

Appendix G

Biological Evaluation (Federal Endangered, Threatened, and Proposed Species — Forest Service Sensitive Species)

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Biological Evaluation (Federal Endangered, Threatened, and Proposed Species — Forest Service Sensitive Species) For the Supplemental Environmental Impact Statement For Amendment to the Survey and Manage, Protection Buffer, and Other Mitigation Measures Standards and Guidelines

Introduction

This Final Supplemental Environmental Impact Statement (SEIS) assesses three action alternatives for amending species-specific management direction for some relatively rare and/or localized species on National Forests and Bureau of Land Management (BLM) Districts in western Washington, western Oregon, and northern California. This management direction is contained in the Record of Decision for the Northwest Forest Plan (USDA, USDI 1994b), which amended the land and resource management plans for National Forests and BLM Districts within the range of the northern spotted owl. The underlying needs and the purpose for developing this SEIS are described in Chapter 1 of the Final SEIS.

This Biological Evaluation addresses effects on (1) species listed or proposed for listing under the federal Endangered Species Act (ESA) as endangered or threatened species; (2) habitat designated or proposed for designation under ESA as critical habitat; and, (3) species listed as sensitive by the Regional Foresters in Forest Service Regions 5 and 6.

The Final SEIS assesses four alternatives: No-Action and three action alternatives (Alternative 1 is the preferred alternative). The No-Action Alternative would continue the current direction as provided in the Northwest Forest Plan Record of Decision (USDA, USDI 1994b) for the Survey and Manage and other mitigation measures described in the Introduction section of this Final SEIS. The current Survey and Manage direction applies one or more of four possible categories to each of approximately 400 species or species groups. The four Survey and Manage categories are: manage known sites, survey prior to ground-disturbing activities, extensive surveys, and general regional surveys.

Because the purpose of the proposed action centers around clarifying existing direction rather than re-analyzing the entire Northwest Forest Plan, there are many similarities between the effects of the No-Action and action alternatives on endangered, threatened, proposed, and sensitive species, and designated and proposed critical habitat. Compared to the No-Action Alternative, the action alternatives would continue to:

- Apply the Survey and Manage mitigation measure for endemic and little-known species for which the reserves and other elements of the Northwest Forest Plan do not appear to provide a reasonable assurance of persistence.
- Apply the Survey and Manage elements of: manage known sites, and conducting pre-disturbance and landscape-scale surveys.
- Specify changing species between categories or removing them from Survey and Manage based on new information and review by the Regional Interagency Executive Committee.

- Apply the objectives and principle management direction (although not necessarily specific buffers) for Protection Buffer species.

The action alternatives combine and clarify the Survey and Manage, Protection Buffer, and certain other species-specific standards and guidelines in the Northwest Forest Plan. The alternatives apply to lands administered by the Forest Service and the BLM within the Northwest Forest Plan area. Any of the action alternatives, if selected, would amend those standards and guidelines in the Northwest Forest Plan that address Survey and Manage, Protection Buffers, Protection for Bats, Management of Recreation Sites to Minimize Disturbance to Species, and Protect Sites From Grazing. No other changes to the Northwest Forest Plan are being considered in the Final SEIS; there are no changes to major land allocations other than minor acreage of Late-Successional Reserves and Managed Late-Successional Areas created by Protection Buffers, nor are there any changes to other management direction.

Description of Alternatives

The following description of the alternatives being considered summarizes the detailed standards and guidelines provided in the Final SEIS, to which this Biological Evaluation is an appendix. While this summary is intended to provide sufficient detail for the reader to understand the impacts described later in this document, the reader is referred to Chapter 2 of the Final SEIS for a complete description of the standards and guidelines being evaluated. Where apparent discrepancies occur between the description of the alternatives as presented here and in Chapter 2, the text of the Final SEIS takes precedence.

The No-Action Alternative would result in no change in survey schedules or species management for Survey and Manage and Protection Buffer species from that identified in and analyzed as part of the Final SEIS for the Northwest Forest Plan (except for five minor changes described under Changing Standards and Guidelines - Adaptive Management section in Chapter 2 of this FSEIS. Consequently, there would be *no effect* to listed or proposed species or designated or proposed critical habitats resulting from a decision to select this alternative. There would also be *no impact* on Forest Service Sensitive Species.

Alternative 1 is designed to provide the level of protection originally intended in the Northwest Forest Plan (the current No-Action Alternative), but redefines Survey and Manage into six categories based on relative rarity, survey practicability, and understanding of ecological needs, rather than using the four existing categories defined by the protection or survey activity needed. All action alternatives also merge the current Protection Buffer and Protect From Grazing species into Survey and Manage. Some species change management categories based on new information or reanalysis by teams of specialists in the various taxa groups. Alternative 1 maintains all other elements of the Northwest Forest Plan, including other Appendix J2 (an appendix to the Northwest Forest Plan (USDA, USDI 1994a)) mitigations such as Riparian Reserve Scenario 1, additional coarse woody debris, 100-acre owl activity centers, etc.

Specifically, under Alternative 1, Survey and Manage is divided into six categories. Category 1A species are rare (57 species), pre-disturbance surveys are practical, and all known sites are managed. Category 1B species are rare (222 species), pre-disturbance surveys are not practical, and all known sites are managed. Category 1C species are uncommon (10 species), pre-disturbance surveys are practical, and high-priority sites are managed. Category 1D species are uncommon (14 species), pre-disturbance surveys are not practical or not necessary, and high-priority sites are managed. Category 1E species are rare (22 species), their status is undetermined, and all known sites are managed. Category 1F species are uncommon (21 species) and their status is undetermined. For Categories 1A and 1C (60 species) pre-disturbance surveys would be conducted prior to habitat-disturbing activities and strategic surveys (not associated with particular projects) would be conducted to provide information on specific habitat and population needs. For Categories 1B, 1D, 1E, and 1F (279 species), similar strategic surveys would be conducted. For 325 species in Categories A through E, known and new sites would be managed for the persistence of the species consistent with Management Recommendations.

Protection Buffer and Protect From Grazing species would be combined into Survey and Manage. Seventy-two species would be removed from Survey and Manage either throughout their range (63 species), or in part of their ranges (9 species) because they do not meet the basic criteria for inclusion.

This alternative eliminates Protection Buffer land allocations. Small Protection Buffer sites now allocated to Managed Late-Successional Areas and Late Successional Reserves would revert to the underlying land allocations. Occupied sites (such as managed late-successional areas for Del Norte salamanders) would be managed as known sites where they occur in accordance with Management Recommendations for the species, rather than be placed into the specific land allocation. Sites affected by this change are small, typically less than 10 acres.

Alternative 2 provides management under Survey and Manage Standards and Guidelines similar to that described under Alternative 1 for species determined to be rare (300 species, those in Categories A, B, and E in Alternative 1). For the 45 remaining species determined to be uncommon, only sites known as of September 30, 1999, would be managed. Strategic surveys would be completed for those 45 species within 5 years, at which time these species will be removed from Survey and Manage mitigation measures and considered for addition to the Forest Service Sensitive Species and BLM Special Status Species lists. As in Alternative 1, the same 72 species would be removed from Survey and Manage entirely or from part of their range. Alternative 2 would also combine the current Protection Buffer and Protect From Grazing species into Survey and Manage Standards and Guidelines and eliminate the Protection Buffer land allocations.

Alternative 2 differs from Alternative 1 by eliminating the surveys prior to habitat-disturbing activities requirement for 11 uncommon species, limiting management of known sites for 24 uncommon species to 1999 levels, adding management of pre-1999 sites for 21 species, and requiring strategic surveys for the 45 uncommon species be done within 5 years, and raising the standard for adding species to Survey and Manage to the level of rare rather than uncommon. Protection for non-vertebrate uncommon species is expected to decrease slightly, compared to Alternative 1.

Alternative 3 provides management under Survey and Manage Standards and Guidelines similar to that described in Alternative 1, but combines the six categories into three: one rare category (3A, 300 species, composed of Categories 1A, 1B, and 1E) and two uncommon categories (3B, 24 species, composed of Categories 1C and 1D and 3C, 22 species, composed of Category 1F).

Pre-disturbance or equivalent-effort pre-disturbance surveys will be conducted prior to habitat-disturbing activities for rare and uncommon species in Categories 3A and 3B. Surveys are designed to minimize the inadvertent loss of previously unknown sites. Surveys are not intended to guarantee absence in the project area, but rather they are intended to locate the species if it occurs in an identifiable condition during a reasonable survey time period (i.e., no more than two seasons.)

Strategic surveys will be conducted for all species, with a focus on habitat in all land allocations (including reserve land allocations (widely distributed species)), highest likelihood habitat (endemic species), or determination of true status of species (status undetermined species). Surveys are designed to locate the most important habitat for the species and to determine the ability of reserve lands to provide for species persistence.

Manage known sites for all species. For rare species, manage all known sites and protect all late-successional/old-growth habitat within 250 meters of the known site. For uncommon species with status undetermined, manage all known sites. For all other uncommon species, manage high-priority sites. As with Alternatives 1 and 2, Management Recommendations identify management of the site and identify if certain sites are no longer needed.

As in Alternative 1, the same 72 species would be removed from Survey and Manage in all or part of their ranges. Alternative 3 would also combine the current Protection Buffer and Protect From Grazing species into Survey and Manage Standards and Guidelines and eliminate most Protection Buffer land allocations.

Alternative 3 differs from Alternative 1 by requiring equivalent-effort surveys prior to habitat-disturbing activities for many species, including those whose fruiting cycles or other characteristics make finding it not practical. This type of survey is added for 236 species, as well as for 22 rare species with status undetermined. Strategic surveys are specified for all species. Protection for most species is expected to be higher than Alternative 1.

Determinations

The purpose of this analysis is to make a determination of the likely effects of a decision to continue to implement the No-Action Alternative, or modify existing management through adoption of one of the action alternatives, to Forest Service Sensitive Species, and to species listed under ESA as endangered, threatened, or proposed and their designated or proposed critical habitat. This determination of effects results from an analysis of the changes to the species' baselines that are likely to occur as a result of implementing one of these alternatives. Changes to the baseline are measured against the baseline that was assumed to occur prior to the implementation of this action. For this Final SEIS, the baseline subject to change by the action alternatives being considered here is that established at the time of the Northwest Forest Plan and associated Final SEIS analysis, as modified by subsequent analyses related to the Northwest Forest Plan. The No-Action Alternative would result in no changes to the environmental baseline.

The removal of 72 species from the Survey and Manage species list in all or part of the species' range under all action alternatives would result in approximately 24,800 acres of forested habitat in Matrix and Adaptive Management Area land allocations being removed from manage known site direction, unless occupied by other Survey and Manage species with manage known site direction, or protected by other standards and guidelines. If all 24,800 acres are removed from manage known site direction, this would represent about one-tenth of one percent of the federally-managed forest habitat in the range of the northern spotted owl.

It should be understood that these 24,800 acres could not be precisely identified, either in terms of actual number of acres or by specific location, at the time that the Northwest Forest Plan was developed. At that time, Survey and Manage species were assumed to be quite rare and few sites were known for nearly all of these species. Consequently, the analysis in the Northwest Forest Plan could not and did not account for any precise number or location of acres associated with known sites of Survey and Manage species. Therefore, the 1994 analysis could not identify any specific contribution of Survey and Manage known sites to Sensitive Species or species listed or proposed under ESA, and assumed no contribution to the environmental baseline for these species. The removal of 72 species from Survey and Manage in all or part of their range, and the associated removal of 24,800 acres from manage known site direction, therefore, would not alter the environmental baseline described for these species in the previous analysis and would not be identified here as an impact to these species that was not previously identified. Similarly, no specific contribution to the environmental baseline from the location of future sites of Survey and Manage species is possible at this time because future site locations cannot be precisely predicted.

In contrast to the 24,800 acres that would be removed from manage known site direction due to the removal of these 72 species, approximately 200,000 acres of Matrix, some of it currently in late-successional forest condition, has received additional protection as Riparian Reserves, based on additional information and site-specific analysis during the past 6 years of Northwest Forest Plan implementation.

Impacts on Forest Service Sensitive Species

The Forest Service Sensitive Species program includes species for which there is a documented concern for viability within one or more administrative units within the species' historic range (FSM 2670.22, WO Amendment 2600-95-7). The designation of "sensitive" by the Forest Service carries a requirement to analyze the impacts of projects and often to conduct surveys (Forest Service Manual 2670). Forest Service Sensitive Species in the range of the Northwest Forest Plan are listed in Table G-1. Over 450 species are listed as sensitive by Regions 5 and 6, in the range of the Northwest Forest Plan, including over 350 plant species. Many of these species are associated with late-successional habitat.

