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September 28, 2007

Memorandum

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

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

Subject: Endangered Species Act Section 7 Consultation regarding Fiscal Year 2008 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 2008 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) and its designated critical habitat. Those activities and the basis for your determination are discussed in your August 30, 2007, biological assessment (Assessment) (USDI BLM 2007) and a September 10, 2007 amended Assessment. We received your request for the Service's concurrence regarding these findings on September 14, 2007. This response was prepared in accordance with the implementing regulations for section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1536 *et seq.*) (Act), as amended, and is based on information provided in the Assessment, phone discussions and meetings between Service and District staff.

CONSULTATION HISTORY

Some of the activities included in the subject proposed action, which considers effects to the spotted owl, murrelet and their designated critical habitats, were addressed in a previous concurrence document (log # 1-15-06-I-165) (USFWS 2006a), issued to the District on August 22, 2006.

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

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March 1, 2007, the Incidental Take Statement (ITS) of the August 31, 2005, biological opinion (log # 1-7-01-F-0581) was withdrawn by the Service in response to the Ninth Circuit Court of Appeals decision in the ONRC v Allen case (No. 35830), which invalidated the ITS.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

On March 26, 2007 the Service withdrew and requested re-initiation of biological opinion (log # 1-15-06-F-0162) (USFWS 2006b) and letter of concurrence (log # 1-15-06-I-0165) (USFWS 2006a) as related to spotted owls, in response to the Ninth Circuit Court of Appeals decision in the ONRC v Allen case:

On September 4, 2007, the Service received a request for concurrence, dated August 30, 2007. Due to some errors in the data provided in the associated Assessment, the District re-submitted an amended Assessment, dated September 12, 2007, and received by the Service on September 14, 2007.

DESCRIPTION OF THE ACTION AREA

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

DESCRIPTION OF THE PROPOSED ACTION

The Assessment includes a detailed description of the proposed action, and is herein incorporated by reference. Table 1 describes activity types and descriptions of the proposed action.

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

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 know sites to reduce impacts of disturbance. Mandatory PDC will be applied to all activities associated with this proposed action. Recommended PDC will be incorporated during project implementation when practical. Detailed descriptions of the PDC, as provided by the District, are provided in Appendix B.

Table 1. Description of Actions Proposed by the District during FY 2008.

Habitat Modification	
Project Category	**Scope**
Harvest Activities: (includes stewardship, forest products, hazard tree removal, selection harvest, and Port Orford Cedar (POC) sanitation treatments).	**1,917 acres**
LSR[1] Subset	276 acres
CHU[2] Subset	1,020 acres
Vegetation Management: (includes Fuels Reduction Projects, pre-commercial thinning, brushing, pruning, site preparation, and POC sanitation treatments).	**21,652 acres**
LSR subset	5,660 acres
CHU subset	7,036 acres
Watershed Restoration: snag development	**500 trees**
riparian/stream enhancement	**100 acres**
LSR subset	500 trees/100 acres
CHU subset	500 trees/100 acres

Table 1 (continued)

Project Category	Disturbance
Harvest treatments	Harvest treatments could occur across all land use allocations and within designated CHUs. The District anticipates no more than 100 acres of spotted owl suitable habitat may experience noise disturbance associated with the implementation of harvest treatment activities. ▪ Mandatory Project Design Criteria (PDC[3]) apply (Appendix B).
Vegetation management including silviculture	Vegetation Management activities could occur in all land use allocations and within designated spotted owl CHUs. The District anticipates up to 10,000 acres of spotted owl suitable habitat may experience noise disturbance associated with the implementation of vegetation management activities. ▪ Mandatory Project Design Criteria (PDC) apply (Appendix B).
Watershed Restoration	▪ Riparian Restoration 100 acres. ▪ General wildlife enhancement: Tree top blasting; snag development: Up to 500 trees in 2008. ▪ Could occur across all land allocations and designated spotted owl CHUs. Emphasis in riparian reserves and LSR. ▪ PDC (Appendix B) apply.
Mining and quarry operations	▪ Up to 30 acres of noise disturbance associated with Notice-level and Plan-level operations, rock permits (existing quarries) and/or mine reclamations as money allows. ▪ Could occur across all land use allocations and designated spotted owl CHUs. ▪ PDC (Appendix B) apply.
Recreation	▪ Limestone Challenge special recreation permit to hold a one-day equestrian event (plus 1-3 days for preparation) for approximately 30-60 participants using BLM land and BLM-owned and controlled roads. ▪ PDC (Appendix B) apply
Road maintenance (outside of timber sales)	▪ Up to 100 miles of road maintenance and repair. ▪ Could occur across all land use allocations and designated spotted owl CHUs. ▪ PDC (Appendix B) apply.

[1]Late Successional Reserve; [2]Critical Habitat Unit; [3]Project Design Criteria

EFFECTS OF THE ACTION

Definitions

The following terms are used in this analysis:

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

alternatively be referred to as nesting, roosting, and foraging (NRF) habitat throughout this document.

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

Disturbance distance: the distance from the project boundary outward within which the action is likely to cause a spotted owl, if one was present, to be distracted from its normal (Appendix B).

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

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

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

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

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

juxtaposition[1] of the affected stand within the surrounding forest landscape to ensure appropriate effects to spotted owls are documented.

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

In an effort to meet both contractual and regulatory timeframes, the District utilizes several dates to describe the actual implementation of individual projects. A description of those dates follows:

Implementation of project/activity:

- Sale date: For timber harvest activities that will be sold in FY 08;
- Letter of Concurrence date for uncompleted timber harvest activities that were sold in previous years, evaluated under previous consultations, and will be implemented under this letter of concurrence (LOC).
- For activities with a fiscal year (FY) 2008 Decision Record, the date of the Decision Record.
- For uncompleted activities (other than harvest activities) that were evaluated under previous consultations identified in the Consultation History section of this document, implementation will occur following signature of this LOC.

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

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

Habitat Effects

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

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

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

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

King (1993) compared vegetation characteristics between spotted owl use sites (foraging and roosting) and random sites in the Eastern Cascades, Washington on managed forests in the Yakama Indian Reservation. Nearly all stands in the study area had been selectively harvested a few years prior to the study (uneven age management). According to the authors, spotted owls used sites within the managed forests that retained higher canopy cover. However, the authors

did not provide quantitative stand information to determine the extent of the thinning or retained structures.

