

U.S. Department of Interior, Fish and Wildlife Service
U.S. Department of Commerce, National Marine Fisheries Service

Record of Decision

Proposed Issuance of a Permit to Allow Incidental Take of Threatened and Endangered Species to Washington Department of Natural Resources for State Lands in Western and Portions of Eastern Washington State and Approval of the Implementation Agreement and Washington Department of Natural Resources Habitat Conservation Plan

This Record of Decision (ROD) has been developed by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (collectively, the Services; individually, USFWS and NMFS) in compliance with the agency decision-making requirements of the National Environmental Policy Act (NEPA) of 1969, as amended. The purpose of this ROD is to document the decision of the Services in response to an application for an Incidental Take Permit under section 10 of the Endangered Species Act of 1973, as amended.

This ROD will: a) state the Services' decision and present the rationale for its decision; b) identify the alternatives considered in reaching the decision; and c) state whether all means to avoid or minimize environmental harm from implementation of the selected alternative have been adopted (40 CFR 1505.2).

Project Description

The Services propose to issue an Incidental Take Permit (ITP or Permit) lasting 70 years with the possibility of extension for up to 30 additional years, under section 10(a)(1)(B) of the Endangered Species Act (Act) based on a Habitat Conservation Plan (HCP) prepared by the Washington State Department of Natural Resources (DNR). DNR has requested a permit that would allow the incidental take of the following listed species: northern spotted owl (owl), marbled murrelet (murrelet), grizzly bear, gray wolf, bald eagle, Columbian white-tailed deer, Aleutian Canada goose, Oregon silverspot butterfly, and American peregrine falcon. Presently unlisted species dependent upon habitats that have been addressed in the HCP would be covered under unlisted species provisions in the Implementation Agreement (IA). If any of these species become listed during the Permit term, procedures for considering an amendment of the Permit to include them in the Permit are addressed in the IA, which is incorporated here by reference. The HCP, Permit, and IA would run concurrently unless terminated earlier as provided in the IA.

In general, the management activities covered by this agreement can be categorized into two separate types: timber-related and nontimber-related. The DNR HCP focuses on timber management activities as the main landscape influencing factors and the factors with the most influence on wildlife species. The ITP would authorize incidental take of listed species from timber harvest conducted pursuant to the terms of the HCP. Timber-related activities are defined more fully in the Services' Findings. Nontimber activities include actions commonly conducted

by DNR or their contractors within the forest and other habitats. The ITP would authorize take of listed species incidental to these activities not to exceed 1996 levels. These activities are also more fully described in the FEIS and Services' Section 10 Statement of Findings document (Findings).

DNR's HCP covers approximately 1.6 million acres of land including portions of DNR-managed land on both sides of the Cascade Mountains in Washington State and the Olympic Peninsula. The unlisted species provisions would only apply to covered lands on the west side of the Crest of the Cascade Mountains.

The HCP planning area has been divided into nine planning units including the Olympic Experimental State Forest planning unit (OESF). The EIS and HCP examined the affected environment including species resident in the Planning Area, and the EIS examined in detail, the environmental consequences of three alternatives for the eight non-OESF planning units: A) No Action, B) Proposed HCP, and C) Enhanced Conservation Alternative. Additionally, the EIS examined in detail the environmental consequences of three alternatives specific to the proposed management of the OESF: 1) No Action, 2) Unzoned Forest (proposed HCP Alternative), and 3) Zoned Forest Alternative.

Decision (40 CFR 1505.2(a))

For the eight non-OESF planning units, the Services herein adopt Alternative B, the Proposed HCP Alternative, modified as described in the FEIS. For the OESF, the Services herein adopt Alternative 2, the Unzoned Forest Alternative. The statutory bases for this action are found in the Endangered Species Act (ESA or Act). In making this decision, the Services have also considered their trust responsibilities to Native American Tribes and their responsibilities under NEPA. For the balance of this document, the designation "HCP Alternative" refers to Alternatives 2 and B, individually and together.

