in northwestern Oregon were in cavities, compared to only 50 percent in the Klamath Mountains. These differences appeared to reflect regional differences in availability of the different nest types. Dwarf mistletoe infections in Douglas-fir (and numerous debris platforms that were associated with dwarf mistletoe infections) were common in the mixed coniferous forests of the Klamath Mountains and the east slopes of the Cascades, but did not occur in western Oregon.”

NRF in southwest Oregon varies greatly. It may consist of somewhat smaller tree sizes. One or more important habitat component, such as dead down wood, snags, dense canopy, multistoried stands, or mid-canopy habitat, might be lacking or even absent in portions of southwest Oregon NRF. However, southwest Oregon NRF can support nesting owls if those components are available across the immediate landscape. Forsman et al. (1984) documented the range of nest trees for platform nests (from table) (n=47) range equals 36 to 179 centimeters (cm) (14.2 to 70.5 inches) in diameter at breast height (dbh) averaging 106 cm (41.7 inches) dbh. Mistletoe is occasionally used as a nesting substrate in southwest Oregon, which makes smaller trees suitable as nest trees. The BLM Resource Area wildlife biologists make site-specific determinations and delineations of NRF habitat at the project level. Site-specific determinations are incorporated into the Medford District NRF habitat layer.

For spotted owls, features that support nesting and roosting habitat typically include a moderate to high canopy (60 to 90 percent); a multistoried, multi-species canopy with large overstory trees (greater than 30 inches in 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).

Habitat Capable for the northern spotted owl is forest land that is currently not habitat but can become NRF or dispersal in the future, as trees mature and canopy fills in.

Dispersal is a subcategory of “all dispersal” habitat for northern spotted owls. Throughout this document, “dispersal” will be used to describe dispersal-only habitat. Thomas, et al. 1990, defined dispersal habitat as forested habitat more than 40 years old, with canopy closure more than 40 percent, average diameter greater than 11 inches, and flying space for owls in the understory but does not provide the components found in NRF. It provides temporary shelter for owls moving through the area between NRF habitat and some opportunity for owls to find prey, but does not provide all of the requirements to support an owl throughout its life. Dispersal will be used throughout this document to refer to habitat that does not meet the criteria to be NRF habitat, but has adequate cover to facilitate movement between blocks of NRF habitat. Owls also disperse through NRF habitat. The term “all-dispersal” will be used when both dispersal and NRF are intended.

Spotted Owl Habitat Treatment Types

Forest stands in southwest Oregon are often multiple-aged with multiple canopy levels that have resulted from previous harvesting or from past natural stand disturbance such as repeated historic low intensity fire (USDI 1992a, Vol. II, 2-37). The actual interpretation of treatment impacts to owls will be defined by the Resource Area wildlife biologists in collaboration with their Interdisciplinary Team and Field and District Managers. Effects of individual activities will be determined by the BLM following these descriptions.

Medford BLM mapped suitable NRF habitat on the Owl Habitat Baseline (Appendix A of DA BA FH, USDI 2008b)). Resource Area biologists will continue to improve and refine this habitat layer as projects are proposed and field/photo evaluations can be conducted. Acres changed due to fire or harvest activities have been incorporated in the Environmental Baseline (USDA, USDI, 2008b).

Treat and Maintain NRF or Dispersal Habitat means an action or activity will occur within NRF or dispersal habitat that will not change the owl habitat function. The NRF stand retains large trees, multistoried 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” (NLAA) the spotted owl because the treated stand will retain the characteristics that qualify it as the pre-treatment habitat and spotted owls will be able to use the stand as before. Some change to understory vegetation and dense trees may occur. NRF habitat will retain 60 percent canopy cover, large trees and snags, large down wood, and structural diversity important to northern spotted owls. Dispersal habitat will continue to provide at least 40 percent canopy, flying space, and trees 11 inches dbh 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. The OEM suggests any NRF habitat treatment, including NRF maintenance, in the nest patch may be an adverse effect (LAA). This Biological Assessment (BA) will offer site-specific information to explain situations when NRF maintenance at the nest patch is an NLAA.

No potential disturbance to nesting owls or murrelets is anticipated with any of these proposed projects. Applying the PDC (Appendix A) will ensure that no potentially disturbing noise or activity would occur within sensitive distances of nesting owls or murrelets by implementing one or more of the following:

- avoiding activities during the nesting period,
- by spacing projects outside sensitive distances,

- by conducting protocol surveys to ensure birds are not nesting at the location or time of the activity.

Spotted Owl Designated Critical Habitat

The final rule for Revised Designation of Critical Habitat for the northern spotted owl was published by the US Fish and Wildlife Service (the Service) in the *Federal Register* was signed on August 12, 2008 and became effective on September 12, 2008. Critical Habitat 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 NRF habitat in the future (57 FR 10:1796-1837).

Treat and Maintain Critical Habitat means no primary constituent elements are removed or reduced and primary constituent elements of critical habitat are retained. The Endangered Species Act (ESA) consultation handbook (USDA et al. 2002, 4-33), as amended, provides the following information regarding designated critical habitat:

Primary Constituent Elements

The physical and biological features of designated or proposed critical habitat essential to the conservation and recovery (amendment due to *Gifford Pinchot* lawsuit¹) of the species, including, but not limited to the following:

- space for individual and population growth, and for normal behavior;
- food, water, air, light, minerals, or other nutritional or physiological requirements;
- cover or shelter;
- sites for breeding, reproduction, rearing of offspring, germination, or seed dispersal; and
- habitats that are protected from disturbance or are representative of the historic geographic and ecological distributions of a species [50 CFR 424.12(b)].

It further defines critical habitat for listed species as: “(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 [constituent elements] (I) essential to the conservation of the species and (II) 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” [16 U.S.C. § 1532(5)(A)]. Designated critical habitats are described in 50 CFR part 17 and part 226.

¹ *Gifford Pinchot Task Force et al. v U.S. Fish and Wildlife Service et al.*, 378 F.3d 1059, 1069-71 Attachment 1-9

In the proposed CHU rule specifically for owl critical habitat, the Service defined the following elements of Primary Constituent Elements (PCE), as described in the proposed ruling: (32450 **Federal Register** / Vol. 72, No. 112, June 12, 2007 / Proposed Rules).

Sites for habitats that are representative of the historical geographical and ecological distributions of the northern spotted owl for:

PCE-1 Forest types known to support the northern spotted owl across its geographic range...

PCE-2 Forest types as described in PCE 1 of sufficient area, quality, and configuration, or that have the ability to develop these characteristics, to meet the home range needs of territorial pairs of northern spotted owls throughout the year. A home range must provide all of the habitat components and prey needed to provide for the survival and successful reproduction of a resident breeding pair of northern spotted owls....

- *Nesting Habitat: breeding, reproduction, and rearing of offspring...*
- *Roosting Habitat: cover, or shelter...*
- *Foraging Habitat: food, or other nutritional or physiological requirements...*

PCE-3 Dispersal habitat: The dispersal of juveniles requires habitat supporting both the transience and colonization phases. Habitat supporting the transience phase of dispersal includes, at a minimum, stands with adequate tree size and canopy closure to provide protection from avian predators and at least minimal foraging opportunities. This may include younger and less diverse forest stands than foraging habitat, such as even-aged, pole-sized stands.... Habitat supporting colonization is generally equivalent to roosting and foraging habitat...

Northern Spotted Owl Recovery Plan

The Service finalized the Recovery Plan for the northern spotted owl on May 13, 2008. *Recovery plans are not regulatory documents; rather, they provide guidance to bring about recovery and establish criteria to be used in evaluating when recovery has been achieved.* BLM continues to work with the Service to incorporate Recovery Goals and Actions that are consistent with BLM laws and regulations. The Recovery Plan has 33 Recovery Actions. BLM is a participant in the inter-organizational spotted owl working group (Recovery Action 1), and will continue demographic monitoring to address Recovery Actions 2 and 3. The revised RMP will address Recovery Actions 4 and 5 by evaluating the establishment of a network of MOCA's and their management. The proposed action included in this BA does not remove or downgrade habitat in any MOCA. In the Oregon and California Klamath Provinces, this Plan calls for an adaptive management approach to fire management and spotted owl recovery. BLM is participating with others to address the fire-related Recovery Actions 8-10, to better understand spotted owl habitat and prey relationships (Recovery Action 11) and to standardize habitat definitions (Recovery Action 12). BLM is also a collaborator in the many of the Recovery Actions that address barred owl issues.

Marbled Murrelets

Marbled Murrelet Suitable Habitat

Marbled murrelet suitable habitat includes the conifer-dominated stands generally 80 years old or more with trees averaging 18 inches dbh or more. Murrelet suitable habitat must include potential nesting structure as described below and by the Level 2 policy of March 26, 2004. At least one potential nest tree must be present in a stand of trees at least 1 acre in size and the stand trees must be at least one-half the height of the site-potential tree.

We used the spotted owl NRF habitat layer to identify areas that have the potential to provide the forest structure necessary to provide for nesting of murrelets. This is an overly broad category of suitable potential marbled murrelet habitat, but we have no corporate data system in place to evaluate large branches and special site-specific criteria that would qualify as potential marbled murrelet habitat. Any project in murrelet habitat, as we have described here, has been evaluated in the field to refine project-level marbled murrelet habitat conditions.