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

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

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

Studies by Miller 1989 and Miller *et al*. (1997) provide information on habitat use by dispersing juvenile spotted owls. Although Miller's studies do not directly address the relationship between habitat thinning and dispersal, he found spotted owl dispersal use of open sapling-pole stands (2.5 to 53 cm dbh and > 40 % and < 60% closure), supporting the use of the 40 percent canopy cover value for dispersal habitat.

Based on the above information, the Service concludes actions affecting

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

Effects of the Action on Spotted Owl NRF Habitat

The District proposes to treat up to 9,742 acres of NRF habitat (Table 2) in association with harvest treatments and vegetation management activities. An additional 100 acres may be affected by watershed restoration activities that may include snag creation, riparian area enhancement and/or stream improvement projects. Detailed descriptions of the individual treatments may be found in the Assessment (USDI BLM 2007). Proposed projects in spotted owl NRF habitat will occur within eight section 7 watersheds (hydrologically defined units) (watersheds).

Table 2. Acres of Harvest Treatments and Vegetation Management in Spotted Owl NRF Habitat by Watershed.

Section 7 Watershed	Federal Acres of Spotted Owl NRF Habitat	Harvest Treatment Acres[1]	Vegetation Management Acres[1]	Total Treatment Acres	Percent of Spotted Owl NRF Habitat Treated and Maintained
Applegate	114,362	57	2,880	2,937	2.6
Bear	21,174	40	25	65	0.3
Cow Upper	43,657	323	1,735	2,058	4.7
Illinois	135,772	7	1,210	1,217	0.9
Klamath	16,820	25	25	50	0.3
Little Butte Creek	39,719	25	30	55	0.1
Rogue Lower Wild	105,073	47	0	47	0.5
Rogue Middle	88,774	117	3,196	3,313	3.7
Total	**565,351**	**641**	**9,101**	**9,742**	**1.7**

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

Harvest treatments

Selective harvest treatments or stewardship projects consisting of light to moderate thinning are proposed to occur on up to 641 acres of spotted owl NRF habitat (Table 2). These projects will maintain a canopy cover, at the stand level, of no less than 60 percent. Selective harvest may affect NRF habitat by removing some horizontal and vertical structure. Features such as nest trees, multi-layered canopies, and dead and down wood that support prey species habitat will remain within a given project area post-harvest, retaining the ability to provide for the nesting, roosting, foraging and dispersal of spotted owls.

Vegetation Managment

Up to 9,101 acres of vegetation treatments, including siviculture and fuels reduction treatments are proposed for implementation under this proposed action (Table 2). Some vegetation treatments are designed to reduce the severity and rate of spread of large, stand-replacement fires that could adversely impact spotted owl habitat. Other treatments are designed to improve the health of trees remaining post-treatment. These activities will be dispersed across the Action

Area both spatially and temporally to reduce disproportionate impacts to an individual area. Fuels reduction projects that include prescribed fire can also stimulate forage plants, such as young conifer saplings and a variety of shrub, herbs and grass species, important to spotted owl prey. Fuels reduction projects can help restore ecological health in stands that would normally experience high fire frequency in the absence of effective wildland fire suppression.

Watershed Restoration

Up to 100 acres of spotted owl NRF habitat may be affected by watershed restoration activities designed to enhance riparian areas and/or streams on public lands managed by the District. The District has designed these treatments to maintain existing spotted owl NRF habitat.

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

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

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

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

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

Effects to Late Successional Reserves (LSRs)

NRF Habitat

According to the Assessment, a total of up to 2,937 acres of spotted owl NRF habitat may be affected within four individual late successional reserve units in association with the implementation of harvest treatments, vegetation management and watershed restoration activities (Table 3). The District has designed these management actions to contribute to the development of late seral forest conditions and maintain or improve existing spotted owl NRF habitat.

Table 3. Acres of Treatments in spotted owl NRF habitat within Late Successional Reserve Units.

Late-Successional Reserve	Total NRF Habitat Federal Acres by LSR[1]	Acres of Harvest Treatment in LSR	Acres of Vegetation Management in LSR	Total NRF Acres of treatment-habitat maintained	Percent of Federal NRF Habitat treated and maintained
RO223	33,804	15	1,300	1,315	4.0
RO224	8,370	5	0	5	0.1
RO249	40,224	8	1,605	1,613	0.3
RO258	33,641	4	0	4	0.01
Total	**116,039**	**32**	**2,905**	**2,937**	**2.5**

[1.] Baseline acres are all federal lands within the LSR from Environmental Baseline Tables: 06-08 BA (USDI/USDA 2006)

The District Manager, after detailed analysis by Resource Area Biologists and Field Managers has determined, as set forth in the Assessment, that the above proposed treatment of 2,937 acres of NRF habitat within four individual LSR units will have insignificant effects to the nesting, roosting, and foraging of spotted owls within the action area due to the location, type, and timing of these activities, and because projects have been designed to maintain the function of spotted owl habitat. Project implementation is likely to achieve the following outcomes:

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

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

1. All LSR treatments are designed to maintain or improve late successional objectives, in accordance with the Northwest Forest Plan (USDA-USDI 1994).
2. Thinning and vegetation management will help accelerate the stand development towards conditions more favorable to spotted owls and other late-successional species.
3. Vegetation management treatments will improve ecological health of the stand, reduce the chance of tree loss due to suppression mortality, and will reduce the intensity and risk of wildfire by removing excess fuels.

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

Effects to Spotted Owl Dispersal-only Habitat

The District proposes to treat up to 13,827 acres of spotted owl dispersal habitat through harvest treatments and vegetation management activities. Detailed descriptions of the individual treatments may be found in the Assessment (USDI BLM 2007). These projects are proposed to occur in nine watersheds, and will affect approximately 1.2 percent of the extant 1,138,672 acres of dispersal habitat within those affected watersheds (Table 4).

Table 4. Acres of Spotted Owl Dispersal Habitat Treated by Section 7 Watershed.