Several vascular plants and amphibians listed as sensitive by the Forest Service are also listed as Survey and Manage Species. Vascular plants with dual listing are: *Bensoniella oregana* (CA only), *Botrychium minganense*, *Clintonia andrewsiana*, *Coptis asplenifolia*, *Coptis trifolia*, *Corydalis aquae-gelidae*, *Cypripedium fasciculatum*, *Cypripedium montanum*, *Galium kamschaticum*, and *Pedicularis howellii*. Amphibians with dual listing are: Del Norte salamander, Larch Mountain salamander, Siskiyou Mountains salamander, and great gray owl (CA only). These species will remain on the Sensitive species list, regardless of their status under the No-Action Alternative or any of the action alternatives. None of the mollusks, fungi, lichens or bryophytes on the list of Survey and Manage species currently occurs on either the Region 5 or 6 Sensitive Species lists.

Under the three action alternatives, four Sensitive Species would be removed from Survey and Manage and related standards and guidelines, including *Botrychium minganense*, *Clintonia andrewsiana*, *Galium kamschaticum* and *Pedicularis howellii*. Other species that would be removed from Survey and Manage only because they are not closely associated with late-successional or old-growth forests are either already on, or are currently being considered for, the Forest Service Sensitive Species program. Known sites for these species will be managed until their disposition is clarified in the sensitive species program or other management process. In some cases, pre-project surveys would no longer be required. Therefore, some additional impacts to suitable habitat for sensitive species could occur. A forgone Survey and Manage survey, if it had been conducted, could have resulted in the subsequent protection of sites for sensitive species. However, the Forest Service conducts surveys for many sensitive species in the areas where actions/projects are proposed to occur. Where surveys are done, they have a reasonable probability of locating individuals and populations of these sensitive species, irrespective of whether surveys are conducted for Protection Buffer and Survey and Manage species. Discovery of sensitive species through their own surveys (and subsequent habitat management, including site protection) abates effects that might result from any changes in status of species included in the Protection Buffer or Survey and Manage mitigation measures.

Based on the above information, including the discussion of changes to the environmental baseline from removal of 72 species from Survey and Manage, the impacts of any of the action alternatives on sensitive species associated with late-successional forest habitat will be trivial. This conclusion is based substantially on the fact that none of these alternatives would markedly alter the environmental baseline previously analyzed as part of the Northwest Forest Plan and subsequent analyses. Implementation of any of the action alternatives will not impact the viability of any sensitive species. Therefore, for Forest Service Sensitive Species, in general, the determination for all three action alternatives is *no impact*.

Effects on Threatened, Endangered, and Proposed Species and Designated and Proposed Critical Habitat.

A biological assessment was prepared for the 1994 Final SEIS and Record of Decision that implemented Alternative 9 (the Northwest Forest Plan). Effects on listed and proposed species and designated and proposed critical habitat were described in that document (the Biological Assessment is an appendix to the 1994 FSEIS). As species were subsequently listed, Section 7 consultations were completed for the land and resource management plans (as amended by the

Northwest Forest Plan) that guide management on National Forests and BLM Districts. Survey and Manage strategies were considered a part of the standards and guidelines of the Northwest Forest Plan. The effects of each of the alternatives for implementing Survey and Manage strategies are described below.

The Biological Opinion prepared for the Northwest Forest Plan ROD assumed that all the features and standards and guidelines of the Northwest Forest Plan would be implemented. The Survey and Manage Standards and Guidelines were such features (ROD, pp. C-4 to C-6); 405 individual species and four species groups were categorized into one or more of four strategies (components) (ROD, Table 3-C). Given that this SEIS updates and modifies the list of Survey and Manage species (and Protection Buffer and Protect From Grazing species), and that some species will move to new strategies or be removed from Survey and Manage, it is necessary to examine the magnitude of these changes and their effects to listed and proposed species and designated critical habitat. The following discussion summarizes the effects of the Survey and Manage, Protection Buffer, and Protect From Grazing changes on listed and proposed species and designated or proposed critical habitat. Species have been grouped where effects and rationales are the same. Table G-2 is a current list of all Federally endangered, threatened, or proposed species, and designated and proposed critical habitat on National Forest and BLM administered lands in the Northwest Forest Plan area. The lists of species were provided by the various field offices of the U.S. Fish and Wildlife Service and National Marine Fisheries Service which have jurisdiction over the Northwest Forest Plan area. Web sites maintained by these agencies were checked to track up-to-the-present changes to lists of Proposed, Threatened, and Endangered species, and Proposed and Designated Critical Habitat.

Species Not Associated with Late-successional Forest on Federal Lands – No Effect

The Protection Buffer and Survey and Manage Standards and Guidelines were developed to address persistence concerns for species associated with late-successional forest. Sixty-eight listed or proposed species (identified below) occur within the Northwest Forest Plan area, but are (1) not known to occur on federal lands in the planning area; (2) their presence in the Northwest Forest Plan area is peripheral, transitory, or unaffected by forest management; or, (3) they do not inhabit coniferous forest and are not associated with late-successional and old-growth forests. Any habitat protected by the Protection Buffer and Survey and Manage Standards and Guidelines is likely to be late-successional conifer forest. Therefore, any changes to the Protection Buffer and Survey and Manage Standards and Guidelines would have no bearing on these species (or their critical habitat, if designated or proposed) and would not affect the conclusions of the Northwest Forest Plan Final SEIS. For these 68 listed or proposed species, the determination is *no effect*.

Vascular Plants

<i>Alopecurus aequalis</i> var. <i>sonomensis</i>	Sonoma alopecurus
<i>Arabis macdonaldiana</i>	MacDonald's rockcress
<i>Arenaria paludicola</i>	Marsh sandwort
<i>Astragalus applegatei</i>	Applegate's milkvetch
<i>Astragalus clarianus</i>	Clara Hunt's milkvetch
<i>Castilleja affinis</i> ssp. <i>neglecta</i>	Tiburon paintbrush
<i>Castilleja levisecta</i>	Golden Indian paintbrush
<i>Chorizanthe howellii</i>	Howell's spineflower
<i>Chorizanthe valida</i>	Sonoma spineflower
<i>Delphinium bakeri</i>	Baker's larkspur
<i>Delphinium luteum</i>	Yellow larkspur
<i>Erigeron decumbens</i> var. <i>decumbens</i>	Willamette daisy
<i>Erysimum menziesii</i>	Menzies' wallflower
<i>Hackelia venusta</i>	Showy stickweed
<i>Hesperolinon congestum</i>	Marin dwarf-flax
<i>Fritillaria gentneri</i>	Gentner's mission-bells
<i>Hesperolinon congestum</i>	Marin dwarf-flax
<i>Howellia aquatilis</i>	Water howellia

<i>Layia carnosa</i>	Beach layia
<i>Lasthenia burkei</i>	Burke's goldfields
<i>Lasthenia cojugens</i>	Contra costa goldfields
<i>Lilium occidentale</i>	Western lily
<i>Limnanthes floccosa</i> ssp. <i>grandiflora</i>	Large-flowered wooly meadowfoam
<i>Lomatium bradshawii</i>	Bradshaw's lomatium
<i>Lomatium cookii</i>	Cook's lomatium
<i>Lupinus sulphureus</i> var. <i>kincaidii</i>	Kincaid's lupine
<i>Lupinus tidestromii</i> var. <i>layneae</i>	Pt. Reyes clover lupine
<i>Lupinus tidestromii</i> var. <i>tidestromii</i>	Tidestrom's clover lupine
<i>Navarretia leucocephala</i> ssp. <i>plieantha</i>	Many-flowered navarretia
<i>Orcuttia tenuis</i>	Slender Orcutt grass
<i>Phlox hirsuta</i>	Yreka phlox
<i>Plagiobothrys hirtus</i>	Hairy (Rough) popcorn flower
<i>Plagiobothrys strictus</i>	Calistoga allocarya
<i>Poa napensis</i>	Napa bluegrass
<i>Sidalcea nelsoniana</i>	Nelson's checkermallow
<i>Sidalcea oregana</i> var. <i>calva</i>	Wenatchee Mountain checkermallow
<i>Sidalcea oregana</i> var. <i>valida</i>	Kenwood Marsh checkermallow
<i>Spiranthes diluvialis</i>	Ladies'-tresses
<i>Thlaspi montanum</i> var. <i>californicum</i>	Kneeland Prairie penny-cress
<i>Trifolium amoenum</i>	Showy Indian clover

Invertebrates

<i>Branchinecta conservatio</i>	Conservancy fairy shrimp
<i>Branchinecta lynchi</i>	Vernal pool fairy shrimp
<i>Desmocerus californicus dimorphus</i>	Valley elderberry longhorn beetle
<i>Icaricia icarioides missionensis</i>	Mission blue butterfly
<i>Icaricia icarioides fenderi</i>	Fender's blue butterfly
<i>Incisalia mossii bayensis</i>	San Bruno elfin butterfly
<i>Lepidurus packardi</i>	Vernal pool tadpole shrimp
<i>Lycaeides argyrognomon lotis</i>	Lotis blue butterfly
<i>Pacifastacus fortis</i>	Shasta (= placid) crayfish
<i>Speyeria callippe callippe</i>	Callippe silverspot butterfly
<i>Speyeria zerene behrensii</i>	Behren's silverspot butterfly
<i>Speyeria zerene hippolyta</i>	Oregon silverspot butterfly
<i>Speyeria zerene myrtleae</i>	Myrtle's silverspot butterfly
<i>Syncaris pacifica</i>	California freshwater shrimp

Fish

<i>Eucyclogobius newberryi</i>	Tidewater goby
<i>Hypomesus transpacificus</i>	Delta smelt

Reptiles

<i>Dermochelys coriacea</i>	Leatherback turtle
<i>Chelonia mydas</i> (incl. <i>agassizii</i>)	Green turtle
<i>Lepidochelys olivacea</i>	Olive (=Pacific) ridley sea turtle
<i>Caretta caretta</i>	Loggerhead turtle

Birds

<i>Branta canadensis leucopareia</i>	Aleutian Canada goose
<i>Charadrius alexandrinus nivosus</i>	Western snowy plover (coastal populations)
<i>Pelcanus occidentalis</i>	Brown pelican
<i>Rallus longirostris obsoletus</i>	California clapper rail

Mammals

<i>Aplodontia rufa nigra</i>	Point Arena mountain beaver
<i>Eumetopias jubatus</i>	Steller (= northern) sea lion
<i>Odocoileus virginianus leucurus</i>	Columbian white-tailed deer
<i>Reithrodontomys raviventris</i>	Salt marsh harvest mouse

Listed and Proposed Plants – No Effect

The Action Agencies survey for listed and proposed plant species in the vicinity of proposed actions/projects (see Table G-2 for species list). These surveys are designed to have a high likelihood of locating populations of such plants irrespective of whether surveys are also done for Protection Buffer and Survey and Manage species. Discovery and subsequent protection of populations of listed or proposed plant species through their own surveys minimizes effects that might result from any changes in status of Protection Buffer and Survey and Manage species. Removal of 72 species from Survey and Manage will not change the environmental baseline for these species or result in changes to impacts to these species that were not anticipated in the analysis of the Northwest Forest Plan and subsequent analyses. For the three action alternatives, the determination is *no effect* for listed and proposed plants.

Listed and Proposed Fish – No Effect

All actions/projects proposed on BLM or FS administered lands must meet the Aquatic Conservation Strategy objectives of the Northwest Forest Plan. As proposed actions/projects are designed and analyzed for effects to listed fish, needs of the fish species and habitat elements required to meet Aquatic Conservation Strategy objectives will be identified. The changes in the Protection Buffer and Survey and Manage strategies will not alter this assessment process; therefore, there will be no effect as a result of changes in these strategies from the No-Action Alternative. Critical habitat for listed fish also corresponds well with Riparian Reserves in the Northwest Forest Plan and the Aquatic Conservation Strategy objectives. Therefore, any effects on listed or proposed fish that might result from any changes in status of Protection Buffer and Survey and Manage species will be minimal. Removal of 72 species from Survey and Manage will not change the environmental baseline for these species or result in changes to impacts to these species that were not anticipated in the analysis of the Northwest Forest Plan and subsequent analyses. For the three action alternatives, the determination is *no effect* for listed and proposed fish, and designated and proposed critical habitat.

California Red-legged frog – May Affect, Not Likely to Adversely Affect

Background and Affected Environment. The changes in the Protection Buffer and Survey and Manage strategies “may affect” the riparian-associated habitat of the California red-legged frog (although the most important habitat for red-legged frog is aquatic and riparian, this species is known to sometimes move through moist forest habitat during dispersal). Within the Northwest Forest Plan area, the potential range of the red-legged frog is confined to the “overlap” area between the Sacramento River basin and portions of the Mendocino and Shasta-Trinity National Forests, and a small portion of lower Middle Creek in Lake County, subject to heavy use by off-highway vehicle traffic. However, due to the poor potential quality of the habitat (lack of narrow, incised channels and pools; predominant riffles/runs) and elevation bands that the species is most likely to occur in, the alternatives being considered here should have little or no potential to affect the species (Bratch 2000, pers. comm.). Site records and suitable habitat for California red-legged frogs are extremely rare for this area.