Marbled Murrelet Potential Structure

Potential marbled murrelet nest trees occur within 50 miles (81 kilometers) of the coast (USDI 1997, p. 32) and below 2,925 feet (900 meters) in elevation (Burger 2002). Murrelets nest in one of four tree species: western hemlock, Douglas-fir, Sitka spruce, or western red cedar (Nelson and Wilson 2002, p. 24 and 44). Nest trees are 19.1 inches (49 centimeters) or more dbh and more than 107 feet (33 meters) in height, have at least one platform 5.9 inches (15 centimeters) or more in diameter, contain nesting substrate (e.g., moss, epiphytes, duff) on that platform, and have an access route through the canopy that a murrelet could use to approach and land on the platform (Burger 2002; Nelson and Wilson 2002, p. 24, 27, 42, 97, 100). The tree has a tree branch or foliage, either on the tree with potential structure or on a surrounding tree, that provides protective cover over the platform (Nelson and Wilson 2002, p. 98 and 99).

Marbled Murrelet Occupied Habitat

Occupied habitat is suitable habitat or potential structure found to meet the definition of occupied by interagency established survey protocol (Evans Mack et al. 2003). Survey data collected by the Rogue River-Siskiyou National Forest (Forest Service) and BLM in southwestern Oregon (9,795 survey visits for murrelets between 1988 and 2001) indicate murrelets inhabit forested areas relatively close to the ocean. Murrelets have not been found more than 32 miles (51.5 kilometers) inland on the Powers Ranger District or more than 16 miles (25.7 kilometers) inland on the Gold Beach or Chetco Ranger Districts of the Rogue River-Siskiyou National Forest, located adjacent to Medford BLM (Dillingham et al. 1995; USDA and USDI 1996; USDA and USDI 2003, Appendix I). Occupied behaviors were observed during 221 surveys on the Siskiyou National Forest from 1988 through 2001, and presence was observed during an additional 491 surveys. The 221 observations of occupied behaviors may represent 125 or more distinct forest stands. Murrelets were not detected on the Medford BLM or the Rogue River National Forest.

The Forest Service and BLM completed a study to better quantify the likelihood of murrelet occurrence beyond the eastern boundary of the western hemlock/tanoak vegetation zone in southwest Oregon (USDA and USDI 2001). This study refined the existing survey zone boundaries to better reflect known murrelet occurrence. Area A encompasses the known range of the marbled murrelet. Approximately 82,400 acres of suitable habitat are located in Area A. NWFP LSRs and other reserved areas contain 90 percent of the suitable habitat in Area A; any stands of suitable habitat in Matrix subsequently found to be occupied are designated as additional “Murrelet” LSR. Area B is a “buffer” to Area A and includes all land 6.2 miles (10 kilometers) east of Area A. Surveys are conducted only in Areas A and B. Federal land east of Area B is assumed to not contain murrelet habitat and is no longer surveyed. Part of the Action Area is within Area B. To date, no murrelets have been found in Medford’s portion of Area B. The Service concurred with our study conclusions in a letter: *Technical Assistance on the Final Results of Landscape Level Surveys for Marbled Murrelets in Southwest Oregon* (USDI Fish and Wildlife Service reference: 1-7-02-TA-6401).

Marbled Murrelet Treatment Types

Projects occurring near marbled murrelet habitat that do not alter the habitat itself have the potential to disturb murrelets that may be nesting nearby. Projects of this type are noted as “disturbance” projects in the Proposed Action table. PDC, including protocol surveys, seasonal restrictions, and field evaluation of habitat (see Appendix A, PDC) reduce chances of disturbance to nesting murrelets. The noise and activity associated with habitat treatments also have the potential of disturbance. For clarity in this BA, those disturbances are evaluated as interrelated and interdependent effects associated with the harvest project. PDC in habitat treatment projects reduce the chance of adverse impact in all cases.

Treat and Maintain Marbled Murrelet Suitable Habitat means to affect the quality of murrelet habitat and maintain its ability to serve as nesting habitat. Treating trees in the understory—not the actual nest trees—is an example of treating and maintaining marbled murrelet nesting habitat.

BLM biologists evaluated proposed projects to ensure that projects in this BA avoid the potential disturbance that could occur from projects occurring near marbled murrelet sites that do not directly affect the marbled murrelet habitat itself. All potential disturbance activity related to harvest of habitat is considered an interrelated and interdependent effect associated with the harvest and is not evaluated separately.

Marbled Murrelet Activity Period

Table 2. Marbled Murrelet Breeding Period (see also PDC, Appendix A)		
Entire Breeding Period	Critical Breeding Period	Extended Breeding Period
April 1-September 15	April 1-August 5	August 6-September 15

Marbled Murrelet Designated and Proposed Critical Habitat

Critical Habitat for the marbled murrelet was designated by the Service on May 24, 1996 (61 FR 26256), and includes the primary constituent elements that support nesting, roosting, and other normal behaviors that are essential to the conservation of the marbled murrelet. The Service published proposed revised Critical Habitat for marbled murrelets (44678-44701 **Federal Register**). The Proposed Rule has not been finalized as of the date of this BA.

Primary Constituent Elements

Primary constituent elements of marbled murrelet critical habitat include

- (1) individual trees with potential nesting platforms, and
- (2) forested areas with a canopy height of at least one-half the site-potential tree height and, regardless of contiguity, within 0.5 miles (0.8 kilometers) of individual trees containing potential nesting platforms.

The final rule identifies activities that might adversely affect critical habitat: *A variety of activities that disturb or remove PCEs may adversely affect, though not necessarily "adversely modify", marbled murrelet critical habitat: Removal or degradation of forested areas with a canopy height of at least 1/2 the site-potential tree height and, regardless of contiguity, within 0.8 km (0.5 mi) of individual trees containing potential nest platforms. This includes removal or degradation of trees currently unsuitable for nesting that contribute to the structure/integrity of the potential nest area (i.e., trees that contribute to the canopy of the forested area). These trees provide the canopy, stand conditions, and protection from predation important for marbled murrelet nesting. Beneficial actions may also adversely affect, but would not be expected to adversely modify, critical habitat, since they would promote the development*

Designated critical habitat also includes habitat that is currently unsuitable but has the capability of becoming suitable habitat within 25 years.

III. DESCRIPTION OF THE PROPOSED ACTION

All projects described in this BA avoid any removal of dominant, co-dominant or intermediate canopy trees within 300 meters of a nesting owl to comply with NLAA determinations described in the OEM process for activities in the nest patch (OEM Appendix B, DA BA FH USDI 2008b). If protocol surveys have not been conducted to confirm the birds are non-nesting that season, activities will be curtailed to avoid the potential of in-season disturbance. PDCs and nest patch protection will also apply to sites located through the OEM process in areas where field surveys have not documented actual owl sites. Lacking field surveys, these areas indicate the highest likelihood of owl occupancy, and provide a conservative approach to protect birds during the sensitive breeding period. Projects all comply with the PDC (project design criteria) below that are designed to avoid adverse disturbance impacts to owls and murrelets. Recommended PDCs will be followed when possible.

Project Design Criteria

PDC are conservation measures developed to reduce impacts to listed species. PDC include three general components:

- Retention and protection of known nesting trees and
- Seasonal protection during the critical or extended breeding periods of nesting species and/or
- Establishing distance protection around active nesting sites to reduce the potential of disturbance effects.

Murrelet PDC also includes litter control measures around nest sites to avoid attracting corvids, which can kill murrelet chicks.

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.

The Service had previously requested Medford BLM to categorize NLAA projects into harvest, “fuels”, and other kinds of projects. To meet that request, biologists in each Resource Area classified projects into one of the general categories in Table 3: harvest, forest health, and “other” using their best judgment of the proposed actions. Most Medford projects are designed to meet multiple objectives. Individual projects might have several units that could meet several of these objectives. Different biologists might classify the same project into a different category. Although classification of projects by these categories is possible, it is not necessarily meaningful to listed species. The effects of projects are evaluated in terms of changes to canopy cover, dominant structure, tree density and understory removal. The effects to the habitat do not vary among project “types”.

The acres treated, the effects to vegetation, the habitat category affected, and the location of the treatment are clearly defined for each project, regardless of objective. Therefore, projects will be analyzed according to their potential impacts to habitat: Spotted owl NRF, dispersal and critical habitat, and marbled murrelets and critical habitat.

All projects in this BA are designed to ensure the owl habitat classification will retain the owl habitat characteristics of the pre-treatment habitat following treatment. Pre-project habitat will be maintained. Harvest treatments described in this BA are designed to ensure that suitable habitat for owls and murrelets retains 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 preparation (including slash treatment) related to the timber sale.

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. If the blowdown or fire changes the stand to non-habitat, the effects determination of salvage removal would be “no effect”, except for possible disturbance. Most salvage harvest that maintains habitat will involve the removal of a few trees and the retention of the pre-salvage habitat condition for owls and murrelets.

Selective harvest is planned in densely-spaced stands that provide dispersal habitat for owls. Harvest in dispersal habitat is designed to promote tree growth in areas designated for timber harvest. Some dispersal stands have been previously managed, some resulted from wildfires that removed portions of the stand, and some are mixed-conifer/hardwood stands from natural regeneration. Some are 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 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.

Hazard tree removal is difficult to anticipate, but safety concerns require them to be dealt with promptly. Hazard trees can occur along active roadways, may result from localized wind or snow break damage, or may be existing trees considered hazardous by contractors working in adjacent areas. Most hazard tree removal will occur along the road prism and will involve individual trees. BLM sells most hazard trees that are located in the matrix. Some in LSR and other reserves may be left on site as down wood or be used for stream improvement projects. The amount of hazard tree removal in this biological assessment is estimated from widely variable hazard tree treatments in prior years. Actual acres in FY 09 and FY 10 may be less than estimated. If a situation occurs that exceeds that estimate, the Level 1 team will evaluate the need for additional consultation. Any removal or falling of hazard trees would be evaluated to ensure they would either be no effect or would be “discountable, insignificant, or completely beneficial” (ESA Handbook Definition of May affect, Not likely to adversely affect, USDI,

2002). Some hazard tree removal occurs in non-habitat or involves the removal of small trees and would have no effect to northern spotted owls or critical habitat. BLM is not required to consult on activities that have “No Affect” to listed species or critical habitat.