Section 7 Watershed	Federal Dispersal Habitat Acres[1]	Acres of Harvest Treatments	Acres of Vegetation Management	Total Spotted Owl Dispersal Habitat Treated and Maintained	Percent of Habitat Treated and Maintained
Applegate	192,550	58	4,470	4,528	2.3
Bear	31,526	40	25	65	0.2
Cow Upper	52,471	634	565	1,199	2.3
Illinois	210,183	8	2715	2,723	1.3
Klamath	32,628	25	25	50	0.2
Little Butte	54,093	85	30	115	0.2
Rogue Lower Wild	138,273	150	640	790	0.6
Rogue Middle	134,917	171	4,051	4,222	3.1
Rogue Upper	292,031	105	30	135	0.1
Total	**1,138,672**	**1,276**	**12,551**	**13,827**	**1.2**

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

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

Harvest Treatments

Up to 1,276 acres of selective harvest is planned within dispersal habitat in densely-spaced stands that provide dispersal habitat (Table 4). These stands consist of previously managed stands, mixed-age stands that have resulted from low to moderate intensity wildland fire, or mixed-conifer and hardwood stands that meet the criteria that 40 percent of the stand has trees at least 11 inch diameter and allows flying space but lacks NRF habitat structural components. Treatments may also occur in older forest stands, possibly up to 120 years on average, comprised 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. The District designs harvest treatments within spotted owl dispersal habitat to promote tree growth in areas designated for timber harvest.

Vegetation Management

Up to 12,551 acres of vegetation management activities may be implemented in association with this proposed action (Table 4). These activities include fuels reduction treatment designed to remove surface fuels, brush or small trees as well as the removal of ladder fuels. Other treatments include treatments in young conifer stands designed to promote tree growth and structural diversity. The defined components of spotted owl dispersal habitat will be retained in treated areas.

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

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

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

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

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

Effects to Spotted Owl Prey Species

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

Residual trees, snags and down wood that are retained in the thinned stands will provide some cover for prey species over time, and will help minimize harvest impacts to some prey species. Some arboreal prey species will venture into harvest units a short distance for food. Spotted owls seldom venture far into non-forested stands to hunt. However, edges can be areas of good prey availability and potentially increased vulnerability (i.e., better hunting for spotted owls) (Zabel *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 Manager, with input from Resource Area Biologists and Field Managers, has determined that effects to spotted owls, as described here, would be insignificant.

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

Effects to Spotted Owl Critical Habitat

NRF Habitat

Up to 3,890 acres of NRF habitat in ten CHUs will be treated through harvest and vegetation management treatments (Table 5). An additional 500 conifer trees may be utilized to create snags that will provide important habitat for snag-dependent species.

Table 5: Effects to Spotted Owl NRF Habitat within CHUs.

Critical Habitat Units	Federal Acres of NRF Habitat[1]	Harvest Treatment Acres	Vegetation Management Treatment Acres	Total Spotted Owl NRF Habitat Treated and Maintained	Percent of CHU treated and maintained
OR 32	20,287	174	470	644	3.17
OR 34	21,096	5	0	5	0.02
OR 37	36,482	10	15	25	0.07
OR 38	14,120	30	20	50	0.35
OR 62	3,609	10	65	75	2.08
OR 64	3,799	0	579	579	15.2
OR 65	39,680	14	175	189	0.47
OR 72	18,465	8	1,705	1,713	9.27
OR 74	9,859	10	575	585	5.93
OR 75	4,949	10	15	25	0.51
Total	**172,346**	**271**	**3,619**	**3,890**	**2.26**

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

Harvest Treatments

Up to 271 acres of spotted owl NRF habitat may receive harvest treatments associated with this proposed action (Table 5). These treatments will be dispersed spatially among nine individual critical habitat units. Selective harvest treatments or stewardship projects consist of light to moderate thinning. These projects will maintain a canopy cover, at the stand level, of no less than 60 percent. Selective harvest may affect spotted owl NRF habitat by removing some horizontal and vertical structure. Features such as nest trees, multi-layered canopies, and dead and down wood that contribute to spotted owl suitable habitat will remain within a given project area post-harvest, retaining the ability to provide for the nesting, roosting, foraging and dispersal of spotted owls.

Vegetation Management

Up to 3,619 acres of spotted owl NRF habitat in nine individual CHUs will be treated through fuels/vegetation management methods as depicted in Table 5. Approximately 91 percent (3,544 acres) of the treatments scheduled to occur in spotted owl NRF habitat within designated critical habitat units consist of fuels reduction treatments, designed to reduce surface and ladder fuels that may contribute to the spread and intensity of wildland fires. In accordance with the criteria used to define the primary constituent elements of critical habitat (USFWS 1992), the Assessments indicates none of these features would change as a result of the implementation of these actions.

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

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

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

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

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

Watershed Restoration

Up to 500 snags may be created from live conifers within spotted owl designated critical habitat unit OR-32. These treatments are designed to improve habitat for spotted owls and other late-successional associated species that depend upon dead trees to fulfill their biological requirements. The District has designed these treatments to maintain existing spotted owl NRF habitat. Therefore, trees selected for snag creation will not represent potential spotted owl nest trees.

Dispersal Habitat

The Assessment describes the affects of treating up to a total of 4,166 acres of spotted owl dispersal habitat among ten individual CHUs (Table 6).

Table 6: Effects to Spotted Owl Dispersal Habitat within Designated Critical Habitat Units.

Critical Habitat Units	Federal Acres of spotted owl dispersal habitat[1]	Harvest Treatment Acres	Vegetation Management Treatment Acres	Total Spotted Owl Dispersal Habitat Treated and Maintained	Percent of CHU treated and maintained
OR 32	24,558	460	0	460	1.87
OR 34	28,462	5	0	5	0.02
OR 37	35,238	15	15	30	0.12
OR 38	23,669	35	30	65	0.27
OR 62	3,995	10	0	10	0.25
OR 65	65,784	13	867	880	1.33
OR 67	66,355	175	0	175	0.26
OR 72	40,807	6	2,300	2,306	5.65
OR 74	19,597	15	190	205	1.04
OR 75	9,531	15	15	30	0.31
Total	**317,996**	**749**	**3,417**	**4,166**	**1.31**

[1]From Appendix B in 2006-2008 BA, (USDA, USDI 2006).

Harvest treatments

Up to 749 acres of dispersal habitat will be treated through harvest treatments within ten CHUs (Table 6). According to the Assessment, the proposed selective harvest treatments and hazard tree removal have been designed to avoid adverse effects to the primary constituent elements of spotted owl critical habitat within the affected CHUs.