A Draft Recovery Plan for the California red-legged frog was made available to the public in May 2000 (FR Vol. 65, No. 93, 30604-30605). A number of “Core Areas” are identified where suitable habitat is proposed to be protected and/or managed for California red-legged frogs for recovery. Portions of two Core Areas occur in the Northwest Forest Plan area. Core Area 13 (Cottonwood Creek) is located partly on the Shasta-Trinity National Forest and partly on the Mendocino National Forest, in the southwest corner of Shasta County and northwest corner of Tehama

County; federal land allocations in the proposed Core Area are Congressionally Reserved, Late-Successional Reserve, Adaptive Management Area, and Matrix. Core Area 14 (Clear Lake Tributaries) is partly on the Mendocino National Forest, in central Lake County; the portion of the proposed Core Area on National Forest System land is within both Late-Successional Reserve and Matrix land allocations.

Critical habitat for the California red-legged frog was proposed by the U.S. Fish and Wildlife Service on September 11, 2000 (USDI FWS 2000). Critical habitat areas are defined as those physical or biological features essential to the conservation of the species and which may require special management consideration or protection. The primary constituent elements of critical habitat for California red-legged frogs are: (1) suitable aquatic habitat; (2) associated uplands; and (3) suitable dispersal habitat connecting suitable aquatic habitat. Of 31 proposed critical habitat units for the California red-legged frog (encompassing 1.83 million acres of federal land), only Unit 6 (western half) is located on federally managed land within the Northwest Forest Plan area (Unit 6 partially overlaps with Core Area 13 in the Recovery Plan). Unit 6 consists of drainages found within the headwaters of Cottonwood and Red Bank Creeks in Tehama County. The unit encompasses approximately 119,600 acres (48,400 hectares); approximately 51 percent is within the boundaries of the Mendocino National Forest and the majority of the remaining 49 percent is privately owned. Land allocations on the federal portion of Unit 6 include Congressionally Reserved, Late-Successional Reserve, and Matrix. Unit 6 also encompasses approximately 20 sections of BLM managed land. There is no known or suspected frog habitat on these BLM lands. These parcels are identified for exchange and have undergone section 7 ESA consultation. The Biological Opinion for the potential land exchange contained terms and conditions with regard to the frog, requiring BLM to verify in the field the absence of habitat prior to any land transfers. If habitat were found, surveys for the species would be required.

Environmental Consequences and Comparison of Alternatives. The four alternatives considered in this SEIS would have similar effects on the California red-legged frog. All actions/projects proposed on BLM or FS administered lands must meet the Aquatic Conservation Strategy objectives of the Northwest Forest Plan. Furthermore, if a project is proposed which is in potential habitat for California red-legged frog, surveys for this species are conducted. These surveys are designed and implemented to have minimal impacts on the target species or its proposed critical habitat. Because some surveys for Survey and Manage species could be conducted in or near riparian zones, there is a slight chance that the Survey and Manage surveys themselves could result in disturbance to California red-legged frog or its habitat. For instance, if surveys for Survey and Manage species occurred in a stream channel during the time of year when frog egg masses would be present, these surveys could be detrimental. However, because (1) Survey and Manage surveys do not generally occur in the stream channels, other than for aquatic mollusks; (2) there is low likelihood that these frogs are present on Forest Service and BLM administered land within the range of the northern spotted owl; and, (3) suitable frog habitat is generally lacking on these federally managed lands outside of Riparian Reserves, the potential for this kind of impact is minimal/unlikely. Therefore, for the three action alternatives, the determination is *may affect, not likely to adversely affect* for California red-legged frog and its proposed critical habitat.

Bald eagle – No Effect

Background and Affected Environment. Breeding and wintering populations of the bald eagle occur throughout the Northwest Forest Plan area and are addressed in the Pacific States Bald Eagle Recovery Plan (USDI FWS 1986) and the Oregon-Washington Bald Eagle Working Team Implementation Plan (Washington DFW 1990). Agencies survey extensively for bald eagles. Management of the bald eagle includes preparation of site-specific management plans and providing protection zones and management areas, as needed, for the species and its habitat. Management guidelines delineated in these plans address the potential loss of habitat from timber harvest activities, the distribution goals identified in the recovery plan, and to some extent, human disturbance. This species is not essentially dependent on late-successional habitat, but it is linked to large trees near riparian habitat for roosting and nesting. Riparian areas are protected in the

Northwest Forest Plan area. The bald eagle was proposed for delisting in July 1999 and a final decision and rule will be published by the U.S. Fish and Wildlife Service.

Environmental Consequences and Comparison of Alternatives. All four alternatives in this SEIS would have similar effects on bald eagle habitat management. The primary potential effect of Alternatives 1, 2, and 3 on bald eagles would result from 72 species being removed from Survey and Manage Standards and Guidelines. This difference between the action alternatives and the No-Action Alternative would be the loss of protection for approximately 24,800 acres of late-successional habitat across the Northwest Forest Plan area. However, removal of 72 species from Survey and Manage will not change the environmental baseline for this species or result in changes to impacts to this species that were not anticipated in the analysis of the Northwest Forest Plan and subsequent analyses. The current requirements to conduct specific surveys and develop site management plans for bald eagles greatly reduces any potential effect from changes in the Protection Buffer and Survey and Manage Standards and Guidelines. None of the alternatives in this SEIS will affect the original basis for the assessment of the effects to bald eagles and conclusions in the Northwest Forest Plan Final SEIS. Therefore, for the three action alternatives, the determination is *no effect* for bald eagle.

Marbled murrelet – No Effect

Background and Affected Environment. Management of the marbled murrelet and its habitat on federally managed lands was an important component in the design of the Northwest Forest Plan. Therefore, this species received extensive attention in the Northwest Forest Plan Final SEIS and its supporting documents. That Final SEIS (pp. 3&4-245 through 3&4-249 and Appendices G and J2) provides a detailed explanation of the basis for concluding that the Northwest Forest Plan would serve as the federal agency contribution to marbled murrelet recovery. Additional information was provided in the April 12, 1994, letter from the SEIS Team Leader to the U.S. Fish and Wildlife Service. Where it occurs, critical habitat for marbled murrelet on federal lands is located within the boundaries of Late-Successional Reserves.

The management strategy for marbled murrelets in the Northwest Forest Plan includes two primary components: (1) protection and development of marbled murrelet nesting habitat inside the large reserves near the coast; and, (2) retention of all current and future known marbled murrelet nest sites in all land allocations and protecting occupied habitat. Location of murrelet nest sites is ensured by requiring protocol surveys of potential habitat for marbled murrelet prior to management activities.

Management of the Congressionally Withdrawn Areas and Late-Successional Reserves has occurred as expected. The most common activity in the coastal areas is the silvicultural thinning of stands within Late-Successional Reserves to encourage late-successional forest development. After 6 years of implementing the Northwest Forest Plan, there have been fewer impacts to the late-successional forest in the Matrix and Adaptive Management Areas than was originally expected, due to lower than anticipated timber harvest and more Riparian Reserve acreage than originally modeled.

Because the pre-project survey requirements for potential marbled murrelet habitat minimize the inadvertent loss of occupied sites, there is no anticipated effect from the Survey and Manage and Protection Buffer Standards and Guidelines. There is no new information that would substantially alter the conclusions of the Northwest Forest Plan Final SEIS concerning marbled murrelets.

Environmental Consequences and Comparison of Alternatives. The four alternatives considered in this SEIS would have similar effects on marbled murrelet habitat management. The primary potential effect of Alternatives 1, 2, and 3 on marbled murrelets would result from dropping protection for 72 Survey and Manage species in all or parts of their ranges. This difference between the three action alternatives and the No-Action Alternative would be the loss of protection for approximately 24,800 acres of late-successional habitat across the Northwest Forest Plan area, much of which is outside the range of the marbled murrelet. However, the presence of other

Survey and Manage species at the same location could result in continued protection for some of these locations. Consequently, the removal of 72 species from Survey and Manage will not change the environmental baseline for these species or result in changes to impacts to these species that were not anticipated in the analysis of the Northwest Forest Plan and subsequent analyses. Despite eliminating protection for these or any other Survey and Manage sites in the future, the level of protection for habitat currently occupied by marbled murrelet would not be reduced, since marbled murrelet surveys and habitat protection measures would remain in place regardless of Survey and Manage species locations. All nest sites located would be protected under existing Northwest Forest Plan Standards and Guidelines for the murrelet. The determination for the three action alternatives is *no effect* for marbled murrelet and its critical habitat.

Northern spotted owl – No Effect

Background and Affected Environment. Management of northern spotted owls and their habitat on federally managed lands was an important consideration in the design of the Northwest Forest Plan. This species received extensive attention in the Northwest Forest Plan Final SEIS and its supporting documents. The Northwest Forest Plan Final SEIS (USDA, USDI 1994a, pp. 3&4-211 through 3&4-245 and Appendices G, J.1, and J.3) provides the basis for concluding that the Northwest Forest Plan would serve as the federal agency contribution to spotted owl recovery.

An April 12, 1994, letter from the Northwest Forest Plan SEIS Team Leader to the U.S. Fish and Wildlife Service specifically addressed the contribution to spotted owl habitat which would accrue from implementation of the Survey and Manage Standards and Guidelines. This discussion states that the expected small scale of late-successional forest areas that would be retained for the Survey and Manage Standards and Guidelines would have a negligible beneficial effect on the maintenance of spotted owl populations. This negligible effect results from the fact that the federal recovery strategy for spotted owl population is primarily designed to retain and manage large blocks of late-successional habitat to provide for population clusters of spotted owl pairs (Biological Assessment of the Draft SEIS, October 1993). Most Survey and Manage sites are small in comparison.

An additional component of the Northwest Forest Plan spotted owl strategy was assurance of successful spotted owl dispersal among the large reserves, through their relatively close proximity. Based upon empirical movement data and population modeling, the distance between reserves is adequate to ensure dispersal between adjacent reserves. In addition, the retention and restoration of late-successional forest in Riparian Reserves and the 100-acre owl activity centers would contribute to spotted owl dispersal by providing foraging and roosting habitat for dispersing spotted owls.

The Northwest Forest Plan Final SEIS anticipated that some Matrix and Adaptive Management Area undergoing future timber harvest would be suitable spotted owl habitat and would be occupied by spotted owls (USDA, USDI 1994a, Appendix J3, p. J3-8). Therefore, the anticipated rate of timber harvest in the Matrix and Adaptive Management Areas was included as part of the analysis of effects to spotted owls in the Final SEIS. The Northwest Forest Plan Final SEIS analysis concluded that the expected timber harvest would be compatible with spotted owl habitat management objectives of the Northwest Forest Plan. The loss of spotted owl habitat in the Matrix and Adaptive Management Areas was anticipated to occur in a manner which would allow the habitat to regrow and spotted owl populations to stabilize in the Late-Successional Reserves and Congressionally Reserved Areas.

The management direction for spotted owl habitat contained in the Northwest Forest Plan is based on providing large blocks of late-successional forest in Congressionally Reserved Areas and Late-Successional Reserves, with provisions for spotted owl dispersal between the reserves. Management of the Congressionally Reserved Areas and Late-Successional Reserves has occurred consistent with what was anticipated in the Northwest Forest Plan Final SEIS. The most common activities inside Late-Successional Reserves are silvicultural thinning of non-late-successional

stands (with a general goal of developing late-successional forests), and risk management (fuels reduction) in the drier forest types. After 6 years of implementing the Northwest Forest Plan, there have been fewer impacts to the spotted owl population in Matrix and Adaptive Management Areas than were originally anticipated due to lower than anticipated timber harvest, and the designation of more Riparian Reserve acreage than originally modeled.

After 6 years, the scientific findings indicate that the original spotted owl management strategy is being met. A recent analysis of spotted owl demographics, prepared as part of the effectiveness monitoring of the Northwest Forest Plan, has provided updated information regarding the population status of the northern spotted owl (Franklin et al. 1999). This recent analysis is based on data compiled from study sites throughout the Northwest Forest Plan area. The 1999 results indicate a slightly slower decline in the spotted owl population and a stabilization of the female survival rates, when compared to a similar analysis from 1993 (Forsman et al. 1996). These conclusions are consistent with projections from the Northwest Forest Plan Final SEIS analysis.

Recently, a meta-analysis was conducted on all 16 spotted owl demographic study areas in Oregon, Washington, and northern California. Results of this analysis indicate that female survival rates and reproductive rates were not themselves declining over time (Franklin et al. 1999) as had been reported in earlier analyses. That is, recent evidence indicates that while spotted owl populations continue to decline consistent with what was anticipated in 1994, the rate of decline of spotted owls (based on female survival and reproductive rates) has slowed. This result is based on many different studies from throughout the range of the northern spotted owl. The estimated rate of decline in this 1998 meta-analysis of spotted owl data was 3.9 percent, with a 95 percent confidence interval of 0.925 - 0.997. This means that the population could be declining by as much as 7.5 percent per year, or by as little as 0.3 percent per year. Based on the fact that most demographic studies are not reporting large declines in owl numbers, we suspect that the actual rate of decline is closer to 0.3 percent per year than it is to 7.5 percent per year (Forsman 2000, pers. comm.).