Potentially-disturbing activities are seasonally restricted around known and potential spotted owl nest sites (see PDC Appendix A) to reduce potential disturbance to nesting owls. Some harvest could occur in suitable habitat that has not been surveyed for northern spotted owls. BLM evaluated all BLM lands to determine the likelihood of owl occupancy based on habitat condition. Where adverse disturbance may be possible, and the project would occur during the critical nesting season within the disturbance distances outlined in Appendix A—Project Design Criteria, those projects would be analyzed in a formal consultation BA. No adverse disturbance projects are included in this BA, because all projects are designed to reduce and avoid adverse 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 project areas.

Some fuels reduction related to slash could be expected, and would incorporate PDC (Appendix A) to ensure any potential disturbance effects to owls will 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.

Forest health and 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. Most projects that reduce trees or shrubs also reduce understory fuels and reduce the risk of severe wildfire. Forest health projects generally emphasize fuels reduction as a primary objective, although watershed restoration and timber harvest projects also meet fuels and forest health objectives.

Maintenance brushing, release, pre-commercial thinning, prescribed burning or scalping small areas of grass / forbs for site preparation (see also fuels reduction), planting, 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.

Fuels reduction projects in this BA are designed to maintain pre-treatment habitat by design. They incorporate PDC to avoid adverse disturbance. Fuels reduction can include piling and prescribed burning, thinning, and brush treatments. 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. Actual prescriptions vary by project, and could also meet timber or other objectives.

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 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 reduce 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. All units proposed for harvest, fuel reduction, or forest development treatments could also be available for biomass utilization under stewardship contracts. Biomass could be removed using low impact ground-based equipment or cable yarding systems. 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. Fire line construction may occur as a tool to help create fire lines. No treatments will occur without an evaluation for habitat of listed species, and incorporation of protection methods to ensure adverse effects are avoided.

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 will treat and maintain habitat.

Culvert and ditching activities occur on existing roads, where high use is expected to have two scenarios: listed species have habituated to the noise, and work in these areas would have “no effect” (NE) to listed species, or listed species would have been displaced already from the high use. We are consulting only on projects that occur on closed or low-use roads, where owls or murrelets may remain in the vicinity, and the watershed construction work is likely to exceed ambient noise levels for that area. PDC for season and/or distance will reduce any noise impacts to nesting owls or murrelets and would be “not likely to adversely affect” listed species (NLAA) in these limited situations.

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 down wood restoration, wildlife tree development using chainsaws (dead and green snags), wildlife habitat restoration and enhancement (such as meadows), and prescribed burning (see fuels management). Some blasting for snag creation may occur.

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 maintenance work can be tied to timber harvest, to forest health projects or might be packaged as a watershed restoration project. 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). Meadow restoration, fencing, native plant seeding and planting, and weed removal may occur to restore or repair healthy ecosystems. 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 BLM activities. Road Maintenance includes maintenance, ditching, restoration or decommissioning, culvert replacement and repair, bridge maintenance and repair, road re-alignment. Most road maintenance would occur on already heavily used roads where listed species are likely to be habituated to this level of activity or have previously been displaced from near the road.

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 and limbing 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 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. All ground disturbance activities will occur only after an evaluation that the project would not adversely impact habitat of listed species.

Recreation projects in this BA are designed to maintain pre-treatment owl or murrelet habitat and avoid adverse impacts related to disturbance. Most recreation projects would occur in areas of high use by the public. As such, any listed species near these areas are likely to be habituated to that activity, or have already been displaced to quieter areas.

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 or presence of potential nesting 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).

Adaptive Management

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:

- Project complies with the RMP or LRMP to which it is tiered. In this BA, projects comply with the NWFP as well as the current RMP.
- Impacts and extent of the project are within parameters of described activities in this BA.
- 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
- Minimization measures proposed for the project are consistent with the intent and impacts of actions described in this BA

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).

Table 3. Proposed Action by General Objective “Types”

Project Category (Units of measure)	Scope
Treatment Type	Amount
Harvest Activities: includes stewardship, forest products, hazard tree removal, selection harvest, pole sales. (Acres)	1,285
CHU/LSMA subset	30
Forest Health Treatments: (includes Fuels Reduction Projects, pre-commercial thinning, brushing, pruning, site preparation in acres).	9,485
CHU/LSMA subset	1,005
Watershed (Other from spreadsheet) Restoration (snag development (trees), riparian/stream enhancement work (acres) including trail maintenance.	607
CHU/LSMA subset	10
BA TOTAL	11,377
Noise would be kept to an insignificant level through implementation of seasonal and distance PDC.	

IV EFFECTS OF THE ACTION

Table 4 shows that no more than 4,645 acres of NRF habitat are proposed to be treated and maintained by any treatment as a result of implementation of this proposed action. There will be no change to the amount of NRF habitat as a result of any of these treatments. Quality, in many cases, will improve because the post-treatment stand will allow more space for residual trees to develop NRF characteristics. Treated stands are designed to be more resilient to stand-replacement fire, disease, and suppression mortality. This maintenance of NRF habitat will occur in both the Klamath Mountains and Western Cascades provinces (Table 4).

Table 4: NRF Habitat that will be treated and maintained, depicted by Physiographic Province

Physiographic Province	Medford BLM NRF Acres in Province*	Acres of Treatment (treat and maintain)	Percent of total BLM NRF treated and maintained
Klamath Mountains	306,406	4070	1.3% No change
Project Objective Type**			
Forest health		3640	
Other		210	
Timber		220	
Cascades West	73,590	575	<1% No change
Project Objective Type**			
Forest health		355	
Other		85	
Timber		135	
Total	379,996***	4645	1.2% No change
<p>* Baseline was updated to include habitat changes due to a wildfire in Butte Falls since the DA BA FH baseline was completed.</p> <p>**The Service requested project objective breakouts based on the primary objective of the project, although most projects meet more than one objective. Acres depicted are associated with only one category and do not overlap, but the distinction between types of projects are not definitive. Project objectives do not change effects to habitat.</p> <p>***Revised during consultation process 2/09.</p>			

Projects within NRF include thinning, density management, and some stewardship projects that are designed to ensure NRF habitat will retain at least 60% canopy cover, and large trees and snags, large down wood, and structural diversity important to northern spotted owls will be retained. Light to moderate thinning will 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. Components important to spotted owls such as nest trees, multi-layered canopies, and dead and down wood that support prey species habitat will remain within a given

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project area post-harvest, retaining the ability to provide for the nesting, roosting, foraging and dispersal of spotted owls. Hazard trees are usually sold, and acres where hazard trees are removed are included in the harvest treatment table above. 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:

- Canopy cover will be maintained at 60 percent or greater at the stand level.
- Decadent woody material, such as large snags and down wood will remain post-treatment.
- All multi-canopy, uneven aged tree structure that was present pre-treatment will remain post-treatment.
- NRF habitat treatments will be distributed both spatially and temporally throughout the two affected Physiographic provinces.
- Activities will be distributed both spatially and temporally across BLM.
- No nest trees will be removed.
- PDC will avoid adverse disturbance.

Treatments will improve ecological health of the stand, stimulate forage plants important to spotted owl prey, 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.

EFFECTS: SPOTTED OWL DISPERSAL HABITAT

Table 5 shows that up to 6732 acres of dispersal habitat will be treated and maintained under the proposed action in two Physiographic Provinces. There is no dispersal habitat removal in this proposed action. The total amount of dispersal habitat in the action area will not change as a result of these treatments. The projects analyzed in this BA are designed to maintain dispersal habitat characteristics post-project. Trees over 11 inches dbh 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, will be avoided. Wild fire resiliency will be improved. Remaining trees will 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.

Table 5 Dispersal habitat that will be treated and maintained depicted by Physiographic Province

Physiographic Province	Medford BLM Dispersal Acres in Province	Acres of Dispersal Treat and Maintain	Total % dispersal treated and maintained
Klamath Mountains	99,186	5,547	5.6%
Project Objective Type**			
Forest health		4745	
Other		217	
Timber		585	
Cascades West	30,070	1,185	3.9%
Project Objective Type**			
Forest health		745	
Other		95	
Timber		345	
BA Total	129,256	6,732	5.2%
<p>* Baseline was updated to include habitat changes due to a wildfire in Butte Falls since the DA BA FH baseline was completed.</p> <p>**The Service requested project breakouts by “type” although most projects meet more than one objective and differences in “type” is not definitive. Acres depicted are associated with only one category and do not overlap.</p>			

Selective harvest and forest health projects are planned within dispersal habitat in densely-spaced stands that provide dispersal habitat. These treatments will 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:

- There will be no change in the amount of spotted owl dispersal habitat in the Action Area as a result of these proposed activities.

- Canopy cover will be maintained at 40 percent.
- Decadent woody material, such as large snags and down wood will be maintained during these treatments.
- 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.
- Very dense stands will be opened by thinning, thereby improving conditions for dispersing spotted owls.
- Thinning dispersal habitat could reduce the rate of spread and intensity of wildland fires common to Medford BLM.
- No nest trees will be removed.
- PDC will avoid adverse disturbance impacts
- Necessary components of spotted owl dispersal habitat will be retained.

Additionally, benefits to spotted owl habitat would be realized by thinning trees and reducing fuels. Some treatments 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.