Vegetation Management

The Assessment indicates that up to 3,417acres of vegetation management treatments will occur in spotted owl dispersal habitat within six individual CHUs (Table 6). The District designed these treatments to avoid adverse effects to the primary constituent elements of spotted owl critical habitat within the affected CHUs.

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

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

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

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

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

Effects to Spotted Owls due to Disturbance

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

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

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

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

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

Effects to Marbled Murrelets

Noise Disturbance

The Assessment describes activities scheduled to occur within murrelet survey zone B (Appendix C). These projects will not take place within suitable murrelet habitat. However, areas of suitable murrelet habitat may occur adjacent to project areas. The District anticipates minor noise impacts to murrelets associated with implementation of the proposed action. Based on negative occupancy results of previous surveys within zone B, the District believes these areas are unlikely to support active murrelet nest sites.

<u>Anaktuvuk Stewardship Project</u>

The Anaktuvuk Stewardship project involves chainsaw thinning to remove small trees in young silvicultural units. Seasonal restrictions (Appendix B) will be imposed where suitable murrelet habitat surrounds the project units.

Young Stand Management Project
The District proposes a young stand management project which involves chainsaw thinning in young silvicultural units, including tree spacing and brush removal. Most units are adjacent to suitable murrelet habitat.

Hazard Tree Removal
The Assessment states hazard tree removal could occur throughout the year. These activities are difficult to predict. However, the District anticipates hazard tree removal may occur within suitable murrelet habitat in Zone B and within designated murrelet critical habitat within the Glendale Resource Area. The District anticipates these activities would affect an insignificantly small area, are very short in duration, and may consist of tree felling, bucking and removal. Scattered individual trees may be removed, primarily along existing right-of-way road corridors for public safety.

Disturbance associated with the implementation of the above activities will be limited by application of mandatory PDC (Appendix B0) 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 Manager, with input from Resource Area Biologists and Field Managers, has determined projects that comply with Mandatory PDC related to disturbance will be insignificant to murrelets because:

1. Adverse effects from disturbance are very unlikely to occur beyond the disturbance distances (USFWS 2003) described in the mandatory PDC.

2. The Proposed Action, with the application of the mandatory PDC, is likely to avoid adverse disturbance impacts to murrelets because activities will likely not cause murrelets to flush from their nest, abandon nests, cause juveniles to prematurely fledge, interrupt foraging activity or result in increased predation due to less protection when the adult flushes during the critical nesting season (USFWS 2003).

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

Effects to Marbled Murrelet Designated Critical Habitat
While the activities described above in the "Effects to Murrelets due to Disturbance" section may occur within the boundaries of designated critical habitat for murrelets, the District has determined the subject activities will not affect the primary constituent elements of murrelet critical habitat.

Aggregate Effects Analysis

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

- The proposed action is not likely to change the key characteristics of NRF and dispersal habitats throughout the action area. Retention of these characteristics was considered in the design of the proposed activities. NRF habitat throughout the action area is expected to continue to exhibit 60 percent or greater canopy cover, and pre-project levels of decadent woody material and multi-canopy, uneven-aged tree structure.
- Wild fire resiliency in the action area is likely to be improved by the proposed thinning activities, which will reduce fuel-loading. Remaining trees will have more available water, space and light to be healthier and grow faster, and develop more structural diversity.
- The results of the proposed treatments in NRF habitat are likely to have long-term beneficial effects to spotted owls by reducing the risks of stand loss to fire or suppression mortality, and accelerating further development of NRF habitat characteristics within the action area. Seventy-one percent (6,945 acres) of the 9,842 acres of proposed treatments within spotted owl NRF habitat were designed to reduce fuel loads that contribute to large, stand replacement fires.
- The results of the proposed treatments in dispersal habitat are likely to have long-term beneficial effects to spotted owls by reducing the risks of stand loss to fire or suppression mortality, and accelerating further development of dispersal habitat characteristics (e.g., improved "flying space" within existing very dense stands of trees) within the action area.

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

Marbled Murrelets
The Assessment considers the effect of the combined treatments described separately above and includes the District's determination that the proposed activities will not take place within suitable habitat for murrelets or adversely affect the primary constituent elements of murrelet critical habitat in the action area for the following reasons

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

Concurrence

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

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

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

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

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

cc: Carole Jorgensen, BLM, Medford, OR (e)
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Appendix A: Spreadsheet of the Proposed Action provided by Medford BLM.