Critical habitat for the northern spotted owl was designated on January 15, 1992 (57 FR 1796). Federal agencies have continued to manage the spotted owl critical habitat in compliance with the Endangered Species Act, consulting on activities that may affect critical habitat. The Final SEIS analysis assumed no contribution from spotted owl critical habitat above that already provided by the Northwest Forest Plan.

The Northwest Forest Plan Final SEIS anticipated publication of a special rule for spotted owls under section 4(d) of the Endangered Species Act (USDA, USDI 1994a, pp. 3&4-8 through 3&4-10). This rule has not been completed at this time. This rule would have released some nonfederal lands in portions of the spotted owl range in Washington from the prohibition against harming ("take" of) spotted owls. Many Habitat Conservation Plans (provided for under section 10(a)(1)(B) of the Act) have been completed. These plans result in permits for the incidental take of spotted owls for nonfederal activities when conducted in compliance with those plans. All Habitat Conservation Plans having undergone consultation relative to spotted owls under Section 7 of the Endangered Species Act were judged to not appreciably reduce the survival and recovery of the spotted owl in the wild. These plans have an affect similar to the proposed 4(d) rule by allowing some loss of spotted owls on nonfederal lands and their effect is consistent with the assumptions of the Northwest Forest Plan Final SEIS analysis.

Environmental Consequences and Comparison of Alternatives. The four alternatives considered in this SEIS would have similar effects on spotted owl habitat management across the Northwest Forest Plan area, which is the meaningful scale for consideration of spotted owl populations. Large reserves and other components of the Northwest Forest Plan would continue to provide habitat blocks for population clusters and dispersal conditions for individual spotted owls under all of the alternatives.

The primary effects of Alternatives 1, 2, and 3 on spotted owls would result from eliminating protection for 72 Survey and Manage species in all or part of their ranges. The primary difference

between the three action alternatives and the No-Action Alternative would be the loss of protection for approximately 24,800 acres of late-successional habitat across the Northwest Forest Plan area. However, this may be a slight overestimation of the number of acres undergoing a loss of protection, since the presence of other Survey and Manage species at the same location could result in continued protection for some of these locations.

The loss of 24,800 acres of late-successional forest would be minor, when compared to the acreage of current and potential late-successional forest in Riparian Reserves and the existing 100-acre owl core areas that might contribute to spotted owl movement across a landscape. Additionally, the 24,800 acres of habitat protected under the No-Action Alternative for Survey and Manage species, though meaningful for the individual Survey and Manage species, occurs as scattered, relatively small patches which provide little contribution to the maintenance of spotted owl populations, or other listed or proposed species. These small patches could often not be considered “suitable” habitat for spotted owls unless they happen to be contiguous with other reserved habitat as part of a block of habitat large enough to support spotted owl use. The analysis of spotted owl habitat and effects of the Northwest Forest Plan on that habitat, conducted under the Northwest Forest Plan Final SEIS, considered the potential contribution of small patches of late-successional forest identified for Survey and Manage and Protection Buffer species. At that time, the acreage of late-successional forest that would be included in managed known sites and protection buffers was assumed to be very low and their distribution across the landscape, and location relative to reserves or listed species sites, was unpredictable. For those reasons, that analysis concluded that these small areas of late-successional forest would not provide significant benefits to listed species. Consequently, the removal of 72 species from Survey and Manage will not change the environmental baseline for these species or result in changes to impacts to these species that were not anticipated in the analysis of the Northwest Forest Plan and subsequent analyses.

Although 72 species would be removed from Survey and Manage over all or part of their ranges under the three action alternatives, the patches of late-successional forest that would be returned to underlying land allocations and potentially available for timber harvest would not lower the amount of habitat or change the distribution of habitat originally expected to be available to spotted owls since the acres for all Survey and Manage known sites and Protection Buffers had not been anticipated to contribute significant benefits to owls in the analysis of the Northwest Forest Plan Final SEIS. While these areas might have benefitted dispersing spotted owls by providing additional structure and habitat complexity to the harvested area through the next stand rotation, these benefits are negligible when compared to the contribution of Riparian Reserves and Matrix Standards and Guidelines.

One difference between the alternatives is the effect on the red tree vole (*Arborimus longicaudus*). The red tree vole is a prey species of the northern spotted owl. The contribution of red tree voles as prey varies in different portions of the range of the spotted owl, from a low of one percent (of total prey items) of the diet to a high of six percent. However, in some circumstances, red tree voles may represent a higher proportion of the diet of individual spotted owls. In coastal southwestern Oregon, the red tree vole made up 50 percent of the prey items consumed by two owl pairs, though due to their small size, these voles provided only 16 percent of the total biomass of the diet (Forsman et al. 1984).

Alternative 2 would increase the risk that red tree vole populations may decline throughout portions of the species range and that the remaining populations could become more isolated (see also the red tree vole effects discussion in Chapter 3&4 of this FSEIS), compared to Alternatives 1 and 3 and the No-Action Alternative. This increased risk would result from management activities that occur primarily in the Matrix and Adaptive Management Areas. Any effects on spotted owls would be greatest for resident spotted owls, because they are dependent on prey availability within their individual home range. However, because red tree voles do not represent a large portion of the diet of most resident spotted owls and the Matrix and Adaptive Management Areas are not expected to provide long-term habitat for resident spotted owls, any effect to spotted owls from reductions of red tree vole populations is likely to be low.

The three action alternatives contain adaptive management components that result in some uncertainty as to their effects on other land management programs and environmental conditions. This uncertainty is due to the potential for changes in the Survey and Manage species and, therefore, changes in the number of acres affected as changes are made. The No-Action Alternative is somewhat static in the number of species it would retain, though it is possible that species could be removed. Even so, future surveys for the species covered under the No-Action Alternative would result in new locations and additional acres identified for the species management. Alternatives 1, 2, and 3 provide for both removals and additions to Survey and Manage, which exacerbates the uncertainty in the number of acres affected. With any of these action alternatives, the impacts of the changing list of species and the corresponding fluctuation in acreage protection for those species, along with the location of new species sites, adds uncertainty to the estimate of the future effects of the alternatives. Nevertheless, given the minimal amount of habitat for spotted owls provided by the Survey and Manage and Protection Buffer Standards and Guidelines, there is sufficient information on which to base reasonable analyses and conclusion.

Neither the No-Action Alternative nor any of the three action alternatives will affect the original basis for the assessment or the conclusions of the effects to spotted owls as presented in the Northwest Forest Plan Final SEIS. Congressionally Reserved Areas and Late-Successional Reserves will continue to be managed for late-successional habitat in the Northwest Forest Plan area and provide for spotted owl breeding clusters. Because Congressionally Reserved Areas, Late-Successional Reserves, and the Riparian Reserve system are intertwined or in close proximity, adequate dispersal habitat for spotted owls will continue to be provided. The potential difference between alternatives has no effect on the spotted owl habitat management strategy because it results in only negligible minor fluctuations in the amount of habitat. The Northwest Forest Plan Final SEIS assumptions and conclusions relative to a spotted owl 4(d) rule and critical habitat remain valid as described above. Therefore, none of the alternatives in this SEIS would affect the conclusions of the Northwest Forest Plan Final SEIS that spotted owls will be adequately provided for under the Northwest Forest Plan. Therefore, for the three action alternatives, the determination is *no effect* for northern spotted owl and its critical habitat.

Gray wolf – No Effect

Background and Affected Environment. The range of the gray wolf includes portions of the Northwest Forest Plan area, including the northern Cascade Range in Washington. Gray wolves are not closely associated with late-successional forest, but use a variety of open and forested habitat that supports the deer and elk populations which are their primary prey, as well as supporting areas with populations of small mammals. Gray wolves are sensitive to human disturbance.

Environmental Consequences and Comparison of Alternatives. All four alternatives in this SEIS would have similar effects on gray wolf habitat. Because gray wolves are not dependent on late-successional forest, the small, isolated patches of late-successional forest that would be protected under the Survey and Manage Standards and Guidelines would have a negligible effect on habitat for this species. None of the alternatives in this SEIS will affect the original basis for the assessment of the effects to gray wolves and conclusions in the Northwest Forest Plan Final SEIS. Therefore, for the three action alternatives, the determination is *no effect* for gray wolves.

Grizzly bear – No Effect

Background and Affected Environment. The range of the grizzly bear includes portions of the Northwest Forest Plan area, including the National Forests in the Cascade Range in Washington. While grizzly bears are not closely associated with late-successional forest, they use a variety of habitats, including forested areas for hiding and cover. Grizzly bears are sensitive to human disturbance.

Environmental Consequences and Comparison of Alternatives. All four alternatives in this SEIS would have similar effects on grizzly bear habitat. Because grizzly bears are not dependent on

late-successional forest, the small, isolated patches of late-successional forest that would be protected under the Survey and Manage Standards and Guidelines would have minimal effect on habitat for this species. None of the alternatives in this SEIS will affect the original basis for the assessment of the effects to grizzly bears and conclusions in the Northwest Forest Plan Final SEIS. Therefore, for the three action alternatives, the determination is *no effect* for grizzly bear.

Canada Lynx – May Affect, Not Likely to Adversely Affect

Background and Affected Environment. In general, lynx are associated with habitats that are southern extensions of the boreal forest. Lynx are highly specialized predators whose primary prey is the snowshoe hare (*Lepus americanus*). Lynx have evolved to survive in areas that receive deep snow. Snowshoe hares use forests with dense understories that provide forage, cover to escape from predators, and protection during extreme weather. Generally, earlier stages of successional forest have greater understory structure than do mature forests and support higher hare densities. However, mature forests can also provide snowshoe hare habitat, as openings appear in the canopy of mature forests when trees succumb to disease, fire, wind, ice, or insects, and the understory develops. Lynx concentrate their hunting activities in areas where hare activity is relatively high. Lynx are thought to use late-successional and old-growth forests for denning.

The Canada lynx is a Protection Buffer and C3 (component 3 — extensive surveys) species under the No-Action Alternative. The lynx management direction was changed from requiring pre-project surveys to an extensive survey approach on June 11, 1996. This approach more closely addresses the primary survey need for the lynx, to define its range in the Northwest Forest Plan area. The lynx was not addressed further in the Species Review Process for this Final SEIS because no substantial new information was available for the analysis.

The lynx was proposed for listing on July 8, 1998, as a threatened species under the Endangered Species Act (63 FR 36994). A final rule listing the species as threatened was published in the Federal Register on March 24, 2000, and became effective on April 24, 2000. The U.S. Fish and Wildlife Service concluded that the population in the conterminous United States was threatened by human alteration of forests, low numbers as a result of past overexploitation, expansion of the range of competitors, and elevated levels of human access into lynx habitat. To date, critical habitat for the species has not been designated or proposed.

Concurrent with the listing process, a national interagency Lynx Conservation Assessment and Strategy was developed to provide a consistent and effective approach to conservation of Canada lynx in the conterminous United States (USDI, USDA 2000). The Forest Service, BLM, U.S. Fish and Wildlife Service, and National Park Service are all participants. The Lynx Science Report (Ruggiero et al. 1999) provides background information on the species and its management.

The Lynx Conservation Assessment and Strategy identifies 17 risk factors in 4 different categories—factors affecting lynx productivity, lynx mortality, lynx movements, and other large-scale risk factors. Risk factors identify activities or existing conditions that could adversely affect either individuals or groups of lynx. Factors identified include: timber management; wildland fire management; recreation; forest/backcountry roads and trails; livestock grazing; other human developments; trapping; predator control; incidental or illegal shooting; competition and predation as influenced by human activities; highways (vehicular collisions); highway, railroad, and utility corridors; land ownership patterns; ski areas and large resorts; fragmentation and degradation of lynx refugia; lynx movement and dispersal across shrub-steppe habitats; and habitat degradation by non-native invasive plant species. Within the range of the Northwest Forest Plan, the primary risk factors for lynx are: forest type conversion and precommercial thinning in snowshoe hare habitat (primary lynx prey); fire exclusion that prevents natural disturbance processes; roads and winter recreational trails; and lack of a lynx monitoring strategy.