The Alternatives (40 CFR 1505.2(b))

The EIS described and analyzed the effects of several alternatives and also eliminated other alternatives from detailed analysis. The reasonable alternatives are described in the DEIS as modified by the FEIS, and are summarized below. The rationale for eliminating the other alternatives from detailed analysis was presented in the EIS in section 2.0. The DEIS and FEIS (together referred to as the EIS) are incorporated here by reference.

In determining the scope of the proposed action, the Services and the Applicant proceeded according to purposes and needs. These purposes and needs were stated in the EIS, and formed the foundation for the decision as to which alternatives were analyzed in detail. Generally, the Services' purposes and needs corresponded to those agencies' responsibilities to implement the ESA. The Applicant's purposes and needs corresponded to its duty to comply with the ESA and its other legal responsibilities as the Trustee for State assets held in trust for 26 beneficiaries.

During the scoping and development of the HCP for the eight non-OESF planning units, the Services and applicant generated and considered 14 alternatives. These included A) No Action, B) Proposed HCP, and C) HCP with some enhanced conservation measures, the reasonable alternatives that were analyzed in detail in the EIS. The Services determined that none of the other 11 Alternatives would meet both the statutory and regulatory requirements of the ESA, and the purposes and needs of the proposed action as described in the EIS. Accordingly, none of those Alternatives were analyzed in detail in the EIS. The rationale underlying which alternatives were determined to be reasonable appears in Table 2.5.1 of the EIS.

During the scoping for the development of the OESF planning unit, the applicant and Services generated and considered 10 alternatives. These included 1) No Action, 2) Unzoned Forest, and 3) Zoned Forest, reasonable alternatives that were analyzed in detail in the EIS. The Services determined that none of the other seven alternatives would meet both the statutory and regulatory requirements of the ESA, and the purposes and needs of the Services and Applicant as described in the EIS. Accordingly, none of the other seven OESF Alternatives were analyzed in detail. The rationale underlying the decision as to which alternatives were determined to be reasonable appears in Table 2.6.1 of the EIS.

The No Action Alternative (Alternative A for the non-OESF planning units and Alternative 1 for the OESF) described management in the absence of the issuance of an Incidental Take Permit (ITP), and approval of the unlisted species provisions of the IA. Management under the No Action Alternative would be the same for all nine planning units. Briefly, the No Action Alternative was described in terms of continuing management and operations in accord with current DNR operating policies, compliance with State forestry regulations, and the avoidance of the take of listed species as the method of complying with the ESA.

The No Action Alternative was not adopted because, of the alternatives analyzed in detail, it provided the weakest combination of conservation for listed and unlisted species, and the lowest level of management certainty for both the Services and the applicant. In comparison to other proposed action alternatives, it would provide the least certainty for both resource protection and operational planning. Furthermore, according to the analysis provided in the EIS, the No Action Alternative would be least economically beneficial to affected communities. Finally, each of the action proposals contain more effective conservation prescriptions and goals, as described in the HCP and EIS.

The DNR HCP Alternative for the eight non-OESF planning units is summarized below (Alternative B). This alternative was adopted because it was the alternative contained in DNR's permit application and because the Services have found that it meets the statutory criteria for issuance of an ESA Section 10 ITP (see Findings). In addition, the Services believe it meets the Services' trust responsibilities to Native American Tribes.

The other action alternative analyzed in detail in the EIS was Alternative C. Alternative C would provide certain additional conservation benefits for fish and wildlife, beyond those provided in

Alternative B. However, Alternative C (considered together with Alternative 3 for the OESF planning unit) would produce 3.4 to 16.3 percent less harvest volume, with greater impacts occurring in certain geographic areas than others. In view of the DNR's fiduciary responsibility to produce revenues for trust beneficiaries, it permit application package contained Alternatives B and 2.