08 NLAA Medford BA 8_28_07. Appendix A: SPREADSHEET OF PROPOSED ACTIVITIES BY SECTION 7 WATERSHED, CHU AND LSR																								LSR Habitat							
						Owl effects									CHU effects										LSR effects							
Section 7 Watershed	Year (8 or X)	Project ID	Project Type (T,V,O)	Land allocation	RA	NRF remove	NRF dwngrd	NRF T&M	Disp remove	Disp T&M	Total Habitat acres	Owl effect	>3/1 toJune 30 (Y/N)*	CHU #	NRF remove	NRF dwngrd	NRF T&M	Disp remove	Disp T&M	all CHU acres	CHU EFFECTS	LSR Name	LSR#	NRF remove	NRF dwngrd	NRF T&M	Disp remove	Disp T&M	all LSR acres	Comment
Applegate	8	Roadside Hazard Trees	T	Z	GP	0	0	2	0	3	5	NLAA	N	OR-72	0	0	1	0	1	2	NLAA	East	RO-249	0	0	1	0	1	2	
Applegate	8	Misc. Forest Products	T	Z	GP	0	0	5	0	5	10	NLAA	N	OR-72	0	0	3	0	2	5	NLAA	East	RO-249	0	0	3	0	2	5	
Applegate	8	Silviculture (non 6320)	V	Z	GP	0	0	125	0	0	125	NLAA	N	OR-72	0	0	5	0	0	5	NLAA	East	RO-249	0	0	5	0	0	5	
Applegate	8	Cheney Slate Fuels	V	L	GP	0	0	200	0	400	600	NLAA	Y	OR-72	0	0	200	0	400	600	NLAA	East	RO-249	0	0	200	0	400	600	
Applegate	8	Deer Willy HFRA includes 500 POC	V	L	GP	0	0	1,300	0	1,600	2,900	NLAA	N	OR-72	0	0	1,300	0	1,600	2,900	NLAA	East	RO-249	0	0	1,300	0	1,600	2,900	
Illinois	8	Roadside Hazard Trees	T	Z	GP	0	0	2	0	3	5	NLAA	N	OR-72	0	0	1	0	1	2	NLAA	East	RO-249	0	0	1	0	1	2	
Illinois	8	Misc. Forest Products	T	Z	GP	0	0	5	0	5	10	NLAA	N	OR-72	0	0	3	0	2	5	NLAA	East	RO-249	0	0	3	0	2	5	
Illinois	8	Althouse Sucker Fuels	V	L	GP	0	0	100	0	100	200	NLAA	Y	OR-72	0	0	100	0	100	200	NLAA	East	RO-249	0	0	100	0	100	200	
Rogue Upper	8	Elk Creek Hazard Trees	T	L	BF	0	0	0	0	5	5	NLAA	Y	OR-34	0	0	5	0	5	10	NLAA	Elk Ck.	RO-224	0	0	5	0	5	10	
Rogue Lower Wild	8	Rogue Lower Young Stand Silviculture	V	L	GL	0	0	0	0	0	0	NLAA	Y	not	0	0	0	0	0	0	NLAA	Fishhook	RO-258	0	0	0	0	0	0	Y
Rogue Lower Wild	8	Rogue Lower CH Young Stand Silviculture	V	Z	GL	0	0	0	0	0	0	NLAA	Y	OR-67	0	0	0	0	0	0	NLAA	Fishhook	RO-258	0	0	0	0	0	0	Y
Rogue Lower Wild	8	Silviculture (non 6320)	V	L	GP	0	0	0	0	40	40	NLAA	N	not	0	0	0	0	0	0	NE	Fishhook	RO-258	0	0	0	0	40	40	
Rogue Lower Wild	8	Rum Creek Fuels	V	L	GP	0	0	0	0	600	600	NLAA	Y	OR-65	0	0	0	0	600	600	NLAA	Fishhook	RO-258	0	0	0	0	600	600	
Rogue Lower Wild	8	Rogue Lower CH Hazard Trees	T	Z	GL	0	0	10	0	10	20	NLAA	Y	OR-65	0	0	5	0	5	10	NLAA	Fishhook	RO-258	0	0	0	0	0	0	
Rogue Lower Wild	8	Rogue Lower CH SFP	T	Z	GL	0	0	10	0	10	20	NLAA	Y	OR-65	0	0	5	0	5	10	NLAA	Fishhook	RO-258	0	0	0	0	0	0	
Rogue Lower Wild	8	Roadside Hazard Trees	T	Z	GP	0	0	2	0	3	5	NLAA	N	OR-65	0	0	1	0	1	2	NLAA	Fishhook	RO-258	0	0	1	0	1	2	
Rogue Lower Wild	8	Misc. Forest Products	T	Z	GP	0	0	5	0	5	10	NLAA	N	OR-65	0	0	3	0	2	5	NLAA	Fishhook	RO-258	0	0	3	0	2	5	
Rogue Middle	8	Silviculture (non 6320)	V	Z	GP	0	0	345	0	1,070	1,415	NLAA	N	OR-65	0	0	25	0	0	25	NLAA	Fishhook	RO-258	0	0	0	0	15	15	
Cow Upper	8	Cow Upper Young Stand Silviculture	V	L	GL	0	0	0	0	0	0	NLAA	Y	not	0	0	0	0	0	0	NLAA	Galesville	RO-223	0	0	0	0	0	0	Y
Cow Upper	8	Cow Upper CH Young Stand Silviculture	V	Z	GL	0	0	0	0	0	0	NLAA	Y	OR-32	0	0	0	0	0	0	NLAA	Galesville	RO-223	0	0	0	0	0	0	Y
Cow Upper	8	Cow Upper CH-32 Hazard Trees	T	Z	GL	0	0	10	0	10	20	NLAA	Y	OR-32	0	0	5	0	5	10	NLAA	Galesville	RO-223	0	0	0	0	0	0	
Cow Upper	8	Slim Jim Small Wood/Fuels /NCDM	T	Z	GL	0	0	134	0	237	371	NLAA	Y	OR-32	0	0	134	0	237	371	NLAA	Galesville	RO-223	0	0	0	0	32	32	
Cow Upper	8	Fizzy Stew	T	L	GL	0	0	5	0	202	207	NLAA	Y	OR-32	0	0	5	0	188	193	NLAA	Galesville	RO-223	0	0	5	0	188	193	
Cow Upper	8	Cow Upper SFP	T	Z	GL	0	0	10	0	10	20	NLAA	Y	OR-32	0	0	5	0	5	10	NLAA	Galesville	RO-223	0	0	5	0	5	10	
Cow Upper	8	Cow Upper CH-32 SFP	T	Z	GL	0	0	10	0	10	20	NLAA	Y	OR-32	0	0	5	0	5	10	NLAA	Galesville	RO-223	0	0	5	0	5	10	
Cow Upper	8	Eastside Fuels /Middle Cow Fuels	V	L	GL	0	0	1,300	0	0	1,300	NLAA	Y	OR-32	0	0	470	0	0	470	NLAA	Galesville	RO-223	0	0	1,300	0	0	1,300	