Conservation Agreements for Canada Lynx were recently established between the U.S. Fish and Wildlife Service and the Forest Service (USDA, USDI 2000) and the U.S. Fish and Wildlife Service and BLM (USDI FWS, BLM 2000). An earlier Conservation Agreement was signed by

the U.S. Fish and Wildlife Service and the Forest Service in February 1998, before the lynx was listed. On February 7, 2000, the Forest Service and the U.S. Fish and Wildlife Service entered into their conservation agreement, under which the agencies agreed to consider conservation measures in the Lynx Conservation Assessment and Strategy when designing and implementing activities that might affect lynx. This agreement applies to Forest Service managed lands in Regions 1, 2, 4, 6, and 9 of the Forest Service, and was signed in coordination with Regions 1, 3, 5, and 6 of the U.S. Fish and Wildlife Service. This agreement, therefore, applies to all National Forest lands that provide known or potential lynx habitat in the Northwest Forest Plan area, as described in the Lynx Conservation Assessment and Strategy.

Under this agreement, the Forest Service and U.S. Fish and Wildlife Service recognize the Lynx Conservation Assessment and Strategy (and the science report upon which it is based) as a compendium and interpretation of current scientific knowledge about the Canada lynx and agree to use the Lynx Conservation Assessment and Strategy in making determinations of effects for lynx, for actions potentially affecting lynx or lynx habitat in the planning area. The Forest Service and U.S. Fish and Wildlife Service also agree to review and consider the Lynx Conservation Assessment and Strategy in designing activities so as to avoid adverse impacts to the species.

Wildlife biologists in the Salem, Eugene, Coos Bay, Roseburg and Medford BLM Districts, and the Klamath Falls Resource Area of the Lakeview District, have reviewed the evaluations of Canada lynx habitat on BLM administered lands in western Oregon that they completed in late 1999 and early 2000. These previous evaluations had indicated the potential for the occurrence of secondary habitat on a small portion of the Salem District; all other Districts indicated that they had no lynx habitat.

The current review of these previous evaluations, done at the request of the Oregon State Office, was conducted using the Criteria and Procedures for Lynx Habitat Mapping and Recommendations for Oregon and Washington contained in the July 28, 2000, memorandum from the Lynx Biology Team to the Lynx Steering Committee. These mapping criteria and procedures were provided as direction to field units from the Lynx Steering Committee in their August 22, 2000, letter. Based on these criteria and procedures, the BLM concludes that no Canada lynx habitat occurs on BLM administered lands within these Districts/Resource Areas in western Oregon, and that actions administered by the BLM in western Oregon are not likely to impact lynx.

In 1994, the Northwest Forest Plan Final SEIS information on the distribution of lynx indicated the species occurred in the north-central portion of the Cascade Range in Washington State. As a result of the 1996 change in management direction, extensive surveys for lynx have been conducted to determine if the species occurs in areas in which they were not known at the time of the Northwest Forest Plan Final SEIS. The newly acquired information suggests that the range of the species in the Northwest Forest Plan area may extend to the remainder of the Washington Cascades and part of the Oregon Cascades, although these data and this extension of the range have not been confirmed. This unconfirmed survey information has not resulted in any changes in the documented range of the lynx.

Environmental Consequences and Comparison of Alternatives. The No-Action Alternative would retain the lynx Protection Buffer language on pages C-47 through C-48 of the Northwest Forest Plan Record of Decision (USDA, USDI 1994b), which applies special management in the Matrix and Adaptive Management Area land allocations, as modified in the June 11, 1996, management direction.

The Canada Lynx Standard and Guideline in this Final SEIS has been modified in the action alternatives to more closely align with the existing interagency Conservation Agreements and address legal requirements of ESA compliance. The Lynx Conservation Assessment and Strategy was recently developed to provide a consistent and effective approach to conservation of Canada lynx in the conterminous United States (USDI, USDA FS 2000). Subsequently, the U.S. Fish and Wildlife Service and the Forest Service (USDA, USDI 2000) and the U.S. Fish and Wildlife

Service and the BLM (USDI FWS, BLM 2000) signed conservation agreements, and the action agencies agreed to consider conservation measures in the Lynx Conservation Assessment and Strategy, when designing and implementing actions that could affect lynx or their habitat. The Canada Lynx Standard and Guideline would apply to all land allocations.

Since all three action alternatives propose to apply the same management direction (Canada Lynx Standard and Guideline), the environmental consequences of these alternatives would be similar. Under the action alternatives, the Forest Service would not propose or conduct any activity that would result in a “may affect, *likely to adversely affect*” determination for the lynx until land and resource management plans were reviewed or amended, as appropriate, to fully consider conservation measures from the Lynx Conservation Assessment and Strategy. This amendment process would include appropriate National Environmental Policy Act (NEPA) review and public involvement, and compliance with provisions of the Endangered Species Act. For activities proposed on Forest Service managed lands by and/or involving third parties, the Forest Service and U.S. Fish and Wildlife Service would review and consider the new information on lynx to ensure compliance with all applicable federal laws, including ESA, NEPA, National Forest Management Act, and Federal Land and Policy Management Act, during the agency analysis and decision-making process. This would include a consideration of cumulative effects and a determination that the action would not result in an irreversible and irretrievable commitment of resources that would foreclose reasonable and prudent alternatives under section 7(d) of ESA. For these reasons, the Canada Lynx Standard and Guideline, as proposed under the three action alternatives, is expected to result in a very low risk to persistence for lynx within the planning area.

Under the action alternatives, 72 species would be removed from Survey and Manage in all or part of their range in the Northwest Forest Plan area, resulting in approximately 24,800 acres of known sites being returned to the underlying land allocation. This is not expected to affect lynx. Removal of 72 species from Survey and Manage will not change the environmental baseline for this species or result in changes to impacts to this species that were not anticipated in the analysis of the Northwest Forest Plan and subsequent analyses. Future activities including, but not limited to, timber harvest, road construction, or application of prescribed fire, might be proposed on these “returned” sites, but would be evaluated for their direct and indirect effects to lynx. Because management direction provided through the Canada Lynx Standard and Guideline would require that activities conducted on these returned sites not adversely affect the species, future management would not result in adverse impacts to lynx.

Under the action alternatives, the Forest Service would not conduct activities likely to adversely affect the lynx. For BLM administered lands, the action alternatives are determined to have no effect on lynx or its habitat, based upon the conclusion that BLM administered lands contain no suitable habitat for the species in the planning area. For the proposed action, because of the provisions in the February 7, 2000, Forest Service Conservation Agreement, and the lack of suitable habitat for Canada lynx on BLM administered lands in the planning area, the determination for Canada lynx is *may affect, not likely to adversely affect*.

Designated or Proposed Critical Habitat – General

Regardless of where critical habitat is located, the effects of any action or project on designated or proposed critical habitat would be assessed on a site-specific basis, and relative to the applicable species, independent of Protection Buffer and Survey and Manage requirements. Identification of actions or projects deemed acceptable for maintenance of the integrity of critical habitat will be determined based on what is required for the critical habitat itself (analysis of primary constituent elements). Further, changes to the standards and guidelines being considered through this SEIS would not alter the conclusions reached in previous consultations regarding the effects of these standards and guidelines on the primary constituent elements of critical habitat for listed species. Because of these requirements and considerations, there would be an inconsequential risk to designated or proposed critical habitat from proposed changes to the Survey and Manage, Protection Buffer, and related mitigation measures.

Summary

The Northwest Forest Plan Final SEIS Biological Assessment of species listed under the Endangered Species Act assumed that the contribution to their survival from protection of Survey and Manage species would be minimal. This conclusion was based on the assumptions that (1) the amount of late-successional habitat that would be protected by Survey and Manage species known sites would be minimal compared to the 24 million acres of federal land included in the range of the northern spotted owl; (2) the fact that the actual locations of Survey and Manage species' protected sites were unpredictable at the time the Northwest Forest Plan consultation was conducted; and, (3) the fact that the protected sites are, mostly, in patches as small as 2 acres. The Biological Opinion completed under that consultation did not anticipate a specified amount of incidental take, but rather deferred the discussion of incidental take to consultation for specific and programmatic activities that would implement the Northwest Forest Plan.

The Northwest Forest Plan Final SEIS Biological Assessment stated that Survey and Manage mitigation measures were expected to retain acreage of late-successional forest throughout the range of the northern spotted owl; however, Survey and Manage sites were likely to occur in small patches and have a long-term effect similar to green-tree and old growth retention provisions. Green tree retention and retention of old growth in watersheds will provide some benefit to spotted owls in the long term. Over a period of 100 years or so, these provisions will provide additional structural diversity to forest stands, which would improve the stand's ability to serve as owl habitat, even after harvested" (USDA, USDI 1994a, Appendix G, p. G-37). In the Biological Opinion from the U.S. Fish and Wildlife Service (USDA, USDI 1994, Appendix G, Biological Opinion p. 12), Survey and Manage or Protection Buffer provisions are not specifically included in environmental baseline for any of the species addressed.

Under all action alternatives, approximately 24,800 acres of forested habitat in Matrix and Adaptive Management Area land allocations would be returned to the underlying land allocation unless occupied by other Survey and Manage species with manage known site protection, or protected by other standards and guidelines, due to the removal of 72 species from Survey and Manage in all or part of the species ranges. The 24,800 acres, as far as listed species are concerned, were never counted as protected habitat in the Biological Assessment for the Northwest Forest Plan (1994). Thus, any decision to "return" these acres to Matrix and Adaptive Management Area land allocations is not a "reinstatement" at all.

For the above-stated reasons, the analysis of effects for listed species from the Northwest Forest Plan Final SEIS concluded that no substantial contribution would accrue to listed species from the protection of known sites for Survey and Manage species. The removal of 72 species from all or part of their range and the return of 24,800 acres of late-successional habitat to the underlying land allocation should not be considered as a change in the environmental baseline for listed species. Hence, none of the action alternatives should result in changes to the status or the likely effects to listed species in the Northwest Forest Plan area.

Summary of Determinations

For all action alternatives, for all sensitive species in late-successional habitat (Forest Service designation), the collective determination is *may impact, but not likely to result in a trend toward federal listing*. For sensitive species not associated with late-successional habitat, the determination is *no impact*. For 68 species listed or proposed as Endangered or Threatened, and which are not dependent on late-successional habitat, the determination for all action alternatives is *no effect*. For California red-legged frog proposed critical habitat, the determination for all action alternatives is *may affect, not likely to adversely affect*. For all other species listed as Endangered or Threatened (including Proposed or Designated Critical Habitat), for all action alternatives, the determination is *no effect*.

Prepared by Forest Service biologist Lee O. Webb and reviewed by BLM biologists Bruce Rittenhouse, Barbara Hill, and Joseph Lint.

Signed:

/s/ Lee O. Webb

October 20, 2000

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Date

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Table G-1. Sensitive species in Forest Service Regions 5 (CA) and 6 (OR/WA), within the Northwest Forest Plan area (Range of the Northern Spotted Owl).		
Scientific Name	Common Name	Region
VASCULAR PLANTS		
<i>Abronia umbellata</i> ssp. <i>breviflora</i>		6
<i>Agoseris elata</i>		6
<i>Agrostis howellii</i>		6
<i>Allium peninsulare</i>		6
<i>Androsace elongata</i> ssp. <i>acuta</i>		6
<i>Anemone muttalliana</i>		6
<i>Anemone oregana</i> var. <i>felix</i>		6
<i>Antennaria parvifolia</i>		6
<i>Antirrhinum subcordatum</i>		5
<i>Arabis macdonaldiana</i>		6
<i>Arabis modesta</i>		6
<i>Arabis sparsiflora</i> var. <i>atrorubens</i>		6
<i>Arabis suffrutescens</i> var. <i>horizontalis</i>		6
<i>Arctostaphylos hispidula</i>		6
<i>Arenaria paludicola</i>		6
<i>Arnica viscosa</i>		6
<i>Artemisia campestris</i> ssp. <i>borealis</i> var. <i>wormskioldii</i>		6
<i>Artemisia ludoviciana</i> ssp. <i>estesii</i>		6
<i>Asplenium septentrionale</i>		6
<i>Aster gormanii</i>		6
<i>Aster sibiricus</i> var. <i>meritus</i>		6
<i>Aster vialis</i>		6
<i>Astragalus agnicidus</i>		5
<i>Astragalus arrectus</i>		6
<i>Astragalus australis</i> var. <i>olympicus</i>		6
<i>Astragalus microcystis</i>		6
<i>Astragalus peckii</i>		6
<i>Astragalus tyghensis</i>		6
<i>Bensoniella oregana</i>		5/6
<i>Bolandra oregana</i>		6
<i>Botrychium ascendens</i>		6
<i>Botrychium campestre</i>		6

Table G-1. Sensitive species in Forest Service Regions 5 (CA) and 6 (OR/WA), within the Northwest Forest Plan area (Range of the Northern Spotted Owl).		
Scientific Name	Common Name	Region
VASCULAR PLANTS (continued)		
<i>Botrychium botrychium ascendens</i>		5
<i>Botrychium botrychium crenulatum</i>		5
<i>Botrychium botrychium lunaria</i>		5
<i>Botrychium botrychium montanum</i>		5
<i>Botrychium fenestratum</i>		6
<i>Botrychium lineare</i>		6
<i>Botrychium minganense</i>		6
<i>Botrychium montanum</i>		6
<i>Botrychium paradoxum</i>		6
<i>Botrychium pedunculosum</i>		6
<i>Botrychium pinnatum</i>		6
<i>Botrychium pumicola</i>		6
<i>Brodiaea coronaria</i> ssp. <i>rosea</i>		5
<i>Calamagrostis breweri</i>		6
<i>Calochortus greenei</i>		5
<i>Calochortus howellii</i>		6
<i>Calochortus longebarbatus</i> var. <i>longebarbatus</i>		5/6
<i>Calochortus longebarbatus</i> var. <i>peckii</i>		6
<i>Calochortus nitidus</i>		6
<i>Calochortus nutudus</i>		6
<i>Calochortus persistens</i>		5
<i>Calochortus umpquaensis</i>		6
<i>Camassia howellii</i>		6
<i>Camissonia graciliflora</i>		6
<i>Camissonia pygmaea</i>		6
<i>Campanula shetleri</i>		5
<i>Campanula wilkinsiana</i>		5
<i>Cardamine pattersonii</i>		6
<i>Carex anthoxanthea</i>		6
<i>Carex atrata</i> var. <i>atrosquama</i> (WA tracks as <i>C. atrosquama</i>)		6
<i>Carex atrata</i> var. <i>erecta</i> (<i>C. heteroneura</i>)		6

Table G-1. Sensitive species in Forest Service Regions 5 (CA) and 6 (OR/WA), within the Northwest Forest Plan area (Range of the Northern Spotted Owl).