EFFECTS to PREY

Harvest and Forest health treatment 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 will 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

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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 will 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 will increase over the next few years, until shrubs and residual trees respond to again close in the stand.

EFFECTS TO OWLS DUE TO DISTURBANCE

Some treatments may 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 will be short duration and low intensity. Only activities that have no adverse impacts are included in this BA. Standards and guides from the NWFP and the current 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 designed 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 will not cause "*significant impairment to feeding, breeding and sheltering such that harm would occur.*" (USFWS ESA Handbook, version 3).

BLM biologists evaluated all projects in this biological assessment against the known and potential owl sites. To estimate likely occupied habitat outside of known home ranges, nearest-neighbor distances and known spotted owl density estimates were utilized to "place" potential spotted owl occupied sites in suitable habitat. Only those projects that would occur outside the critical breeding period (Mar 1 to June 30) or outside the appropriate disturbance distance (Appendix A), or both, are included in this BA. Any other situation could have the potential of adverse disturbance effects to spotted owls, and will be evaluated under a separate consultation for "may affect, likely to adversely affect" projects.

Proving "no effect" is a very high bar and modeling is an imperfect science. Each owl has individual behavioral traits. ESA guides us to evaluate our impacts conservatively in favor of the owl. This approach may over-estimate the NLAA activities in owl habitat, but is consistent with ESA and the USFWS Consultation Handbook (USDI 2002).

PROJECT EFFECTS TO SPOTTED OWL CRITICAL HABITAT (and LSMA)

The LSMA land use allocation under the ROD (USDI 2008c) was delineated to match the spotted owl critical habitat boundaries. Although LSR is no longer a land use allocation under the ROD, this proposed action removes neither dispersal nor NRF owl habitat from the former LSR allocations under the NWFP.

No decrease in any primary constituent element of critical habitat will occur as a result of implementing the projects in this proposed action. Nesting, feeding, sheltering and dispersal conditions of the pre-treatment habitat would be retained, and in many cases, improved. 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. Treatments would retain the canopy percentages, structural components and species diversity important to owls and their recovery habitat, as defined in the literature (see pages 6-7). These stands will continue to provide at least 40 percent canopy, flying space, and trees greater than 11 inches on average and will allow owls to disperse as they did prior to treatment. In dispersal, and stands will provide at least 60 percent canopy and structurally complex trees in NRF habitat. All treatments have been designed to cause only insignificant changes to canopy cover percentages and understory vegetation for NRF (Table 6) or Dispersal (Table 7) as indicated below.

Many pre-treatment areas are over-stocked for the site potential. Reducing vegetation in these stands will result in densities more in synch with the site's carrying capacity. More light, water and resources would be available to the residual trees. Thinning projects would benefit owl critical habitat by reducing brush, understory vegetation, and ladder fuels that crowd the treatment site. A post-treatment site would have stocking rates more sustainable on the site; would be less susceptible to stand-replacement fire; and would be more resilient to stand suppression and disease. Long-term habitat improvements would be expected as the remaining trees respond to more light, water and spacing. Short-term impacts would be insignificant because PDCs would avoid potential disturbance to nesting owls; prey habitat would be retained in similar condition as pre-project levels (see pg 24); and treatments would be "insignificant" in terms of changes to the quantity of pre-project habitat.

Watershed, recreational and road maintenance work will avoid adverse affects to spotted owls by implementing the PDC for distance and/or season around known or potential sites. Any trees removed in these projects would be insignificant to the primary constituent elements of critical habitat for northern spotted owls. No nest trees will be cut. No reduction of any habitat would occur.

Owls also use NRF to disperse. The table below also evaluates the effects of project treatments on All- Dispersal (NRF plus Dispersal).

Table 6 Project Effects on Spotted Owl Critical Habitat, Evaluated by NRF

CHU #	Medford BLM NRF Acres in Province*	Acres of NRF Treatment (treat and maintain)	Percent of total federal NRF treated and maintained
Rogue/Umpqua 14	59,515	250	<1%
Forest Health		240	
Timber Harvest		10	
Klamath Intra-province 16	17,326	25	< 1%
Forest Health		20	
Other		5	
Southern Cascades 17	14,000	230	1.6%
Forest Health		230	
Total (Medford BLM only)	90,841**	505	<1%
* Baseline was updated to include habitat changes due to a wildfire in Butte Falls since the DA BA FH baseline was completed.			
**Revised during Consultation process 2/09..			

Table 7 Project Effects on Spotted Owl Critical Habitat, Evaluated by Dispersal and All-Dispersal

CHU #	Medford BLM Dispersal Acres in Province*	Acres of Dispersal Treatment (treat and maintain)	Percent of total federal dispersal treated and maintained
Rogue/Umpqua 14	13,278	335	2.5%
Forest Health		315	
Timber harvest		20	
Klamath Intra-province 16	6,269	35	<1%
Forest Health		30	
Other		5	
Southern Cascades 17	2,469	170	6.9%
Forest Health		170	
Total	22,016**	540	2.4%
All Dispersal (Dispersal plus	113,041	1,045	<1 %

NRF)			
<p>* Baseline was updated to include habitat changes due to a wildfire in Butte Falls since the DA BA FH baseline was completed.</p> <p>**Revised during consultation process 2/09.</p>			

These treatments will be insignificant to spotted owl critical habitat because:

- No primary constituent elements will be reduced in quantity or quality.
- There will be no change to the amount of NRF in CHUs in the action area.
- There will be no change to the amount of dispersal or all-dispersal in CHUs in the action area.
- The primary constituent elements of critical habitat that make up NRF will be maintained, and improved over the long term. Treated dispersal habitat will continue to support owl dispersal. Canopy cover within treated NRF stands will be retained at or above 60 percent.
- Canopy cover within treated dispersal stands will be retained at or above 40 percent.
- Decadent woody material in the treatment area, such as large snags and down wood will remain post-treatment.
- Any multi-canopy, uneven aged tree structure that was present prior to treatment will remain post-treatment.
- Post treatment structural conditions will maintain prey species, particularly woodrats, in the treatment areas.
- No nest trees will be removed.

Specific beneficial effects would be expected in Critical Habitat from thinning and forest health projects.

- Some of the primary constituent elements of spotted owl critical habitat may be improved over time as a result of treatments.
- Accelerated growth would occur in the remaining trees, improving owl habitat over time.
- Spotted owl dispersal habitat would more rapidly develop NRF characteristics.
- Post-treatment flying space would be improved in dispersal stands that were crowded pre-treatment.
- Residual trees in NRF habitat would get taller and thicker in a shorter period of time.
- Treated stands would be healthier and less susceptible to severe losses from wildfire or suppression diseases.
- Some dispersal habitat will be improved by reducing thick vegetation that could curtail flight or hunting. Flying space would be improved.
- Additional light may provide food for woodrats, a primary prey of spotted owls in the project area.

Collectively, less than one percent of the NRF habitat within the CHUs listed in Table 6 will be treated and maintained and 2.4% of dispersal habitat would be treated to accelerate owl habitat conditions over time. Less than 1% of all-dispersal habitat in the three CHU's in the Medford

District would be treated. Treatments are distributed both spatially and temporally throughout three CHUs.

Northern Spotted Owl Recovery Plan

BLM projects in this BA will support the Recovery Plan in several ways:

Recovery Action 5: Manage habitat-capable lands in MOCAS to produce high quality habitat

Light thinning of overstocked stands in CHU/LSMA (Tables 6 and 7) will avoid adverse change and improve future owl habitat over time.

Recovery Action 8: Manage the Klamath Provinces in Oregon and California to meet spotted owl recovery while creating more fire-resilient forests.

Much of the forest in the Klamath Province experiences a frequent fire return interval. Thinning stands in this area will restore stocking rates to healthier levels and reduce the chance of mortality suppression or wildfire losses. All stands are managed on a sustainable yield basis.

Recovery Action 10: In MOCAs and in all areas of the Dry-Forest Landscape strategy, post fire habitat modifications should focus on habitat restoration and conserving habitat elements that take the most time to develop or recover.

All projects in this BA will retain snags and down wood and green trees as specified under the NWFP. Long-term spotted owl habitat restoration would be expected from projects in CHU/LSMA (Tables 6 & 7) within the Klamath Province. (The same is true for the Cascades West Province, although it is not classified as a “dry forest” in the Recovery Plan).

Recovery Action 32: Maintain substantially all of the older and more structurally complex multi-layered conifer forests on Federal lands outside of MOCAs.

The RMP (USDI 2008b) established the deferred management LUA to meet this need. None of the projects in this BA remove habitat from, or reduce the quality of any deferred habitat.

EFFECTS TO MARBLED MURRELETS

Medford BLM conservatively evaluates possible marbled murrelet habitat at the programmatic level using NRF habitat for spotted owls. No murrelets have been documented in the Medford District as of January 2009. Surveys in 2001 for the Willy Slide Project Area, which overlays part of the proposed roadside project (described below), had no murrelet detections. Projects that occur in NRF habitat within the area where marbled murrelet surveys are required will be evaluated in the field to locate the large trees and limbs necessary to support marbled murrelet nesting. If potential nest trees are located within the project area, surveys will be conducted to ensure no murrelets are present. If the survey documents occupancy, as defined by the protocol

(Evans et al 2003), harvest in the project would be modified to avoid adverse effects to the marbled murrelet.

Removal of danger trees is required to maintain safety along roads. Medford estimates that 1-3 scattered hazard trees per acre (likely much less) could be felled in up to 7 acres of forested habitat within Zone B. Some of the hazard trees in the Glendale area occur in recreational areas. Most recreational areas in Glendale have too much activity to qualify as marbled murrelet habitat, or along public roadways. It is unlikely that any hazard trees in Glendale would be used by murrelets for nesting because murrelets have never been documented on the District, and most of the roadways are near younger habitat. Most of the hazardous trees along roadways are isolated from NRF or older habitat and unlikely to support murrelets. Field evaluation would evaluate large trees that have potential for marbled murrelet nesting. Any potential murrelet nest trees that would be felled for safety reasons would trigger emergency consultation would be initiated.