Rogue Lower Wild	8	Rogue Lower CH Young Stand Silviculture	V	Z	GL	0	0	0	0	0	0	NLAA	Y	OR-67	0	0	0	0	0	0	NLAA	Northwest	RO-255	0	0	0	0	0	0	Y
Applegate	8	Fish Hatchery Fuels	V	M	GP	0	0	0	0	20	20	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Applegate	8	North Applegate Fuels	V	M	GP	0	0	0	0	20	20	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Applegate	8	Water Gap Fuels	V	M	GP	0	0	0	0	20	20	NLAA	N	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Applegate	8	Jaynes Drive Fuels	V	M	GP	0	0	0	0	30	30	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Applegate	8	Copper Drive Fuels	V	M	GP	0	0	0	0	40	40	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Applegate	8	Grays Creek Fuels	V	M	GP	0	0	0	0	40	40	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Applegate	8	Willliams Fuels	V	M	GP	0	0	0	0	40	40	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Applegate	8	New Hope Fuels	V	M	GP	0	0	0	0	40	40	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Applegate	8	Applegate Hazard Trees	T	A	AS	0	0	25	0	25	50	NLAA	N	OR-74	0	0	10	0	15	25	NLAA	not	0	0	0	0	0	0	0	
Applegate	8	Applegate Hazard Trees	T	A	AS	0	0	25	0	25	50	NLAA	N	OR-75	0	0	10	0	15	25	NLAA	not	0	0	0	0	0	0	0	
Applegate	8	Applegate Misc. Forest Products	V	A	AS	0	0	30	0	30	60	NLAA	Y	OR-75	0	0	15	0	15	30	NLAA	not	0	0	0	0	0	0	0	
Applegate	8	Applegate Fuels	V	A	AS	0	0	575	0	190	765	NLAA	N	OR-74	0	0	575	0	190	765	NLAA	not	0	0	0	0	0	0	0	
Applegate	8	Cheney Slate Fuels	V	A	GP	0	0	650	0	2,000	2,650	NLAA	Y	OR-72	0	0	100	0	200	300	NLAA	not	not	0	0	0	0	0	0	
Bear	8	Bear Misc. Forest Products	V	M	AS	0	0	25	0	25	50	NLAA	Y	OR-38	0	0	10	0	15	25	NLAA	not	0	0	0	0	0	0	0	
Bear	8	Bear Hazard Trees	T	M	AS	0	0	40	0	40	80	NLAA	N	OR-38	0	0	20	0	20	40	NLAA	not	0	0	0	0	0	0	0	
Cow Upper	8	Cow Upper Young Stand Silviculture	V	M	GL	0	0	0	0	0	0	NLAA	Y	not	0	0	0	0	0	0	NLAA	NOT	not	0	0	0	0	0	0	Y
Cow Upper	8	Cow Upper CH Young Stand Silviculture	V	M	GL	0	0	0	0	0	0	NLAA	Y	OR-62	0	0	0	0	0	0	NLAA	NOT	not	0	0	0	0	0	0	Y
Cow Upper	8	Cow Upper CH Young Stand Silviculture	V	M	GL	0	0	0	0	0	0	NLAA	Y	OR-64	0	0	0	0	0	0	NLAA	NOT	not	0	0	0	0	0	0	Y
Cow Upper	8	Cow Upper CH Young Stand Silviculture	V	M	GL	0	0	0	0	0	0	NLAA	Y	OR-67	0	0	0	0	0	0	NLAA	NOT	not	0	0	0	0	0	0	Y
Cow Upper	8	Boney Skull fuels	V	M	GL	0	0	0	0	17	17	NLAA	Y	OR-65	0	0	0	0	17	0	NLAA	NOT	not	0	0	0	0	0	0	
Cow Upper	8	Anaktuvuk Stew	T	M	GL	0	0	0	0	73	73	NLAA	Y	OR-67	0	0	0	0	73	73	NLAA	NOT	not	0	0	0	0	0	0	
Cow Upper	8	Cow Upper Hazard Trees	T	Z	GL	0	0	10	0	10	20	NLAA	Y	not	0	0	0	0	0	10	NLAA	NOT	not	0	0	0	0	0	0	
Cow Upper	8	Cow Upper CH-62 SFP	T	Z	GL	0	0	10	0	10	20	NLAA	Y	OR-62	0	0	5	0	5	10	NLAA	NOT	not	0	0	0	0	0	0	
Cow Upper	8	Boney Skull NCDM	T	M	GL	0	0	124	0	62	186	NLAA	Y	not	0	0	0	0	0	0	NLAA	NOT	not	0	0	0	0	0	0	
Cow Upper	8	Boney Skull fuels	V	M	GL	0	0	135	0	248	383	NLAA	Y	OR-62	0	0	65	0	0	65	NLAA	NOT	not	0	0	0	0	0	0	
Cow Upper	8	Westside	V	M	GL	0	0	300	0	300	300	NLAA	Y	not	0	0	0	0	0	0	NLAA	NOT	not	0	0	0	0	0	0	
Cow Upper	8	Cow Upper CH-62 Hazard Trees	T	M	GL	0	0	10	0	10	20	NLAA	Y	OR-62	0	0	5	0	5	10	NLAA	NOT	not	0	0	5	0	5	10	
Illinois	8	Silviculture (non 6320)	V	M	GP	0	0	20	0	65	85	NLAA	N	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Illinois	8	Illinois Valley Rec/ Fuels project	V	M	GP	0	0	40	0	150	190	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Illinois	8	E Fork Illinois Fuels	V	M	GP	0	0	200	0	400	600	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Illinois	8	Althouse Sucker Fuels	V	M	GP	0	0	300	0	1,500	1,800	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Illinois	8	Tennessee Lime Fuels	V	M	GP	0	0	550	0	500	1,050	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Klamath	8	Klamath Hazard Trees	T	M	AS	0	0	25	0	25	50	NLAA	N	OR-38	0	0	10	0	15	25	NLAA	not	0	0	0	0	0	0	0	
Klamath	8	Klamath Misc. Forest Products	V	M	AS	0	0	25	0	25	50	NLAA	Y	OR-38	0	0	10	0	15	25	NLAA	not	0	0	0	0	0	0	0	