Scientific Name	Common Name	Region
VASCULAR PLANTS (continued)		
<i>Carex backii</i>		6
<i>Carex chordorrhiza</i>		6
<i>Carex circinata</i>		6
<i>Carex comosa</i>		6
<i>Carex crawfordii</i>		6
<i>Carex densa</i>		6
<i>Carex dioica</i> var. <i>gynocrates</i> (WA tracks as <i>C. dioica</i>)		6
<i>Carex flava</i>		6
<i>Carex foenea</i>		6
<i>Carex hystericina</i>		6
<i>Carex interior</i>		6
<i>Carex livida</i>		6
<i>Carex macrochaeta</i>		6
<i>Carex nardina</i>		6
<i>Carex norvegica</i>		6
<i>Carex nova</i>		6
<i>Carex parryana</i>		6
<i>Carex pluriflora</i>		6
<i>Carex proposita</i>		6
<i>Carex rostrata</i>		6
<i>Carex saxatilis</i> var. <i>major</i>		6
<i>Carex scirpoidea</i> var. <i>scirpoidea</i>		6
<i>Carex scirpoidea</i> var. <i>stenochlaena</i>		6
<i>Carex serratodens</i>		6
<i>Carex stenophylla</i> (<i>C. eleocharis</i>)		6
<i>Carex stylosa</i>		6
<i>Carex sychnocephala</i>		6
<i>Carex tenuifolia</i>		6
<i>Carex vallicola</i>		6
<i>Carex xerantica</i>		6
<i>Cassiope lycopodioides</i>		6
<i>Castilleja chlorotica</i>		6

Table G-1. Sensitive species in Forest Service Regions 5 (CA) and 6 (OR/WA), within the Northwest Forest Plan area (Range of the Northern Spotted Owl).		
Scientific Name	Common Name	Region
VASCULAR PLANTS (continued)		
<i>Castilleja cryptantha</i>		6
<i>Castilleja fraterna</i>		6
<i>Castilleja thompsonii</i>		6
<i>Chaenactis suffrutescens</i>		5
<i>Chaenactis thompsonii</i>		6
<i>Cheilanthes intertexta</i>		6
<i>Chlorogalum angustifolium</i>		6
<i>Chrysolepis chrysophylla</i>		6
<i>Chrysosplenium tetrandrum</i>		6
<i>Cicuta bulbifera</i>		6
<i>Cimicifuga elata</i>		6
<i>Clarkia heterandra</i>		6
<i>Claytonia lanceolata</i> var. <i>pacifica</i>		6
<i>Clintonia andrewsiana</i>		6
<i>Collinsia sparsiflora</i> var. <i>bruceae</i>		6
<i>Collomia mazama</i>		6
<i>Coptis aspleniifolia</i>		6
<i>Coptis trifolia</i>		6
<i>Cordylanthus maritimus</i> ssp. <i>palustris</i>		6
<i>Cordylanthus tenuis</i> ssp. <i>pallescens</i>		5
<i>Corydalis aquae-gelidae</i>		6
<i>Cryptantha milobakeri</i>		6
<i>Cryptantha rostellata</i>		6
<i>Cryptogramma stelleri</i>		6
<i>Cupressus bakeri</i>		6
<i>Cyperus bipartitus</i>		6
<i>Cypripedium fasciculatum</i>		5/6
<i>Cypripedium montanum</i>		5
<i>Cypripedium parviflorum</i>		6
<i>Damasonium californicum</i>		6
<i>Delphinium nudicaule</i>		6
<i>Delphinium viridescens</i>		6
<i>Dicentra pauciflora</i>		6

Table G-1. Sensitive species in Forest Service Regions 5 (CA) and 6 (OR/WA), within the Northwest Forest Plan area (Range of the Northern Spotted Owl).		
Scientific Name	Common Name	Region
VASCULAR PLANTS (continued)		
<i>Dodecatheon austrofrigidum</i>		6
<i>Draba aurea</i>		6
<i>Draba cana</i>		6
<i>Draba howellii</i>		6
<i>Draba longipes</i>		6
<i>Dryas drummondii</i>		6
<i>Dryopteris cristata</i>		6
<i>Epilobium nivium</i>		5
<i>Epilobium oreganum</i>		5/6
<i>Epilobium siskiyouense</i>		6
<i>Eriastrum brandegeae</i>		5
<i>Ericameria arborescens</i>		6
<i>Erigeron cervinus</i>		6
<i>Erigeron disparipilus</i>		6
<i>Erigeron oreganus</i>		6
<i>Erigeron peregrinus</i> ssp. <i>peregrinus</i> var. <i>thompsonii</i>		6
<i>Erigeron petrophilus</i>		6
<i>Erigeron salishii</i>		6
<i>Eriogonum alpinum</i>		5
<i>Eriogonum lobbii</i>		6
<i>Eriogonum nervulosum</i>		5
<i>Eriogonum pendulum</i>		5
<i>Eriogonum tripodium</i>		5
<i>Eriophorum chamissonis</i>		6
<i>Eriophorum viridicarinatum</i>		6
<i>Eritrichium nanum</i> var. <i>elongatum</i>		6
<i>Eryngium petiolatum</i>		6
<i>Erythronium citrinum</i> var. <i>roderickii</i>		5
<i>Erythronium elegans</i>		6
<i>Erythronium howellii</i>		6
<i>Eschscholzia caespitosa</i>		6
<i>Euonymus occidentalis</i>		6

Table G-1. Sensitive species in Forest Service Regions 5 (CA) and 6 (OR/WA), within the Northwest Forest Plan area (Range of the Northern Spotted Owl).		
Scientific Name	Common Name	Region
VASCULAR PLANTS (continued)		
<i>Festuca elmeri</i>		6
<i>Filipendula occidentalis</i>		6
<i>Frasera umpquaensis</i>		5/6
<i>Fritillaria camschatcensis</i>		6
<i>Fritillaria glauca</i>		6
<i>Fritillaria purdyi</i>		6
<i>Galium kamtschaticum</i>		6
<i>Gallium serpicum</i> var. <i>warnerense</i>		6
<i>Gentiana glauca</i>		6
<i>Gentiana newberryi</i> var. <i>newberryi</i>		6
<i>Gentiana plurisetosa</i>		6
<i>Gentiana setigera</i>		5/6
<i>Gentianella tenella</i>		6
<i>Geum rivale</i>		6
<i>Geum rossii</i> var. <i>depressum</i>		6
<i>Geum triflorum</i> var. <i>campanulatum</i>		6
<i>Hackelia hispida</i> var. <i>disjuncta</i>		6
<i>Hackelia taylorii</i>		6
<i>Hackelia venusta</i>		6
<i>Haplopappus liatrisiformis</i>		6
<i>Hastingsia bracteosa</i>		6
<i>Hazardia whitneyi</i> var. <i>discoidea</i>		6
<i>Heuchera grossulariifolia</i> var. <i>tenuifolia</i>		6
<i>Hesperolinon drymarioides</i>		5
<i>Horkelia hendersonii</i>		5/6
<i>Horkelia tridentata</i> ssp. <i>tridentata</i>		6
<i>Howellia aquatilis</i>		6
<i>Hydrocotyle verticillata</i>		6
<i>Hypericum majus</i>		6
<i>Iliamna bakeri</i>		5
<i>Iliamna latibracteata</i>		6
<i>Iliamna longisepala</i>		6
<i>Isopyrum stipitatum</i>		6

Table G-1. Sensitive species in Forest Service Regions 5 (CA) and 6 (OR/WA), within the Northwest Forest Plan area (Range of the Northern Spotted Owl).		
Scientific Name	Common Name	Region
VASCULAR PLANTS (continued)		
<i>Ivesia longibracteata</i>		5
<i>Ivesia pickeringii</i>		5
<i>Ivesia shockleyi</i>		6
<i>Kalmiopsis fragrans</i>		6
<i>Keckiella lemmonii</i>		6
<i>Kobresia bellardii</i> (<i>K. myosuroides</i>)		6
<i>Lathyrus biflorus</i>		5
<i>Lewisia cantelovii</i>		5
<i>Lewisia oppositifolia</i>		5
<i>Lewisia stebbinsii</i>		5
<i>Lilium occidentale</i>		6
<i>Limnanthes floccosa</i> ssp. <i>bellingeriana</i>		6
<i>Limnanthes gracilis</i> var. <i>gracilis</i>		6
<i>Limonium californicum</i>		6
<i>Linanthus bolanderi</i>		6
<i>Linanthus harknesii</i> ssp. <i>condensatus</i>		5
<i>Linanthus nuttallii</i> ssp. <i>howellii</i>		5
<i>Liparis loeselii</i>		6
<i>Listera borealis</i>		6
<i>Lobelia dortmanna</i>		6
<i>Lobelia kalmii</i>		6
<i>Loiseleuria procumbens</i>		6
<i>Lomatium cusickii</i>		6
<i>Lomatium erythrocarpum</i>		6
<i>Lomatium greenmanii</i>		6
<i>Lomatium ochocense</i>		6
<i>Lomatium suksdorfii</i>		6
<i>Luina serpentina</i>		6
<i>Lupinus antoninus</i>		5
<i>Lupinus aridus</i> ssp. <i>ashlandensis</i>		5/6
<i>Lupinus constancei</i>		5
<i>Lupinus sabinii</i>		6
<i>Lupinus sulphureus</i> ssp. <i>kincaidii</i>		6

Table G-1. Sensitive species in Forest Service Regions 5 (CA) and 6 (OR/WA), within the Northwest Forest Plan area (Range of the Northern Spotted Owl).		
Scientific Name	Common Name	Region
VASCULAR PLANTS (continued)		
<i>Luzula arcuata</i>		6
<i>Lycopodium complanatum</i>		6
<i>Lycopodium dendroideum</i>		6
<i>Madia doris-nilesiae</i>		5
<i>Madia stebbinsii</i>		5
<i>Meconella oregana</i>		6
<i>Microseris borealis</i>		6
<i>Microseris douglasii</i> ssp. <i>douglasii</i>		6
<i>Microseris howellii</i>		6
<i>Microseris laciniata</i> ssp. <i>detlingii</i>		6
<i>Mimulus bolanderi</i>		6
<i>Mimulus clivicola</i>		6
<i>Mimulus evanescens</i>		6
<i>Mimulus hymenophyllus</i>		6
<i>Mimulus jungermannioides</i>		6
<i>Mimulus suksdorfii</i>		6
<i>Minuartia decumbent</i>		5
<i>Minuartia rosei</i>		5
<i>Minuartia stolonifera</i>		5
<i>Mirabilis macfarlanei</i>		6
<i>Monardella purpurea</i>		6
<i>Montia diffusa</i>		6
<i>Montia howellii</i>		6
<i>Navarretia tagetina</i>		6
<i>Nemacladus capillaris</i>		6
<i>Neviusia cliftonii</i>		5
<i>Nicotiana attenuata</i>		6
<i>Oxytropis borealis</i> var. <i>viscida</i>		6
<i>Oxytropis campestris</i> var. <i>gracilis</i>		6
<i>Parnassia fimbriata</i> var. <i>hoodiana</i>		6
<i>Parnassia kotzebuei</i>		6
<i>Parnassia palustris</i> var. <i>neogaea</i>		6
<i>Pedicularis howellii</i>		5/6