Medford proposes cutting up to 25 acres of forested habitat adjacent to NRF and within the potential range of marbled murrelets to clear vegetation along roadways, all in zone B. This project is located along approximately 11 miles of roads. Harvest would be completely contained within the roadway, an Administratively Withdrawn Area, as mentioned above on p. 4 and be within 15 feet of the drivable surface of the road. This area is dominated by regrowth of the land cleared in the original construction of the road, decades ago. Most of the second growth stand is 8-14 inch diameter trees, which does not qualify as NRF or potential marbled murrelet habitat.

Along these roads, there are occasional scattered large trees that could potentially have the structure necessary for marbled murrelet nesting, but their isolated nature makes this a low possibility. Marbled murrelet survey protocol specifies that trees around isolated nest trees would contribute to habitat if those trees are at least half the height of the site potential tree (Evans et al 2003). The second growth trees are not that tall. Glendale estimates that up to 15 large trees may be scattered throughout the project area. If field evaluation indicates any of these large trees have adequate limby structure to support murrelets, surveys will be conducted, and if found, the project would be modified to avoid adverse effects. The effects of clearing the roadway would be insignificant to the forest structure. Because field evaluation and/or surveys would ensure the trees are not occupied by murrelets, there would be no disturbance related to this project.

“No effect” is the “appropriate conclusion when the action agency determines its proposed action will not affect a listed species or designated critical habitat.” (ESA handbook compilation pg xvi USDI 2002). BLM could reach a “no effect” in this case, since no marbled murrelets have been confirmed on the Medford District, despite conducting protocol murrelet surveys in many areas of Zone B. However, because this forested habitat occurs within the potential range of marbled murrelets, the treatments could be also considered an insignificant treatment of potential murrelet habitat. The ESA handbook states *“Is not likely to adversely affect”* is the *appropriate conclusion when effects on listed species are expected to be discountable,*

insignificant, or completely beneficial, and defines discountable effects as those that are extremely unlikely to occur and a person would not “1) be able to meaningfully measure, detect or evaluate insignificant effects nor 2) expect discountable effects to occur. Therefore, BLM seeks the concurrence from the Service that these projects “may affect, and will not likely adversely” affect marbled murrelets.

V. CONCLUSION

Medford BLM has determined that the combined treatments described in the BA will not reduce the amount of spotted owl habitat or marbled murrelet habitat. The disturbance related to the projects in this BA will incorporate distance and/or seasonal PDC to avoid adverse effects from noise or smoke. Medford BLM seeks concurrence from the Service that the projects described in this BA “may affect and will not likely adversely affect” (NLAA) spotted owls or designated critical habitat and that the projects within the potential range of the marbled murrelet “may affect and will not adversely affect” (NLAA) marbled murrelets or murrelet designated critical habitat.

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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 spotted owls will be reduced or avoided with PDC. Listed are project design criteria designed for the programmatic impacts discussed in the *Effects of the Action* section.

Medford BLM retains 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 will 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.

PDC for disturbance are intended to reduce disturbance to nesting spotted owls or marbled murrelets. For this consultation, potential disturbance could occur near either documented owl sites or projected owl sites. To estimate likely occupied habitat outside of known home ranges, nearest-neighbor distances and known spotted owl density estimates were utilized to “place” potential spotted owl occupied sites in suitable habitat. Marbled murrelets are difficult to locate. No murrelets have been documented on the District, but Medford remains within zone B. To ensure that activities that have the potential of disturbing marbled murrelets are reduced to NLAA (or NE), we will impose the PDC in or adjacent to marbled murrelet habitat.

Any of the following Mandatory PDC may be waived in a particular year if nesting or reproductive success surveys conducted according to the USFWS endorsed survey guidelines reveal that spotted owls are non-nesting or that no young are present that year. Waivers are only valid until March 1 of the following year. Previously known sites/ activity centers are assumed occupied until protocol surveys indicate otherwise.

Mandatory Project Design Criteria (owls)

A. 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 will not occur within specified distances (Appendix A-1) of any documented or projected owl site between March 1 and June 30 (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 distances may be shortened if significant topographical breaks or blast blankets (or other devices) muffle sound traveling between the work location and nest sites.

B. The action agency has the option to extend the restricted season until September 30 during the year of harvest, based on site-specific knowledge (such as a late or recycle nesting attempt) if project would cause a nesting spotted owl to flush. (See disturbance distance).

C. Burning will not take place within 0.25 miles of spotted owl sites (documented or projected) between 1 March and 30 June (or until two weeks after the fledging period) unless substantial smoke will not drift into the nest stand.

D. To minimize the number of potential spotted owl nest trees used for used for instream structures, only the following sources will be used:

- (I) Trees already on the ground in areas where large woody material is adequate;
- (II) Trees that lack structural conditions (snags, cavities) suitable for spotted owls.

APPENDIX A-1. MANDATORY RESTRICTION DISTANCES TO AVOID DISTURBANCE TO SPOTTED OWL SITES.

Activity	Documented Owl Site
Heavy Equipment (including non-blasting quarry operations)	105 feet
Chain saws	195 feet
Impact pile driver, jackhammer, rock drill	195 feet
Small helicopter or plane	360 feet*
Type 1 or Type 2 helicopter	0.25 mile*
Blasting; 2 lbs of explosive or less	360 feet
Blasting; more than 2 lbs of explosives	1 mile

* If below 1,500 feet above ground level

Above-ambient noises further than these Table B-1 distances from spotted owls are expected to have either 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).

Recommended Project Design Criteria--Murrelets

Restrict operations from March 1 through September 15 (through the extended breeding period) within disturbance distances (unless protocol surveys demonstrate non-nesting).

Protocol surveys are conducted according to: Evans Mack, D., W. P. Ritchie, S. K. Nelson, E. Kuo-Harrison, and T. E. Hamer. 2003. Methods for surveying Marbled Murrelets in forests: a revised protocol for land management and research. Pacific Seabird Group Technical Publication Number 2. Available from <http://www.pacificseabirdgroup.org>

Appendix A-2 Mandatory Marbled Murrelet Project Design Criteria

Impacts	Species: Marbled Murrelet
Disturbance	(II) Mandatory -For Survey Areas A and B work activities (such as tree felling, yarding, road and other construction activities, hauling on roads not generally used by the public, muffled blasting) which produce noises above ambient levels will not occur within specified distances (see table below) of any occupied stand or unsurveyed suitable habitat between April 1 – August 5. For the period between August 6 – September 15, work activities will be confined to between 2 hours after sunrise to 2 hours before sunset. See Fuels management PDCs for direction regarding site preparation and prescribed fire.
Disturbance	(III) Mandatory -Clean up trash and garbage daily at all construction and logging sites. Keep food out of sight so as to not attract crows and ravens (predators on eggs or young murrelets).
Disturbance	(IV) Mandatory- Blasting (open air/unmuffled) – No blasting activities during the critical breeding period (1 April through 15 August) within 1.0 mile of occupied stands or unsurveyed suitable habitat. This distance may be shortened if significant topographical breaks or blast blankets (or other devices) muffle sound traveling between the blast and nest sites or less than 2 lbs of explosives are used If so, then use described distance.
Disturbance	1) Recommended Delay project implementation until after September 15 where possible
Disturbance	2) Recommended Between 1 April and 15 September, concentrate disturbance activities spatially and temporally as much as possible (e.g.,

	get in and get out, in as small an area as possible; avoid spreading the impacts over time and space).
Disturbance	(IV) Mandatory - Blasting (open air/unmuffled) – No blasting activities 1 April through 15 September within 1.0 mile of occupied stands or unsurveyed suitable habitat. This distance may be shortened if significant topographical breaks or blast blankets (or other devices) muffle sound traveling between the blast and nest sites or less than 2 lbs of explosives are used If so, then use described distance.
Disturbance	1) Recommended Delay project implementation until after September 15 where possible
Disturbance	2) Recommended Between 1 April and 15 September, concentrate disturbance activities spatially and temporally as much as possible (e.g., get in and get out, in as small an area as possible; avoid spreading the impacts over time and space).
Restoration projects	<p>Mandatory</p> <p>To minimize the number of potential spotted owl or murrelet nest trees used for instream structures, only the following sources shall be used:</p> <p>(I) Trees already on the ground in areas where large woody material is adequate;</p> <p>(II) Trees lacking suitable nesting structure for spotted owls or murrelets or contributing to trees with suitable nesting structure, as determined by an action agency wildlife biologist.</p>

Fuels	<p>Mandatory</p> <p>(I) Burning would not take place within 0.25 mile of known occupied marbled murrelet sites, or unsurveyed marbled murrelet habitat between April 1 and August 6 unless substantial smoke will not drift into the occupied site or suitable habitat.</p> <p>(II) All broadcast and under-burning operations (except for residual “smokes”) will be completed in the period from two hours after sunrise to two hours before sunset.</p> <p>(IV) During helicopter operations, flights over suitable habitat will be restricted (helicopter should be a least 1,500 feet above ground level); if not possible, fly a minimum of 500 feet above suitable habitat (above canopy).</p>
Wildfire	<p>Mandatory</p> <p>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.</p>
Wildfire	<p>Mandatory</p> <p>(I) From 1 April - 5 August 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.</p>
	<p>Light Hand Tactics or Minimize Impact Suppression Tactics (MIST) should receive consideration for use within the protection zones for northern spotted owls and murrelets.</p>
Quarries	<p>Mandatory</p> <p>For any occupied stands or unsurveyed suitable habitat within 0.25 miles of the quarry operation, restrict operation of the quarry from April 1 to August 5. Agency biologists also have the discretion to modify the 0.25-mile zone depending on topography and the level of noise - what equipment will be present (crusher or dozer/ripper or only loading of existing stockpiled rock).</p> <p>Recommended</p> <p>2) For active nest stands or unsurveyed suitable habitat within 0.25 mile of the quarry operation, restrict operation of the quarry from April 1 through September 15 (unless protocol surveys demonstrate non-nesting).</p>