Section 7 Watershed	Year (8 or X)	Project ID	Project Type (T,V,O)	Land allocation	RA	NRF remove	NRF dwngrd	NRF T&M	Disp remove	Disp T&M	Total Habitat acres	OWL EFFECT	**>JUNE 30 after June 30 (Y/N)***	CHU #	NRF remove	NRF dwngrd	NRF T&M	Disp remove	Disp T&M	all CHU acres	CHU EFFECTS	LSR Name	LSR#	NRF remove	NRF dwngrd	NRF T&M	Disp remove	Disp T&M	all LSR acres	Comment
Little Butte Creek	8	Wasson Hazard Trees	T	M	BF	0	0	0	0	10	10	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Little Butte Creek	8	Wasson Misc. Forest Products	T	M	BF	0	0	0	0	50	50	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Little Butte Creek	8	Little Butte Hazard Trees	T	M	AS	0	0	25	0	25	50	NLAA	N	OR-37	0	0	10	0	15	25	NLAA	not	0	0	0	0	0	0	0	
Little Butte Creek	8	Little Butte Misc. Forest Products	V	M	AS	0	0	30	0	30	60	NLAA	Y	OR-37	0	0	15	0	15	30	NLAA	not	0	0	0	0	0	0	0	
Rogue Lower Wild	8	Rogue Lower Young Stand Silviculture	V	M	GL	0	0	0	0	0	0	NLAA	Y	not	0	0	0	0	0	0	NLAA	NOT	not	0	0	0	0	0	0	Y
Rogue Lower Wild	8	Anaktuvuk Stew	T	M	GL	0	0	0	0	102	102	NLAA	Y	OR-67	0	0	0	0	102	102	NLAA	NOT	not	0	0	0	0	0	0	
Rogue Lower Wild	8	Rogue Lower Hazard Trees	T	Z	GL	0	0	10	0	10	20	NLAA	Y	not	0	0	0	0	0	0	NLAA	NOT	not	0	0	0	0	0	0	
Rogue Lower Wild	8	Rogue Lower SFP	T	Z	GL	0	0	10	0	10	20	NLAA	Y	not	0	0	0	0	0	0	NLAA	NOT	not	0	0	0	0	0	0	
Rogue Middle	8	Rogue Middle Young Stand Silviculture	V	M	GL	0	0	0	0	0	0	NLAA	Y	not	0	0	0	0	0	0	NLAA	NOT	not	0	0	0	0	0	0	Y
Rogue Middle	8	Rogue Middle CH Young Stand Silviculture	V	M	GL	0	0	0	0	0	0	NLAA	Y	OR-32	0	0	0	0	0	0	NLAA	NOT	not	0	0	0	0	0	0	Y
Rogue Middle	8	Rogue Middle CH Young Stand Silviculture	V	M	GL	0	0	0	0	0	0	NLAA	Y	OR-64	0	0	0	0	0	0	NLAA	NOT	not	0	0	0	0	0	0	Y
Rogue Middle	8	Klamath Hazard Trees	V	M	BF	0	0	0	0	20	20	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Rogue Middle	8	Stewart Road Fuels	V	M	GP	0	0	0	0	40	40	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Rogue Middle	8	Slick Sand Fuels	V	M	BF	0	0	0	0	51	51	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Rogue Middle	8	Suspended Pole Thin	T	M	BF	0	0	0	0	53	53	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Rogue Middle	8	Dollar Mtn Fuels	V	M	GP	0	0	0	0	60	60	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Rogue Middle	8	Klamath Misc. Forest Products	V	M	BF	0	0	0	0	104	104	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Rogue Middle	8	Battle Mountain Fuels	V	M	BF	0	0	0	0	133	133	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Rogue Middle	8	Cathedral Hills Fuels	V	M	GP	0	0	0	0	360	360	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Rogue Middle	8	Shanks Creek Fuels	V	M	GL	0	0	0	0	823	823	NLAA	Y	not	0	0	0	0	0	0	NLAA	NOT	not	0	0	0	0	0	0	
Rogue Middle	8	Roadside Hazard Trees	T	M	GP	0	0	2	0	3	5	NLAA	N	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Rogue Middle	8	Misc. Forest Products	T	M	GP	0	0	5	0	5	10	NLAA	N	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Rogue Middle	8	Grave Hazard Trees	T	M	GL	0	0	10	0	10	20	NLAA	Y	not	0	0	0	0	0	0	NLAA	NOT	not	0	0	0	0	0	0	
Rogue Middle	8	Rogue Middle Hazard Trees	T	M	GL	0	0	10	0	10	20	NLAA	Y	not	0	0	0	0	0	0	NLAA	NOT	not	0	0	0	0	0	0	
Rogue Middle	8	Grave SFP	T	M	GL	0	0	10	0	10	20	NLAA	Y	not	0	0	0	0	0	0	NLAA	NOT	not	0	0	0	0	0	0	
Rogue Middle	8	Rogue Middle SFP	T	M	GL	0	0	10	0	10	20	NLAA	Y	not	0	0	0	0	0	0	NLAA	NOT	not	0	0	0	0	0	0	
Rogue Middle	8	Grave CH Hazard Trees	T	M	GL	0	0	10	0	10	20	NLAA	Y	OR-32	0	0	5	0	5	10	NLAA	NOT	not	0	0	0	0	0	0	
Rogue Middle	8	Rogue Middle CH Hazard Trees	T	M	GL	0	0	10	0	10	20	NLAA	Y	OR-32	0	0	5	0	5	10	NLAA	NOT	not	0	0	0	0	0	0	
Rogue Middle	8	Grave CH SFP	T	M	GL	0	0	10	0	10	20	NLAA	Y	OR-32	0	0	5	0	5	10	NLAA	NOT	not	0	0	0	0	0	0	
Rogue Middle	8	Rogue Middle CH SFP	T	M	GL	0	0	10	0	10	20	NLAA	Y	OR-32	0	0	5	0	5	10	NLAA	NOT	not	0	0	0	0	0	0	
Rogue Middle	8	Midddle Rogue Hazard Trees	T	M	AS	0	0	30	0	30	60	NLAA	N	not	0	0	0	0	0	0	NLAA	not	0	0	0	0	0	0	0	
Rogue Middle	8	M.Rogue Misc. Forest Products	V	M	AS	0	0	30	0	30	60	NLAA	Y	not	0	0	0	0	0	0	NLAA	not	0	0	0	0	0	0	0	
Rogue Middle	8	Maple Syrup Fuels	V	M	GP	0	0	50	0	50	100	NLAA	Y	OR-65	0	0	50	0	50	100	NLAA	not	not	0	0	0	0	0	0	
Rogue Middle	8	Middle Rogue Fuels	V	M	AS	0	0	160	0	210	370	NLAA	N	not	0	0	0	0	0	0	NLAA	not	0	0	0	0	0	0	0	
Rogue Middle	8	Quartz Centennial Fuels	V	M	GP	0	0	200	0	600	800	NLAA	Y	OR-65	0	0	100	0	200	300	NLAA	not	not	0	0	0	0	0	0	
Rogue Middle	8	Joe Hill Fuels	V	M	GP	0	0	300	0	500	800	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Rogue Middle	8	W Sunny Fuels	V	M	GL	0	0	950	0	0	950	NLAA	Y	not	0	0	0	0	0	0	NLAA	NOT	not	0	0	0	0	0	0	
Rogue Middle	8	Reuben Fuels	V	M	GL	0	0	1,161	0	0	1,161	NLAA	Y	OR-64	0	0	579	0	0	579	NLAA	NOT	not	0	0	0	0	0	0	
Rogue Upper	8	Cascade Hazard Trees	V	M	BF	0	0	0	0	30	30	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	
Rogue Upper	8	Cascade Misc. Forest Products	T	M	BF	0	0	0	0	100	100	NLAA	Y	not	0	0	0	0	0	0	NE	not	not	0	0	0	0	0	0	