Examples of conservation strategies augmented under Alternative C include the Riparian Management Strategy, and the parameters for northern spotted owl and marbled murrelet conservation. Under Alternative C, the Riparian Management Strategy would be fundamentally the same as under Alternative B but with added restrictions on management activities within riparian, wetland, and unstable slope buffers. For northern spotted owls, Alternative C would add experimental management areas in the South Coast Planning Unit, additional nesting, roosting, and foraging (NRF) areas would be designated in the Klickitat Planning Unit and Straits Planning Unit, NRF conservation goals would be increased generally to 60% per Watershed Analysis Unit (WAU) (compared to 50% under Alternative B). No management would be allowed in owl habitat designated as type A or B quality, WAUs with less than the 60% NRF goal presently would be managed to accelerate development of old forest characteristics. No salvage or health risk reduction activities would be permitted in NRF and no harvest of habitat in excess of the 60% goal would be permitted during the breeding season. For the marbled murrelet Alternative C would augment Alternative B strategies to prevent harvest of marginal habitat or surveyed, unoccupied habitat until the long term strategies for marbled murrelet management are developed.

OESF Alternative 2 would involve implementing experimental management, research and habitat restoration activities throughout each of 11 "landscape units." This mode of management would be utilized to develop landscape wide targets for habitat conservation which would be incorporated into the landscape unit plans. The "unzoned" nature of the strategies means that no area would be strictly off-limits to management activities or to conservation measures. The only strictly off-base areas would be in the designated inner, no entry buffers of riparian areas. In addition to landscape level management, stand level management would be conducted to assure potential suitable owl habitat during significant portions of the management cycle. Management for uncommon habitats would be similar to the strategy proposed for the non-OESF planning units (Alternative B) described in brief below.

OESF Alternative 3 would utilize a "zoned approach" to segregate units in which harvest would be permitted from those which would serve conservation purposes. Conservation areas would be concentrated in areas likely to support spotted owl pairs. Marbled murrelet conservation would be similar to that proposed in Alternative C for the eight non-OESF planning units. Management for uncommon habitats would be the same as under Alternative B for the non-OESF planning units.

The Services identified Alternative B (Proposed HCP Alternative) as both agencies' preferred alternative for the eight non-OESF planning units because it met the purposes and needs of the

Services and the Applicant. The Services identified Alternative 2 (the Unzoned Forest) as the preferred alternative for the OESF planning unit. Alternative C is the environmentally preferable alternative for the eight non-OESF planning units because it provides an additional increment of benefit for fish and wildlife within the Planning Area. Alternative 2 is the environmentally preferable alternative for the OESF planning unit because management proscriptions under this alternative are more consistent with landscape level multiple species conservation strategies than the segregated zoned strategies provided in Alternative 3.

The EIS does provide comparisons of the effects of Alternative 2, 3, B, and C, to the baseline of effects that would occur under the No Action Alternative (Alternatives 1 and A in the EIS) in detail at Chapter Four of the EIS (40 CFR 1505.2 (b)). Although Alternative C was identified as the environmental preferable alternative, it was not selected for adoption by the Service because Alternative B was proposed by DNR in its permit application package and the Services have found that it meets the statutory criteria for permit issuance under ESA section 10(a)(2)(B), (see Findings).

NEPA requires federal agency disclosure of the environmental effects for major federal actions significantly affecting the quality of the human environment. At the time of a decision, a federal agency is required to prepare a record of decision stating what the decision was, identifying the alternatives considered in reaching its decision, specifying the alternative which was considered to be environmentally preferable, discussing all relevant factors the agency used in making its decision, and stating whether all practicable means to avoid or minimize environmental harm from the selected alternative have been adopted, and if not, why not.

All practicable means to avoid or minimize environmental harm have been adopted (40 CFR 1505.2(c)). As stated above, the Services have adopted Alternatives 2 and B (together referred to as the DNR HCP), and thereby have adopted all means provided therein to avoid or minimize environmental harm by their implementation. In adopting Alternatives B and 2, the Services also adopt the monitoring programs contained in those alternatives, as described in section V. of the HCP and summarized below (40 CFR 1505.2(c)). These alternatives have been fully described in the EIS and to avoid redundancy (40 CFR 1500.4(j)), those descriptions are incorporated here by reference. By adopting the preferred alternative with its assurances that the mitigation program and enforcement measures be implemented, all practicable means to avoid or minimize harm have been adopted. A complete description of the HCP and the IA, including a summary of HCP measures designed to minimize and mitigate the effects of incidental take and activities to be covered under the permit is given in the EIS and Biological Opinion (USFWS 1997) for the Services' actions on the DNR application which is herein incorporated by reference.