United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Medford District Office
3040 Biddle Road
Medford, Oregon 97504



In Reply Refer to:
6840 (OR-112)
OR110-TS06-15

Memorandum

To: Field Office Supervisor, Roseburg Office, US Fish and Wildlife Service

From: District Manager, Medford

Subject: *Submission of Medford Bureau of Land Management (BLM) 09 NLAA Biological Assessment*

This Biological Assessment (BA) evaluates projects that “may affect and are not likely to adversely affect” (NLAA) northern spotted owls, marbled murrelets, and spotted owl and marbled murrelet critical habitat. We seek concurrence from the US Fish and Wildlife Service (Service), that these projects are not likely to adversely affect listed species or their federally designated critical habitat. Attached is the *Medford Bureau of Land Management (BLM) 09 NLAA Biological Assessment* and the spreadsheet showing project details.

We look forward to working with the US Fish and Wildlife Service to meet our joint obligations under the Endangered Species Act 7(a) 1 and 7(a) 2 to conserve habitat for endangered species, to avoid jeopardizing listed species and to avoid adverse modification of designated critical habitat.

Attachments:

112:Jorgensen:



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Roseburg Field Office
 2900 NW Stewart Parkway
 Roseburg, Oregon 97471
 Phone: (541) 957-3474 FAX: (541)957-3475

In Reply Refer To: 8330.I0045(09)
 Filename: MBLM FY 09 LOC
 Tails #: 13420-2009-I-0045
 TS#: 09-579

February 26, 2009

Memorandum

To: District Manager, *Robert Burns* Medford District BLM, Medford, Oregon.

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

Subject: Endangered Species Act Section 7 Consultation regarding Fiscal Year 2009 Activities that may affect Listed Species on Public Lands administered by the Medford District of the Bureau of Land Management

This responds to your 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 fiscal year (FY) 2009 may affect, but are not likely to adversely affect, the threatened northern spotted owl (*Strix occidentalis caurina*) (spotted owl) and its designated critical habitat; or the threatened marbled murrelet (*Brachyramphus marmoratus*) (murrelet). Those activities and the basis for your determination are discussed in your biological assessment (Assessment) (USDI BLM 2009), received in our office on February 2, 2009. 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.

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 project units, as well as all areas subject to increased ambient noise levels caused by activities associated with the proposed action. Activities associated with this proposed action will be implemented in both the Klamath Mountains and Cascades West physiographic provinces.

DESCRIPTION OF THE PROPOSED ACTION

The Assessment includes a detailed description of the proposed action, and is herein incorporated by reference. Table 1 displays activity types and number of acres of this proposed action. All activities associated with this proposed action will be initiated (have National Environmental Policy Act documents signed, task orders or contracts obligated) by September 30, 2009. Actual project implementation may occur through February, 2016.

Table 1. Description of Actions Proposed by the District during FY 2009.

Habitat Modification			
Project Category		Scope	
Harvest Activities: (includes stewardship, forest products, hazard tree removal, selection harvest, pole sales).		1,285 acres	
	CHU ¹ /LSMA ² Subset		30
Forest Health Treatments: (includes fuels reduction projects, pre-commercial thinning, brushing, pruning, site preparation).		9,485 acres	
	CHU /LSMA Subset		1,005
Watershed Restoration: snag development, riparian/stream enhancement, trail/recreation management (recorded as "other" on spreadsheet provided with the Assessment).		607 acres	
	CHU /LSMA Subset		10
	Total Proposed Action	11,377	1,045

¹Critical Habitat Unit, ²Late Successional Management Area;

A summary of the proposed activities (see spreadsheet Appendix A), as described in the Assessment, follows:

Harvest Treatments

Harvest treatments have been designed to retain habitat characteristics for both spotted owls and murrelets. Specific activities the District plans to implement include: commercial thinning, selective harvest, density management, commercial firewood, hazard tree removal, salvage, and road and site preparations related to individual timber sales.

The above activities may consist of the removal of a few trees within a forest stand or the removal of individual trees.

Forest Health Treatments

Forest Health Treatments include treatments designed to reduce accumulations of forest fuels (thinning, piling and burning, brush treatments, broadcast burning), pre-commercial thinning,

brushing, pruning and site preparation. Generally, these treatments consist of the removal of small diameter conifer and deciduous trees as well as understory brush species.

Watershed Restoration

Watershed Restoration activities were designed to maintain habitat characteristics and avoid disturbance of spotted owls and murrelets. Specific activities may include culvert replacement, road restoration or decommissioning, slope stabilization, and habitat and stream improvement projects. Many of these activities will not impact the habitats of spotted owls or murrelets, but may occur near these habitats, and have the potential to disturb spotted owls or murrelets.

Recreation management activities may include trail construction and maintenance, campground and physical facilities maintenance, observation decks and guard rails, signing, foot bridges, and special use permits.

In all activities, the District will maintain the characteristics of spotted owl nesting, roosting and foraging (NRF) and dispersal habitats, such as large trees, multi-storied canopy cover, prey species habitats, as well as dead and down wood components.

None of the proposed activities will remove the structures which provide for the nesting of murrelets.

According to the Assessment, this proposed action will implement elements of the Recovery Plan for the Northern Spotted Owl (USDI FWS 2008a) as follows:

Recovery Action 5: Manage habitat capable lands in Managed Owl Conservation Areas to produce high quality habitat.

Light thinning of over-stocked stands within CHUs and LSMAs will contribute to the development of future spotted owl habitat while avoiding adverse impacts.

Recovery Action 8: Manage lands within the Klamath Mountains Physiographic Province in Oregon and California to meet spotted owl recovery while creating more fire resilient forests.

Thinning activities associated with this proposed action will restore stocking rates to healthier levels and reduce the chance of mortality suppression or wildfire losses.

Recovery Action 32: Maintain substantially all of the older and more structurally complex multi-layered conifer forests on federal lands outside of MOCAs.

None of the projects included in this proposed action remove or reduce the quality of spotted owl habitat identified in the District's resource management plan (USDI BLM 2008) as deferred management areas.

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 to 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. The District plans to apply mandatory PDC, to all activities associated with this proposed action. The District will apply recommended PDC during project implementation when practical. Detailed descriptions of the PDC, as provided by the District, are provided in Appendix B.

EFFECTS OF THE ACTION

Effects of the Action on Spotted Owl NRF Habitat

According to the Assessment, the District proposes to treat up to 4,645 acres (Table 2) of NRF habitat in association with the implementation of this proposed action. All projects have been designed to maintain existing spotted owl NRF habitat amounts and in many cases, the District states habitat quality may improve as post-treatment forest stands allow more space for residual trees to develop the characteristics of spotted owl NRF habitat. Additionally, treatments have been designed to result in forest stands more resilient to stand-replacement fires, disease and suppression mortality.

Table 2. Effects to Spotted Owl NRF Habitat.

Physiographic Province	Spotted Owl NRF Habitat Baseline	Acres of Treatment	Percent of Spotted Owl NRF Habitat Treated and Maintained
Klamath Mountains	306,406	4,070	1.32
Timber Harvest		220	
Forest Health		3,640	
Other		210	
Cascades West	73,590	575	0.78
Timber Harvest		135	
Forest Health		355	
Other		85	
Total	379,996	4,645	1.22

As described in the Assessment, the District has determined implementation of this proposed action will be insignificant to spotted owls because:

- Overall canopy cover of affected NRF habitat timber stands will be maintained at 60 percent or greater.
- Existing decadent woody material, such as large snags and down wood will remain post-treatment.

- Existing multi-canopy, uneven aged tree structure will remain post-treatment.
- Treatments will be dispersed both spatially and temporally across the action area.
- No spotted owl nest trees will be removed.
- Application of mandatory PDC will result in the avoidance of adverse disturbance to spotted owls.

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

- 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.
- Treatments may stimulate the growth of forage plants important to spotted owl prey species.
- 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 *may affect, are not likely to adversely affect* the spotted owl.

Effects to Spotted Owl Dispersal-only Habitat

The District proposes to treat up to 6,732 acres (Table 3) of spotted owl dispersal habitat associated with the implementation of this proposed action. According to the Assessment, no spotted owl dispersal habitat will be removed.

Table 3. Effects to Spotted Owl Dispersal Habitat.

Physiographic Province	Spotted Owl NRF Habitat Baseline	Acres of Treatment	Percent of Spotted Owl NRF Habitat Treated and Maintained
Klamath Mountains	99,186	5,547	5.59
Timber Harvest		585	
Forest Health		4,745	
Other		217	
Cascades West	30,070	1,185	3.94
Timber Harvest		345	
Forest Health		745	
Other		95	
Total	129,256	6,732	5.21

As described in the Assessment, the District has determined implementation of this proposed action will be insignificant to spotted owls because:

- There will be no change in the amount of spotted owl dispersal habitat in the action area as a result of implementation of this proposed action.
- Canopy cover will be maintained at 40 percent or greater.
- Existing decadent woody material, such as large snags and down wood will be maintained post-treatment.
- No spotted owl nest trees will be removed.
- Application of mandatory PDC will avoid adverse disturbance to spotted owls.