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

Instructions: Include only yr 8 and x projects. Report year as 8 (for 2008 fiscal year). Put calendar year or X for previous projects from previous consultations. T&M is Treat and Maintain (not "degrade". Sorted by RA then project type. Make sure All FUELS are separate and consistent with counterpart regs.
Count footprint of fuels project once (not for each entry).

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.

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 not likely to adversely affect (NLAA) (or no effect (NE)), we (Medford BLM) 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 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 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	Documented Owl Site	Projected Owl Site**
Heavy Equipment (including non-blasting quarry operations)	105 feet	761 feet
Chain saws	195 feet	851 feet
Impact pile driver, jackhammer, rock drill	195 feet	851 feet
Small helicopter or plane	360 feet*	1016 feet
Type 1 or Type 2 helicopter	0.25 mile*	0.512 mile
Blasting; 2 lbs of explosive or less	360 feet	1016 feet
Blasting; more than 2 lbs of explosives	1 mile	1.12 miles

* If below 1,500 feet above ground level

** Radius distances were increased by 656 feet (200 meters) around estimated nest sites to provide additional protection, since the exact location of owls is unknown in these areas.

Above-ambient noises further than these Table B-1 distances from spotted owls are expected to have ether negligible effects or no effect to spotted owls. The types of reactions that spotted owls could have to noise that the Service considers to have a negligible impact, include flapping

of wings, the turning of a head towards the noise, hiding, assuming a defensive stance, etc. (USFWS 2003).

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	Mandatory (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. (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. (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).
Wildfire	Mandatory Whenever possible, protect known nest sites of any listed species from high intensity fire. Update Resource Information Book annually; incorporate new nests or sites as soon as possible.
Wildfire	Mandatory (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.
	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	Mandatory 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 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).

Appendix C: Range of the Marbled Murrelet within the Action Area.

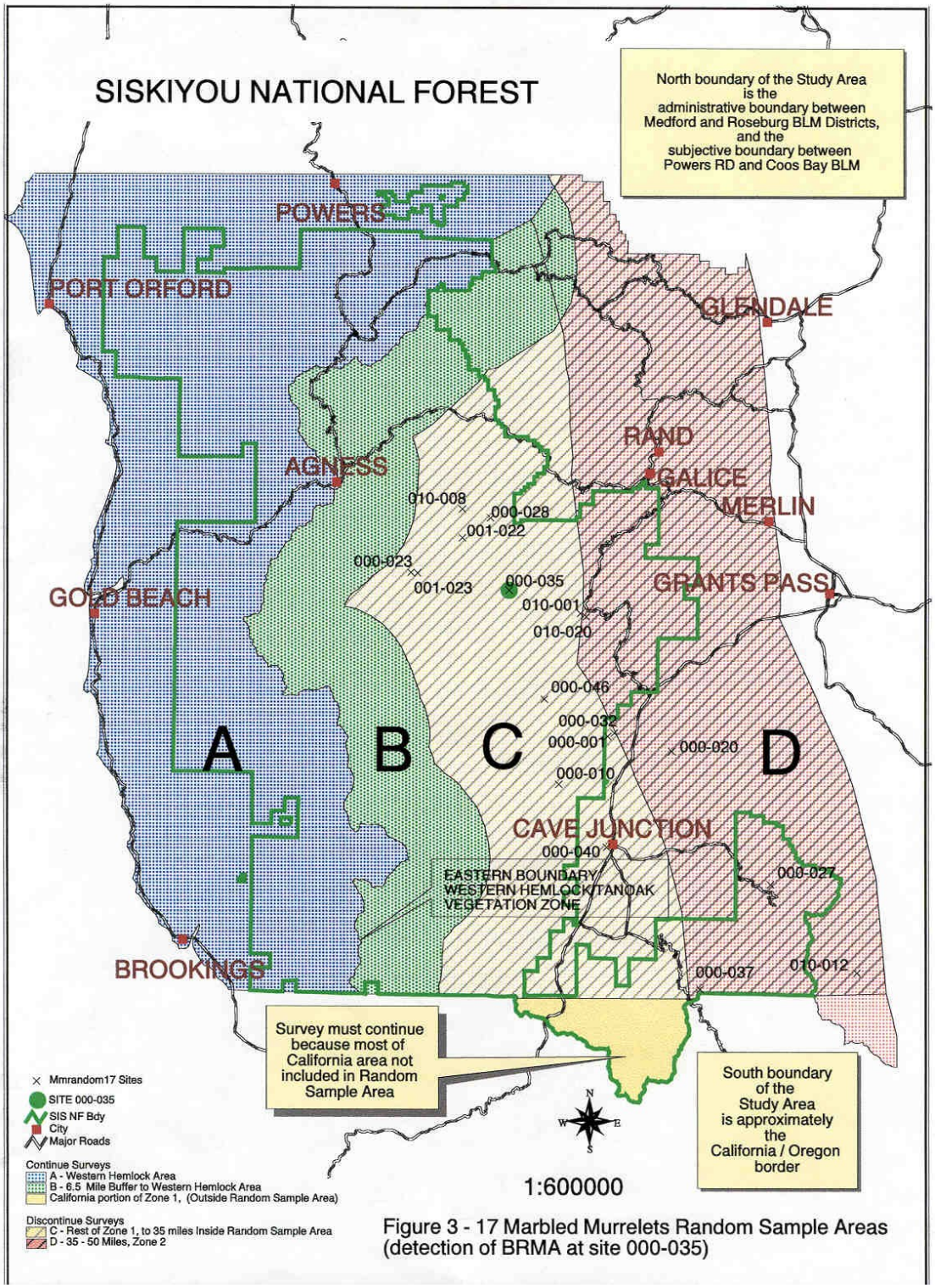

Figure 3 - 17 Marbled Murrelets Random Sample Areas (detection of BRMA at site 000-035)