Table G-1. Sensitive species in Forest Service Regions 5 (CA) and 6 (OR/WA), within the Northwest Forest Plan area (Range of the Northern Spotted Owl).		
Scientific Name	Common Name	Region
VASCULAR PLANTS (continued)		
<i>Pellaea andromedaefolia</i>		6
<i>Pellaea brachyptera</i>		6
<i>Pellaea breweri</i>		6
<i>Pellaea bridgesii</i>		6
<i>Pellaea mucronata</i> ssp. <i>mucronata</i>		6
<i>Penstemon barrettiae</i>		6
<i>Penstemon filiformis</i>		5
<i>Penstemon glaucinus</i>		6
<i>Perideridia erythrorhiza</i>		6
<i>Petrophyton cinerascens</i>		6
<i>Phacelia cookei</i>		5
<i>Phacelia greenei</i>		5
<i>Phacelia minutissima</i>		6
<i>Phlox hendersonii</i>		6
<i>Phlox multiflora</i>		6
<i>Physaria didymocarpa</i> var. <i>didymocarpa</i>		6
<i>Pilularia americana</i>		6
<i>Pityopus californica</i>		6
<i>Plagiobothrys figuratus</i> ssp. <i>corallicarpus</i>		6
<i>Plagiobothrys glyptocarpus</i>		6
<i>Plantago macrocarpa</i>		6
<i>Platanthera chorisiana</i>		6
<i>Platanthera obtusata</i>		6
<i>Platanthera sparsiflora</i>		6
<i>Pleuropogon oregonus</i>		6
<i>Poa laxiflora</i>		6
<i>Poa nervosa</i> var. <i>nervosa</i>		6
<i>Polemonium carneum</i>		6
<i>Polemonium chartaceum</i>		5
<i>Polystichum californicum</i>		6
<i>Potentilla breweri</i>		6
<i>Potentilla diversifolia</i> var. <i>perdissecta</i>		6
<i>Potentilla nivea</i>		6

Table G-1. Sensitive species in Forest Service Regions 5 (CA) and 6 (OR/WA), within the Northwest Forest Plan area (Range of the Northern Spotted Owl).		
Scientific Name	Common Name	Region
VASCULAR PLANTS (continued)		
<i>Potentilla quinquefolia</i>		6
<i>Potentilla villosa</i> var. <i>parviflora</i>		6
<i>Puccinella howellii</i>		5
<i>Primula cusickiana</i>		6
<i>Raillardella pringlei</i>		5
<i>Raillardiopsis scabrida</i>		5
<i>Ranunculus cooleyae</i>		6
<i>Ranunculus populago</i>		6
<i>Ranunculus reconditus</i>		6
<i>Ribes cereum</i> var. <i>colubrinum</i>		6
<i>Romanzoffia thompsonii</i>		6
<i>Rorippa columbiae</i>		5/6
<i>Rubus acaulis</i>		6
<i>Salix candida</i>		6
<i>Salix delnortensis</i>		6
<i>Salix farriae</i>		6
<i>Salix pseudomonticola</i>		6
<i>Salix vestita</i> var. <i>erecta</i>		6
<i>Sanicula tracyi</i>		5
<i>Saxifraga adscendens</i> var. <i>oregonensis</i>		6
<i>Saxifraga cernua</i>		6
<i>Saxifraga hitchcockiana</i>		6
<i>Saxifragopsis fragarioides</i>		6
<i>Scirpus pendulus</i>		6
<i>Scirpus subterminalis</i>		6
<i>Scribneria bolanderi</i>		6
<i>Sedum laxum</i> ssp. <i>heckneri</i>		6
<i>Sedum moranii</i>		6
<i>Sedum oblanceolatum</i>		6
<i>Sedum paradisum</i> (= <i>S. obtusatum</i> ssp. <i>paradisum</i>)		5
<i>Senecio dimorphophyllus</i>		6
<i>Senecio flettii</i>		6

Table G-1. Sensitive species in Forest Service Regions 5 (CA) and 6 (OR/WA), within the Northwest Forest Plan area (Range of the Northern Spotted Owl).		
Scientific Name	Common Name	Region
VASCULAR PLANTS (continued)		
<i>Senecio hesperius</i>		6
<i>Sidalcea hirtipes</i>		6
<i>Sidalcea malviflora</i> ssp. <i>patula</i>		6
<i>Sidalcea nelsoniana</i>		6
<i>Sidalcea oregana</i> var. <i>calva</i>		6
<i>Silene campanulate</i> ssp. <i>campanulata</i>		5
<i>Silene douglasii</i> var. <i>oraria</i>		6
<i>Silene hookeri</i> ssp. <i>bolanderi</i>		6
<i>Silene seelyi</i>		6
<i>Sisyrinchium sarmentosum</i>		6
<i>Sisyrinchium septentrionale</i>		6
<i>Smilax jamesii</i>		5
<i>Sophora leachiana</i>		6
<i>Spiranthes diluvialis</i>		6
<i>Spiranthes porrifolia</i>		6
<i>Streptanthus howellii</i>		5/6
<i>Sullivantia oregana</i>		6
<i>Synthyris pinnatifida</i> var. <i>lanuginosa</i>		6
<i>Talinum sedifforme</i>		6
<i>Tauschia howellii</i>		5/6
<i>Tauschia stricklandii</i>		6
<i>Teucrium canadense</i> ssp. <i>viscidum</i>		6
<i>Thalictrum alpinum</i> var. <i>hebetum</i>		6
<i>Thalictrum dasycarpum</i>		6
<i>Thelypodium brachycarpum</i>		6
<i>Thelypodium eucosmum</i>		5
<i>Thermopsis robusta</i>		6
<i>Townsendia montana</i>		6
<i>Tracyina rostrata</i>		5
<i>Trifolium plumosum</i> var. <i>plumosum</i>		6
<i>Triteleia ixiooides</i> ssp. <i>anilina</i>		6
<i>Triteleia laxa</i>		6
<i>Trollius laxus</i> var. <i>albiflorus</i>		6

Table G-1. Sensitive species in Forest Service Regions 5 (CA) and 6 (OR/WA), within the Northwest Forest Plan area (Range of the Northern Spotted Owl).		
Scientific Name	Common Name	Region
VASCULAR PLANTS (continued)		
<i>Utricularia gibba</i>		6
<i>Utricularia intermedia</i>		6
<i>Vaccinium myrtilloides</i>		6
<i>Viola primulifolia</i> ssp. <i>occidentalis</i>		5/6
<i>Wolffia borealis</i>		6
<i>Wolffia columbiana</i>		6
<i>Woodwardia fimbriata</i>		6
INVERTBRATES		
<i>Acneus beeri</i>	Beer's false penny beetle	6
<i>Acneus bernelli</i>	Burnell's false penny beetle	6
<i>Agapetus denningi</i>	Denning's agapetus	6
<i>Anodonta californiensis</i>	CA floater (freshwater mussel)	5
<i>Apatania tavala</i>	Cascades apatanian caddisfly	6
<i>Eobranchcentrus gelidae</i>	Mt. Hood primitive caddisfly	6
<i>Farula davisi</i>	Green Springs Mt. caddisfly	6
<i>Farula jewetti</i>	Mt. Hood farulan caddisfly	6
<i>Farula reaperi</i>	Tombstone Prairie farulan caddisfly	6
<i>Homoplectra schuhi</i>	Schuh's Homoplectran Caddisfly	6
<i>Juga (Calibasis) occata</i>	Topaz Juga (snail)	5
<i>Limnephilus atereus</i>	Ft. Dick limnephilan caddisfly	6
<i>Nemoura wahkeena</i>	Wahkeena Falls flightless stonefly	6
<i>Neothremma andersoni</i>	Columbia Gorge caddisfly	6
<i>Ochrotrichia alsea</i>	Alsea micro caddisfly	6
<i>Oligophlebodes mosthento</i>	Tombstone Prairie Oligophlebodes caddisfly	6
<i>Pisidium (Cyclocalyx) ultramontanum</i>	Montaine peaclam	5
<i>Rhyacophila colonus</i>	Obrien rhyacophilan caddisfly	6
<i>Rhyacophila haddocki</i>	Haddock's caddisfly	6
<i>Rhyacophila unipuctata</i>	One-spot caddisfly	6
<i>Tinodes siskiyou</i>	Siskiyou caddisfly	6
FISH		
<i>Gila bicolor orgonensis</i>	Oregon Lakes tui chub	6
<i>Catostomus synderi</i>	Klamath large-scale sucker	6
<i>Cottus tenuis</i>	Slender sculpin	6

Table G-1. Sensitive species in Forest Service Regions 5 (CA) and 6 (OR/WA), within the Northwest Forest Plan area (Range of the Northern Spotted Owl).		
Scientific Name	Common Name	Region
FISH (continued)		
<i>Cottus pitensis</i>	Pit sculpin	6
<i>Lavina exilicauda chi</i>	Clear Lake hitch	5
<i>Mylopharodon conocephalus</i>	Hardhead	5
<i>Oncorhynchus mykiss</i>	Interior redband trout	6
<i>Oncorhynchus tshawytscha</i>	Chinook Salmon Washington Coast Oregon Coast Southern Oregon Mid-Columbia River Summer/Fall Run Deschutes River Summer/Fall Run	6
<i>Oncorhynchus keta</i>	Chum Salmon Puget Sound/Strait of Georgia Pacific Coast	6
<i>Oncorhynchus kisutch</i>	Coho Salmon Puget Sound/Strait of Georgia Southwest WA/Lower Columbia River	6
<i>Oncorhynchus nerka</i>	Sockeye Salmon Lake Pleasant Quinault Lake Baker River	6
<i>Oncorhynchus mykiss irideus</i>	Steelhead Trout Oregon Coast Klamath Mountain Province	6
<i>Oncorhynchus mykiss pop 7</i>	McCloud River redband trout	5
<i>Oncorhynchus mykiss</i>	Steelhead Trout Klamath Mtn. Province ESU N. California Province ESU	5
<i>Oncorhynchus clarkii</i>	Coastal run cutthroat trout	5
<i>Oncorhynchus clarki clarki</i>	Coastal Cutthroat Trout Puget Sound Olympic Peninsula Oregon Coast Southern Oregon Coast	6

Table G-1. Sensitive species in Forest Service Regions 5 (CA) and 6 (OR/WA), within the Northwest Forest Plan area (Range of the Northern Spotted Owl).		
Scientific Name	Common Name	Region
FISH (continued)		
<i>Oncorhynchus tshawytscha</i>	Chinook Salmon Central Valley spring run ESU Central Valley fall run ESU S. OR & CA coastal ESU, spring run Upper Klamath/Trinity ESU, spring run Upper Trinity River ESU, fall run	5
AMPHIBIANS		
<i>Dicamptodon copei</i>	Cope's giant salamander	6
<i>Plethodon elongatus</i>	Del Norte salamander	6
<i>Plethodon larsellii</i>	Larch Mountain salamander	6
<i>Plethodon stormi</i>	Siskiyou Mountain Salamander	6
<i>Rhyacriton variegatus</i>	Southern torrent salamander	5
<i>Rana auroa</i>	Red-legged frog	6
<i>Rana aurora aurora</i>	Northern red-legged frog	5
<i>Rana boylei</i>	Foothill yellow-legged frog	5
<i>Rana cascade</i>	Cascade frog	5
<i>Rana pretiosa</i>	Oregon spotted frog	6
<i>Rana luteiventris</i>	Columbia spotted frog	6
REPTILES		
<i>Clemmys marmorata marmorata</i>	Northwestern pond turtle	5/6
<i>Chrysemys picta</i>	Painted turtle	6
<i>Lampropeltis getulus</i>	Common kingsnake	6
<i>Lampropeltis zonata</i>	California mountain kingsnake	6
BIRDS		
<i>Accipiter gentilis</i>	Northern goshawk	5
<i>Agelaius tricolor</i>	Tricolored blackbird	6
<i>Bartramia longicauda</i>	Upland sandpiper	6
<i>Buteo regalis</i>	Ferruginous hawk	6
<i>Buteo swainsoni</i>	Swainson's hawk	6
<i>Centrocercus urophasianus</i>	Western sage grouse	6
<i>Coturnicops noveboracensis</i>	Yellow rail	5/6

Table G-1. Sensitive species in Forest Service Regions 5 (CA) and 6 (OR/WA), within the Northwest Forest Plan area (Range of the Northern Spotted Owl).		
Scientific Name	Common Name	Region
BIRDS (continued)		
<i>Empidonax traillii</i>	Willow flycatcher	5
<i>Falco peregrinus anatum</i>	American peregrine falcon	6
<i>Gavia immer</i>	Common loon	6
<i>Grus canadensis tabida</i>	Greater sandhill crane	5/6
<i>Histrionicus histrionicus</i>	Harlequin duck	6
<i>Leucosticte arctoa atrata</i>	Black rosy finch	6
<i>Pelecanus erythrorhynchos</i>	American white pelican	6
<i>Numenius americanus</i>	Long-billed curlew	6
<i>Strix nebulosa</i>	Great gray owl	5
MAMMALS		
<i>Antrozous pallidus</i>	Pallid bat	5
<i>Arborimus albipes</i>	White-footed vole	6
<i>Brachylagus idahoensis</i>	Pygmy rabbit	6
<i>Corynorhinus townsendii</i> (<i>Plecotus townsendii townsendii</i>)	Townsend's or Pacific western big-eared bat	5/6
<i>Gulo gulo luteus</i>	California wolverine	5/6
<i>Lasiurus blossevillii</i>	Western red bat	5
<i>Martes americana</i>	American marten	5
<i>Martes pennanti pacifica</i>	Pacific fisher	5
<i>Ovis canadensis californica</i>	California bighorn	6
<i>Vulpes vulpes necator</i>	Sierra Nevada red fox	5

Table G-2. Species federally listed as endangered, threatened, or proposed for listing, and designated and proposed critical habitat on Forest Service and BLM administered lands within the Northwest Forest Plan area.