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

- 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.
- Very dense stands will be opened by thinning, thereby improving conditions for dispersing spotted owls.
- Thinning dispersal habitat could reduce 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 *may affect, 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 et al. 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 District has determined 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

Spotted Owl NRF Habitat

According to the Assessment, up to 505 acres (Table 4) of spotted owl NRF habitat may be treated in three individual critical habitat units. No decrease in any primary constituent elements of spotted owl NRF habitat (USDI FWS 2008b) will occur as a result of the implementation of this proposed action. Nesting, feeding, sheltering and dispersal conditions of pre-treatment spotted owl NRF habitat will be retained, and, in many cases, improved.

Table 4. Effects to Spotted Owl NRF Habitat within Designated Critical Habitat Units.

Critical Habitat Unit	Spotted Owl NRF Habitat Baseline	Acres of Treatment	Percent of Spotted Owl NRF Habitat Treated and Maintained
CHU 14: Rogue/Umpqua	59,515	250	0.42
Timber Harvest		10	
Forest Health		240	
CHU 16: Klamath Intra-province	17,326	25	0.14
Forest Health		20	
Other		5	
CHU 17: Southern Cascades	14,000	230	1.64
Forest Health		230	
Total	90,841	505	0.56

As described in the Assessment, the District has determined implementation of this proposed action will be insignificant to spotted owl NRF habitat within designated critical habitat because:

- No primary constituent elements will be reduced in quantity or quality.
- There will be no change in the amount of spotted owl NRF habitat in the three affected CHUs.
- Canopy cover within treated stands of spotted owl NRF habitat will be retained at 60 percent or greater.
- Decadent woody material in the treatment areas, such as large snags and down wood, will remain post-treatment.
- Multi-canopy, uneven-aged tree structure present prior to treatments will remain post-treatment.
- Post treatment structural conditions will maintain habitat conditions for spotted owl prey species, particularly woodrats, in treatment areas.
- No spotted owl nest trees will be removed.

Anticipated beneficial effects which may result from the implementation of thinning and other forest health projects include:

- Improved condition of the primary constituent elements of spotted owl NRF habitat over time.
- Accelerated growth of residual trees, resulting in improved spotted owl NRF habitat.
- Treated stands would be healthier and less susceptible to severe losses from wildland fire or suppression-related diseases.
- Additional light in treated stands may improve forage for spotted owl prey species, including woodrats.

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

Spotted Owl Dispersal Habitat

The Assessment describes the affects of treating up to a total of 540 acres of spotted owl dispersal habitat within three individual CHUs (Table 5). No decrease in any primary constituent elements of spotted owl dispersal habitat will occur as a result of the implementation of this proposed action. Dispersal conditions of pre-treatment spotted owl dispersal habitat will be retained, and, in many cases, improved.

Table 5. Effects to Spotted Owl Dispersal Habitat within Designated Critical Habitat Units.

Critical Habitat Unit	Spotted Owl Dispersal Habitat Baseline	Acres of Treatment	Percent of Spotted Owl Dispersal Habitat Treated and Maintained
CHU 14: Rogue/Umpqua	13,278	335	2.52
Timber Harvest		20	
Forest Health		315	
CHU 16: Klamath Intra-province	6,269	35	0.55
Forest Health		30	
Other		5	
CHU 17: Southern Cascades	2,469	170	6.89
Forest Health		170	
Total	22,016	540	2.45

As described in the Assessment, the District has determined implementation of this proposed action will be insignificant to spotted owl dispersal habitat within designated critical habitat because:

- No primary constituent elements will be reduced in quantity or quality.
- There will be no change in the amount of spotted owl dispersal habitat in the three affected CHUs.
- Canopy cover within treated stands of spotted owl dispersal habitat will be retained at 40 percent or greater.
- Decadent woody material in the treatment areas, such as large snags and down wood, will remain post-treatment.
- Multi-canopy, uneven-aged tree structure present prior to treatments will remain post-treatment.
- Post treatment structural conditions will maintain habitat conditions for spotted owl prey species, particularly woodrats, in treatment areas.

Anticipated beneficial effects which may result from the implementation of thinning and other forest health projects include:

- Improved condition of the primary constituent elements of spotted owl dispersal habitat over time.
- Treatments in spotted owl dispersal habitat may result in more rapid development of spotted owl NRF habitat characteristics.
- Treated stands would be healthier and less susceptible to severe losses from wildland fire or suppression-related diseases.
- The condition of spotted owl dispersal habitat may improve with the reduction of densely stocked vegetation.

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

Effects to Spotted Owls due to Disturbance

As detailed in the Assessment, portions of this proposed action may occur in non-habitat for spotted owls, yet have the potential to result in noise which could carry into occupied spotted owl habitat. The District anticipates application of mandatory PDC will likely result in the avoidance of adverse noise disturbance to spotted owls. Additional conservation measures may be implemented at the site specific, project level by interdisciplinary teams during project reviews.

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, USDI FWS 2003, USDI FWS 2005), disturbance to spotted owls is negatively related to stimulus distance and positively related to noise level, similar to results reported for bald eagles (*Haliaeetus 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 known or potential spotted owl nest sites. District biologists estimated the likelihood of occupancy of suitable habitat by spotted owls utilizing nearest-neighbor distances and known spotted owl density estimates to "place" potential spotted owl occupied sites in suitable habitat. Only those projects that would occur outside the critical breeding period (Mar 1 to June 30) or outside the appropriate disturbance distance (Appendix B), or both, were analyzed in the Assessment.

Opportunistic application of recommended PDC would further reduce the potential for disturbance impacts. The District has determined 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 (USDI FWS 2003) due to the application of mandatory PDC (Appendix A) 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 (USDI FWS 2003).

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

Effects to Marbled Murrelets

As of January 2009, murrelets have not been documented as occurring on public lands managed by the District. However, District biologists continue to survey potential murrelet suitable habitat in areas of planned projects. According to the Assessment, if survey efforts confirm occupancy (as defined by survey protocol {Evans et al. 2003}), the District will modify project implementation to avoid potential adverse effects to murrelets.

For this proposed action, the District plans to remove up to 25 acres of forest stands within the range of the murrelet. These acres occur adjacent to forest stands which may consist of tree structure capable of providing for the nesting of murrelets. These harvest activities will occur along approximately 11 miles of roads, and within 15 feet of the roadway. According to the Assessment, vegetation at the site consists of eight to 14 inch diameter second- growth vegetation, a result of the original road construction. As stated above, if field evaluations at this site indicate existing large trees possess adequate limb structure to support nesting murrelets, surveys will be conducted, and project implementation modified if murrelets are detected.

Disturbance to murrelets associated with the implementation of the above activities will be limited by application of 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 murrelet nest sites. Application of the recommended PDC would further reduce potential impacts. The District has determined implementation of this proposed will be insignificant to murrelets because:

- Murrelets have yet to be documented as occurring on lands managed by the District.

- Site-specific field surveys will take place in areas suspected of containing potential murrelet habitat.
- The District plans to implement mandatory PDC, designed to reduce potential adverse effects from disturbance (Appendix A).

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

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 and spotted owl critical habitat, and *may affect, is not likely to adversely affect* the murrelet. This concurrence is based on the fact that all projects, both individually and collectively, will comply with the District's RMP (USDI BLM 2008), and will incorporate the mandatory PDC described in Appendix A. 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, murrelets, or spotted owl 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.

cc: Carole Jorgensen, BLM, Medford, OR (e)
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Brendan White, FWS-OFWO, Portland, OR (e)
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Appendix A: Spreadsheet of the Proposed Action provided by Medford BLM.