Discussion

Statutory and other Factors Considered in this Decision

Section 10 of the Endangered Species Act authorizes the issuance of incidental take permits for listed species. The applicant must submit a habitat conservation plan specifying: the impact of such taking; steps the applicant will take to minimize and mitigate such impacts, and the funding that will be available to implement such steps; and the alternatives considered and the reasons why such alternatives are not utilized. The Secretary shall issue the requested permit if the Secretary (delegated to USFWS and NMFS) finds that: the taking will be incidental; the applicant will to the maximum extent practicable, minimize and mitigate the impacts of such taking; the applicant will ensure adequate funding for the plan; the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and any other required measures are met, including reporting requirements. The Services have concluded that the proposed permit meets these criteria for the reasons discussed in the Findings, which are incorporated here by reference.

Another factor the Services considered in making the decision was consistency with the Federal trust responsibility to Native American Tribes. This trust responsibility imposes a duty on Federal agencies to protect trust assets for Tribes. For the reasons discussed below, the Services have concluded that issuance of the proposed permit is consistent with this trust responsibility.

NEPA Process

NEPA requires that Federal agencies prepare detailed statement on proposed actions that significantly affect the quality of the human environment. Because of the potential for significant effects on the human environment, the Services have implemented NEPA for the Federal action of issuing an ITP. Accordingly, a Draft EIS and Final EIS were prepared.

NEPA requires the disclosure of the agencies' analysis by the publication of their detailed statements. The Draft EIS (DEIS) was out for public review from April 5, through May 20, 1996 pursuant publication of a Notice of Availability (61 F.R. 15297). The review period generated comments on behalf of 181 individuals, Indian Tribes and Tribal representatives, organizations, and governmental agencies. Comments were reviewed and written responses provided in a 207-page appendix to the FEIS. In addition to the correspondence provided during the public comment period, five public hearings were conducted at which 41 individuals and organizational representatives testified. Comments also led to clarifying changes in the HCP, IA, and DEIS, which were presented in the FEIS.

The EIS considered a full range of alternatives, including proposals contemplating no harvest, to maximum harvest allowable under Washington State forestry regulations. Within the alternatives, a variety of landscape format and prescriptive activities were analyzed. The alternatives considered covered a range of conservation and mitigation prescriptions.

The EIS considered the cumulative effects of the alternatives that were analyzed in detail. Other concurrent and reasonably foreseeable future actions examined in this analysis included management of Federal lands under the Northwest Forest Plan and private lands under current regulations. The effects to various resources have been analyzed for a 100-year period, the potential duration of the requested Permit.

The EIS made use of the best available information. Computerized geographic information systems (GIS) were employed. Data specific to the plan area from both public and private sources were used. The views of experts in relevant fields were solicited in developing the data. Computer modeling of habitats and populations, and other factors were used to inform the analysis.

Comparison of Effects

Introduction

As mentioned briefly above, the Services analyzed two action alternatives for the OESF and two action alternatives for the eight non-OESF planning units in the EIS. The EIS compared the net effects of each of the action alternatives against the baseline of effects that would be expected to occur under Alternative A and 1 (the No Action Alternative), which were the same for all nine planning units. Of the Action Alternatives, the Services selected Alternative B (the Proposed DNR HCP alternative for the eight non-OESF planning units) and Alternative 2 (the Unzoned Forest Alternative for the OESF planning unit) as the preferred alternative. The Services designated Alternative C for the non-OESF planning units and Alternative 2 of the OESF alternatives as the environmentally preferable alternatives.

These selections were based on the analysis presented in the EIS which compared the predicted environmental consequences of each of the action alternatives against the No-Action Alternative. The analysis looked at the effects on planning parameters and other resources that require attention under NEPA, including abiotic resources and a variety of elements of the human environment. These included relative effects of the alternatives on the listed species for which DNR seeks coverage in an ITP (owl, murrelet, Aleutian Canada goose, Oregon silverspot butterfly, grizzly bear, bald eagle, peregrine falcon, Columbian white-tailed deer, and gray wolf). The EIS compared effects of the alternatives on factors that contribute to properly functioning riparian areas and the great number of species that depend on those habitats. The analysis also examined the effects of the alternatives across the multiple habitat types present on state timber lands, and by association, the species dependent on those habitats. The Services also compared the effects of the alternatives on special habitats such as talus slopes, caves, wetlands, seeps and bogs, oak woodlands, and residual woody features.