Scientific Name	Common Name	Current ESA Status
VASCULAR PLANTS		
<i>Alopecurus aequalis</i> var. <i>sonomensis</i>	Sonoma alopecurus	Endangered
<i>Arabis macdonaldiana</i>	MacDonald's rockcress	Endangered
<i>Arenaria paludicola</i>	Marsh sandwort	Endangered
<i>Astragalus clarianus</i>	Clara Hunt's milkvetch	Endangered
<i>Astragalus applegatei</i>	Applegate's milkvetch	Endangered
<i>Castilleja affinis neglecta</i>	Tiburon paintbrush	Endangered
<i>Castilleja levisecta</i>	Golden Indian paintbrush	Threatened
<i>Chorizanthe howellii</i>	Howell's spineflower	Endangered
<i>Chorizanthe valida</i>	Sonoma spineflower	Endangered
<i>Delphinium bakeri</i>	Baker's larkspur	Endangered
<i>Delphinium luteum</i>	Yellow larkspur	Endangered
<i>Erigeron decumbens</i> var. <i>decumbens</i>	Willamette daisy	Endangered
<i>Erysimum menziesii</i>	Menzies' wallflower	Endangered
<i>Fritillaria gentneri</i>	Gentner's fritillary	Endangered
<i>Hesperolinon congestum</i>	Marin dwarf-flax	Threatened
<i>Hackelia venusta</i>	Showy stickweed	Proposed Endangered
<i>Howellia aquatilis</i>	Water howellia	Threatened
<i>Layia carnosa</i>	Beach layia	Endangered
<i>Lasthenia burkei</i>	Burke's goldfields	Endangered
<i>Lasthenia cojugens</i>	Contra costa goldfields	Proposed Endangered
<i>Lilium occidentale</i>	Western lily	Endangered
<i>Limnanthes floccosa</i> ssp. <i>grandiflora</i>	Large-flowered wooly meadowfoam	Proposed Endangered
<i>Lomatium bradshawii</i>	Bradshaw's lomatium	Endangered
<i>Lomatium cookii</i>	Cook's lomatium	Proposed Endangered
<i>Lupinus sulphureus</i> var. <i>kincaidii</i>	Kincaid's lupine	Threatened
<i>Lupinus tidestromii</i> var. <i>layneae</i>	Pt. Reyes clover lupine	Endangered

Table G-2. Species federally listed as endangered, threatened, or proposed for listing, and designated and proposed critical habitat on Forest Service and BLM administered lands within the Northwest Forest Plan area.		
Scientific Name	Common Name	Current ESA Status
VASCULAR PLANTS (continued)		
<i>Lupinus tidestromii</i> var. <i>tidestromii</i>	Tidestrom's clover lupine	Endangered
<i>Navarretia leucocephala</i> ssp. <i>plieantha</i>	Many-flowered navarretia	Endangered
<i>Orcuttia tenuis</i>	Slender Orcutt grass	Threatened
<i>Phlox hirsuta</i>	Yreka phlox	Endangered
<i>Plagiobothrys hirtus</i>	Hairy (Rough) popcorn flower	Endangered
<i>Plagiobothrys strictus</i>	Calistoga allocarya	Endangered
<i>Poa napensis</i>	Napa bluegrass	Endangered
<i>Sidalcea nelsoniana</i>	Nelson's checker-mallow	Threatened
<i>Sidalcea oregana</i> var. <i>calva</i>	Wenatchee Mountains checkermallow	Endangered
<i>Sidalcea oregana</i> var. <i>valida</i>	Kenwood Marsh checkermallow	Endangered
<i>Spiranthes diluvialis</i>	Ute ladies'-tresses	Threatened
<i>Thlaspi montanum</i> var. <i>californicum</i>	Kneeland Prairie penny-cress	Endangered
<i>Trifolium amoenum</i>	Showy Indian clover	Endangered
INVERTEBRATES		
<i>Branchinecta conservatio</i>	Conservancy fairy shrimp	Endangered
<i>Branchinecta lynchi</i>	Vernal pool fairy Shrimp	Threatened
<i>Desmocerus californicus dimorphus</i>	Valley elderberry longhorn beetle	Threatened
<i>Icaricia icarioides fenderi</i>	Fender's blue butterfly	Endangered
<i>Icaricia icarioides missionensis</i>	Mission blue butterfly	Endangered
<i>Incisalia mossii bayensis</i>	San Bruno elfin butterfly	Endangered
<i>Lepidurus packardi</i>	Vernal pool tadpole shrimp	Endangered
<i>Lycaeides argyrognomon lotis</i>	Lotis blue butterfly	Endangered
<i>Pacifastacus fortis</i>	Shasta (= placid) crayfish	Endangered
<i>Speyeria callippe callippe</i>	Callippe silverspot butterfly	Endangered
<i>Speyeria zerene behrensii</i>	Behren's silverspot butterfly	Endangered

Table G-2. Species federally listed as endangered, threatened, or proposed for listing, and designated and proposed critical habitat on Forest Service and BLM administered lands within the Northwest Forest Plan area.

Scientific Name	Common Name	Current ESA Status
INVERTEBRATES (continued)		
<i>Speyeria zerene hippolyta</i>	Oregon silverspot butterfly	Threatened, Designated Critical Habitat
<i>Speyeria zerene myrtleae</i>	Myrtle's silverspot butterfly	Endangered
<i>Syncaris pacifica</i>	California freshwater shrimp	Threatened
FISH		
<i>Chasmistes brevirostris</i>	Shortnose sucker	Endangered
<i>Deltistes luxatus</i>	Lost River sucker	Endangered
<i>Eucyclogobius newberryi</i>	Tidewater goby	Endangered
<i>Hypomesus transpacificus</i>	Delta smelt	Threatened
<i>Oncorhynchus clarki clarki</i>	Southwestern WA/Columbia River coastal cutthroat trout ESU	Proposed Threatened
<i>Oncorhynchus kisutch</i>	Central California coho salmon ESU	Threatened, Designated Critical Habitat
<i>Oncorhynchus kisutch</i>	Oregon Coast coho salmon ESU	Threatened, Designated Critical Habitat
<i>Oncorhynchus kisutch</i>	Southern OR/Northern CA Coasts coho salmon ESU	Threatened, Designated Critical Habitat
<i>Oncorhynchus keta</i>	Columbia River chum salmon ESU	Threatened, Designated Critical Habitat
<i>Oncorhynchus keta</i>	Hood Canal summer-run chum salmon ESU	Threatened, Designated Critical Habitat
<i>Oncorhynchus mykiss</i>	CA Central Valley steelhead ESU	Threatened, Designated Critical Habitat
<i>Oncorhynchus mykiss</i>	Central California Coast steelhead ESU	Threatened, Designated Critical Habitat
<i>Oncorhynchus mykiss</i>	Lower Columbia River steelhead ESU	Threatened, Designated Critical Habitat
<i>Oncorhynchus mykiss</i>	Middle Columbia River steelhead ESU	Threatened, Designated Critical Habitat
<i>Oncorhynchus mykiss</i>	Northern California steelhead ESU	Threatened

Table G-2. Species federally listed as endangered, threatened, or proposed for listing, and designated and proposed critical habitat on Forest Service and BLM administered lands within the Northwest Forest Plan area.		
Scientific Name	Common Name	Current ESA Status
FISH (continued)		
<i>Oncorhynchus mykiss</i>	Snake River Basin steelhead ESU (migrates thru NFP area)	Threatened, Designated Critical Habitat
<i>Oncorhynchus mykiss</i>	Upper Columbia River steelhead ESU	Endangered, Designated Critical Habitat
<i>Oncorhynchus mykiss</i>	Upper Willamette River steelhead ESU	Threatened, Designated Critical Habitat
<i>Oncorhynchus nerka</i>	Ozette Lake sockeye salmon ESU	Threatened, Designated Critical Habitat
<i>Oncorhynchus nerka</i>	Snake River sockeye salmon ESU(migrates thru NFP area)	Endangered, Designated Critical Habitat
<i>Oncorhynchus tshawytscha</i>	CA Central Valley chinook salmon ESU	Threatened, Designated Critical Habitat
<i>Oncorhynchus tshawytscha</i>	CA Coastal chinook salmon ESU	Threatened, Designated Critical Habitat
<i>Oncorhynchus tshawytscha</i>	Lower Columbia River chinook salmon ESU	Threatened, Designated Critical Habitat
<i>Oncorhynchus tshawytscha</i>	Puget Sound chinook salmon ESU	Threatened, Designated Critical Habitat
<i>Oncorhynchus tshawytscha</i>	Sacramento River winter-run chinook salmon ESU	Endangered, Designated Critical Habitat
<i>Oncorhynchus tshawytscha</i>	Upper Willamette River chinook salmon ESU	Threatened, Designated Critical Habitat
<i>Oncorhynchus tshawytscha</i>	Upper Columbia River spring-run chinook salmon ESU	Endangered, Designated Critical Habitat
<i>Oncorhynchus tshawytscha</i>	Snake River fall-run chinook salmon ESU (migrates thru NFP area)	Threatened, Designated Critical Habitat
<i>Oncorhynchus tshawytscha</i>	Snake River spring/summer-run chinook salmon ESU (migrates thru NFP area)	Threatened, Designated Critical Habitat

Table G-2. Species federally listed as endangered, threatened, or proposed for listing, and designated and proposed critical habitat on Forest Service and BLM administered lands within the Northwest Forest Plan area.		
Scientific Name	Common Name	Current ESA Status
FISH (continued)		
<i>Oregonichthys (=Hybopsis) crameri</i>	Oregon chub	Endangered
<i>Pogonichtys macrolepidotus</i>	Sacramento River splittail	Threatened
<i>Salvelinus confluentus</i>	Klamath River bull trout	Threatened
<i>Salvelinus confluentus</i>	Columbia River bull trout	Threatened
<i>Salvelinus confluentus</i>	Puget Sound bull trout	Proposed Threatened
AMPHIBIANS		
<i>Rana aurora draytonii</i>	California red-legged frog	Threatened, Proposed Critical Habitat
REPTILES		
<i>Dermochelys coriacea</i>	Leatherback turtle	Endangered, Designated Critical Habitat
<i>Chelonia mydas (incl. agassizii)</i>	Green turtle	Threatened
<i>Lepidochelys olivacea</i>	Olive (=Pacific) ridley sea turtle	Threatened
<i>Caretta caretta</i>	Loggerhead turtle	Threatened
BIRDS		
<i>Brachyramphus marmoratus</i>	Marbled murrelet	Threatened, Designated Critical Habitat
<i>Branta canadensis leucopareia</i>	Aleutian Canada goose	Threatened
<i>Charadrius alexandrinus nivosus</i>	Western snowy plover (coastal populations)	Threatened, Designated Critical Habitat
<i>Haliaeetus leucocephalus</i>	Northern bald eagle	Threatened
<i>Pelecanus occidentalis</i>	Brown pelican	Endangered
<i>Rallus longirostris obsoletus</i>	California clapper rail	Endangered
<i>Strix occidentalis caurina</i>	Northern spotted owl	Threatened, Designated Critical Habitat
MAMMALS		
<i>Aplodontia rufa nigra</i>	Point Arena mountain beaver	Endangered
<i>Canis lupus</i>	Gray wolf	Endangered
<i>Eumetopias jubatus</i>	Steller (= northern) sea-lion	Endangered

Table G-2. Species federally listed as endangered, threatened, or proposed for listing, and designated and proposed critical habitat on Forest Service and BLM administered lands within the Northwest Forest Plan area.

Scientific Name	Common Name	Current ESA Status
MAMMALS (continued)		
<i>Lynx canadensis</i>	Canada lynx	Threatened
<i>Odocoileus virginianus leucurus</i>	Columbian white-tailed deer	Endangered
<i>Reithrodontomys raviventris</i>	Salt marsh harvest mouse	Endangered
<i>Ursus arctos</i>	Grizzly bear	Threatened