FY09/10 NLAA BA

NA	PROJECT INFORMATION				GENERAL EFFECTS										CHU/USDA EFFECTS						LSR EFFECTS						Comment				
	Project ID (12 characters)	Prop Type	Steward ship	1994 RMP LUA	PREAD LUA	NRF remove	NRF damaged	NRF T&M	Dip remove	Dip T&M	Total Habitat acres	# owl sites Potentially Disrupted	# Nest Patches with units	CHU Name	CHU #	NRF remove	NRF damaged	NRF T&M	Dip remove	Dip T&M	all CHU acres	LSR Name	LSR ID	NRF remove	NRF damaged	NRF T&M		Dip remove	Dip T&M	all LSR acres	Com YN
AS	Birdery Ponds	KL	PH	N	M	T	0	0	460	0	700	1,160	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Gulls Ponds	KL	PH	N	M	T	0	0	10	0	15	25	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Jackson Ck Ponds	KL	PH	N	M	T	0	0	10	0	40	50	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Wagner Ponds	KL	PH	N	M	T	0	0	440	0	160	600	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Canall Ponds	KL	PH	N	M	T	0	0	250	0	300	550	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Hazard trees	KL	O	N	A	T	0	0	45	0	75	150	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Hazard trees	WC	O	N	M	T	0	0	45	0	25	90	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Fish Enhancement	WC	O	N	M	T	0	0	25	0	25	50	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Fish Enhancement	KL	O	N	A	T	0	0	50	0	50	100	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Miss SFP	KL	T	N	A	T	0	0	50	0	50	100	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Miss SFP	KL	T	N	M	T	0	0	50	0	50	100	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Miss SFP	WC	T	N	M	T	0	0	50	0	50	100	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	C-S Management	WC	FE	N	L	O	0	0	150	0	150	300	0	0	NONE	NONE	0	0	150	0	150	300	NONE	NONE	0	0	0	0	0	0	
AS	Silv Treat	WC	FE	N	M	T	0	0	75	0	0	75	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Silv Treat	KL	FE	N	M	T	0	0	220	0	0	220	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Pawson Thin	WC	FE	N	M	T	0	0	80	0	20	100	0	0	NONE	NONE	0	0	80	0	20	100	NONE	NONE	0	0	0	0	0	0	
AS	Eastside Blowdown	WC	T	N	M	T	0	0	25	0	75	100	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Climate Salvage	WC	T	N	M	T	0	0	60	0	20	80	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Bobcat Ponds	KL	HH	N	A	T	0	0	400	0	400	400	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Bald Chick Ponds	KL	FE	N	A	T	0	0	225	0	225	450	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Ranch Steep	WC	FB	T	M	T	0	0	575	0	575	575	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Miss SFP	WC	T	N	M	T	0	0	0	0	150	150	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Miss SFP	KL	T	N	M	T	0	0	0	0	150	150	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Hazard trees	KL	O	N	Z	T	0	0	5	0	15	20	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Hazard trees	WC	O	N	Z	T	0	0	5	0	15	20	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Doubleday Sal.	WC	T	N	M	T	0	0	0	0	50	50	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Antioch Wash	KL	PH	N	M	T	0	0	0	0	155	155	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Tanick Ponds	KL	PH	N	M	T	0	0	205	0	420	625	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Fielder Ponds	KL	PH	N	M	T	0	0	230	0	130	360	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Bearfelder	KL	PH	N	M	T	0	0	115	0	25	140	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	SpaC/Chud	KL	PH	N	M	T	0	0	50	0	0	50	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	RF/Strine	KL	PH	N	M	T	0	0	0	0	30	50	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Evans/Strine	KL	PH	N	M	T	0	0	0	0	55	55	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Pleasantly	KL	PH	N	M	T	0	0	120	0	215	335	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Evans/Siv	KL	PH	N	M	T	0	0	50	0	0	50	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Chas/Siv	WC	PH	N	M	T	0	0	0	0	0	50	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	
AS	Fish Enhancement	WC	PH	N	M	T	0	0	0	0	0	50	0	0	NONE	NONE	0	0	0	0	0	0	NONE	NONE	0	0	0	0	0	0	

In addition to Measurement BA(10X)

LIST DATA									
Province	RA	94RMP_LUA	PROJECT TYPE	PRMP LUA	Stewardship	CHU Name	CHU #	LSR name	LSR #
KL	AS	M	T	T	Y	NONE	NONE	NONE	NONE
EC	BF	L	FH	L	N	Rogue/ Umpqua	14	Catesville South Umpqua	RO-223
WC	GL	Z	O	O	B	Oregon Klamath Mtns	15	Eik Creek	RO-224
	GP	A	R			Klamath Intra-Province	16	East IV/Williams Deer	RO-249
						Southern Cascades	17	Northwest Coast	RO-255
						Fishhook Galice			RO-258

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 spotted owls will be reduced or avoided with PDC. Listed are project design criteria designed for the programmatic impacts discussed in the Effects of the Action section.

The District retains 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 will 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.

PDC for disturbance are intended to reduce disturbance to nesting spotted owls or marbled murrelets. For this consultation, potential disturbance could occur near either documented owl sites or projected owl sites. To estimate likely occupied habitat outside of known home ranges, nearest-neighbor distances and known spotted owl density estimates were utilized to “place” potential spotted owl occupied sites in suitable habitat. Marbled murrelets are difficult to locate. No murrelets have been documented on the District; however, public lands managed by the District remain within zone B. To ensure that activities that have the potential of disturbing marbled murrelets are reduced to not likely to adversely affect (NLAA) (or no effect (NE)), the District will impose the PDC in or adjacent to potential murrelet habitat.

Any of the following Mandatory PDC may be waived in a particular year if nesting or reproductive success surveys conducted according to the Service endorsed survey guidelines reveal that spotted owls are non-nesting or that no young are present that year. Waivers are only valid until March 1 of the following year. Previously known sites/ activity centers are assumed occupied until protocol surveys indicate otherwise.

Mandatory Project Design Criteria (spotted owls)

A. 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 will not occur within specified distances (Appendix B-1) of any documented or projected owl site between March 1 and June 30 (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 distances may be shortened if significant topographical breaks or blast blankets (or other devices) muffle sound traveling between the work location and nest sites.

B. The action agency has the option to extend the restricted season until September 30 during the year of harvest, based on site-specific knowledge (such as a late or recycle nesting attempt) if project would cause a nesting spotted owl to flush. (See disturbance distance).

C. Burning will not take place within 0.25 miles of spotted owl sites (documented or projected) between 1 March and 30 June (or until two weeks after the fledging period) unless substantial smoke will not drift into the nest stand.

D. To minimize the number of potential spotted owl nest trees used for instream structures, only the following sources will be used:

- (I) Trees already on the ground in areas where large woody material is adequate;
- (II) Trees lacking suitable nesting structure for spotted owls.

Table B-1. Mandatory Restriction Distance to Avoid Disturbance to Spotted Owl Sites.

Activity	Spotted Owl Site
Heavy Equipment (including non-blasting quarry operations)	105 feet
Chain saws	195 feet
Impact pile driver, jackhammer, rock drill	195 feet
Small helicopter or plane	360 feet*
Type 1 or Type 2 helicopter	0.25 mile*
Blasting; 2 lbs of explosive or less	360 feet
Blasting; more than 2 lbs of explosives	1 mile

* If below 1,500 feet above ground level

Above-ambient noises further than these Table B-1 distances from spotted owls are expected to have either 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. (USDI FWS 2003).

Recommended Project Design Criteria--Murrelets

Restrict operations from March 1 through September 30 (through the extended breeding period) within disturbance distances (unless protocol surveys demonstrate non-nesting).

Table B-2. Mandatory Marbled Murrelet Project Design Criteria

Impacts	Species: Marbled Murrelet
Disturbance	(II) Mandatory -For Survey Areas A and B work activities (such as tree felling, yarding, road and other construction activities, hauling on roads not generally used by the public, muffled blasting) which produce noises above ambient levels will not occur within specified distances (see table below) of any occupied stand or unsurveyed suitable habitat between April 1 – August 5. For the period between August 6 – September 15, work activities will be confined to between 2 hours after sunrise to 2 hours before sunset. See Fuels management PDCs for direction regarding site preparation and prescribed fire.
Disturbance	(III) Mandatory -Clean up trash and garbage daily at all construction and logging sites. Keep food out of sight so as to not attract crows and ravens (predators on eggs or young murrelets).
Disturbance	(IV)Mandatory- Blasting (open air/unmuffled) – No blasting activities during the critical breeding period (1 April through 15 August) within 1.0 mile of occupied stands or unsurveyed suitable habitat. This distance may be shortened if significant topographical breaks or blast blankets (or other devices) muffle sound traveling between the blast and nest sites or less than 2 lbs of explosives are used If so, then use described distance.
Disturbance	1) Recommended Delay project implementation until after September 15 where possible
Disturbance	2) Recommended Between 1 April and 15 September, concentrate disturbance activities spatially and temporally as much as possible (e.g., get in and get out, in as small an area as possible; avoid spreading the impacts over time and space).
Disturbance	(IV)Mandatory- Blasting (open air/unmuffled) – No blasting activities 1 April through 15 September within 1.0 mile of occupied stands or unsurveyed suitable habitat. This distance may be shortened if significant topographical breaks or blast blankets (or other devices) muffle sound traveling between the blast and nest sites or less than 2 lbs of explosives are used If so, then use described distance.
Disturbance	1) Recommended Delay project implementation until after September 15 where possible
Disturbance	2) Recommended Between 1 April and 15 September, concentrate disturbance activities spatially and temporally as much as possible (e.g., get in and get out, in as small an area as possible; avoid spreading the impacts over time and space).
Restoration projects	Mandatory To minimize the number of potential spotted owl or murrelet nest trees used for instream structures, only the following sources shall be used: (I) Trees already on the ground in areas where large woody material is adequate;

	(II) Trees lacking suitable nesting structure for spotted owls or murrelets or contributing to trees with suitable nesting structure, as determined by an action agency wildlife biologist.
Fuels	<p>Mandatory</p> <p>(I) Burning would not take place within 0.25 mile of known occupied marbled murrelet sites, or unsurveyed marbled murrelet habitat between April 1 and August 6 unless substantial smoke will not drift into the occupied site or suitable habitat.</p> <p>(II) All broadcast and under-burning operations (except for residual “smokes”) will be completed in the period from two hours after sunrise to two hours before sunset.</p> <p>(IV) During helicopter operations, flights over suitable habitat will be restricted (helicopter should be a least 1,500 feet above ground level); if not possible, fly a minimum of 500 feet above suitable habitat (above canopy).</p>
Wildfire	<p>Mandatory</p> <p>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.</p>
Wildfire	<p>Mandatory</p> <p>(I) From 1 April - 5 August 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.</p>
	Light Hand Tactics or Minimize Impact Suppression Tactics (MIST) should receive consideration for use within the protection zones for northern spotted owls and murrelets.
Quarries	<p>Mandatory</p> <p>For any occupied stands or unsurveyed suitable habitat within 0.25 miles of the quarry operation, restrict operation of the quarry from April 1 to August 5. Agency biologists also have the discretion to modify the 0.25-mile zone depending on topography and the level of noise - what equipment will be present (crusher or dozer/ripper or only loading of existing stockpiled rock). Recommended</p> <p>2) For active nest stands or unsurveyed suitable habitat within 0.25 mile of the quarry operation, restrict operation of the quarry from April 1 through September 15 (unless protocol surveys demonstrate non-nesting).</p>