The analysis was performed using information from the Biological Opinion (BO) (USFWS 1997a), Draft Environmental Impact Statement (USDI, *et al.* 1996a), and Final Environmental Impact Statement (USDI, *et al.* 1996b), prepared for the Fish and Wildlife Service's action on the

DNR application, the HCP and IA, and other scientific and commercial information. Those documents are incorporated here, by reference.

Northern Spotted Owl

Under the No Action Alternative, spotted owls would be managed on a take avoidance, circle by circle basis. In the short term some owl habitat within owl home territories would be protected from harvest but other acres could be released. Over time, as sites become vacant or owls relocated, additional amounts of habitat could be harvested resulting in less owl habitat, more fragmentation, and lower prospects of persistence for remaining owls. The high risk of owl loss over the long term was one of the reasons the No Action Alternative was not adopted.

The DNR HCP alternative is expected to result in the take of a large number of owls (about 179 owl pairs, young, and/or territorial singles) in the short term (first 10 years). Most of this short-term take is located outside the Nesting Roosting and Foraging Habitat (NRF)-management areas. Additional owls may be taken throughout the permit period. Mitigation is in the form of NRF and dispersal habitats which are placed in strategic locations in order to maximize the benefits from those habitats. Owl sites are expected to be maintained near or above current levels in the NRF-management areas and in the OESF. NRF-management areas have been designated in proximity to Federal Reserves and in areas of concern, where they would provide the greatest and most effective mitigation. The mitigation package is designed to work in concert with, and complement, the Northwest Forest Plan.

Although there is a large amount of estimated take, many of these sites have a very small percentage of their home range and/or the suitable habitat within that home range which overlap on DNR-managed lands. As a consequence, removal of DNR habitat would have a proportionally small impact to many sites. The DNR HCP alternative provides guaranteed amounts of habitat and thus has distinct advantages over the No Action Alternative.

Alternative C (Additional Conservation Alternative) would result in the least amount of take. Alternative C employs the same owl mitigation strategy but dedicates 67% more NRF towards demographic support of federal reserves, provides 43,000 acres designated for experimental management in the South Coast planning unit and, with the dedication of additional NRF habitat, provides approximately one-third more dispersal habitat than the DNR HCP alternative. Alternative C provides a higher level of demographic support to federal reserves, results in a smaller loss of potential owl habitat over the length of the permit period, and thus provides greater certainty of maintaining owl distribution through the Olympic and Cascade mountain ranges.

For all alternatives the level of take resulting from non-timber activities is minimal. Under the DNR HCP alternative take will be minimized by DNR's commitment to not exceed the 1996 levels and will be mitigated by the landscape management commitments. There is no such commitment under Alternative C.

Marbled Murrelet

Under the No Action Alternative, sites occupied by marbled murrelets and potential marbled murrelet habitat would be protected under a take avoidance policy. However, the No Action Alternative provides the least certainty of all the alternatives analyzed over the long term because of the risk of loss of murrelet habitat due to disturbance, there will be no efforts to distribute habitat in a meaningful way across the landscape, and there would be no efforts to locate additional occupied sites beyond habitat relationship study. This lack of certainty and lack of management directed at marbled murrelet conservation was one of the reasons the No Action Alternative was not adopted.

Under the DNR HCP alternative, take could occur as a result of harvest in unsurveyed, lower-quality habitats; in stands where murrelets were overlooked during surveys (e.g., stands with fewer birds and little vocalization may be less likely to be detected); in stands which are not occupied or used for nesting at the time of surveys, but are occupied later during harvest operations; or in stands which develop nesting characteristics during the permit period and are later subjected to harvest. Potential take may also occur due to disturbance of murrelets during the nesting season as a result of timber and non-timber related activities. It was estimated that about 70-80 percent or more of existing murrelet habitat might be released under the plan and 50 percent of the higher-quality (surveyed, but unoccupied) habitat could be harvested.

However, the habitat with the most value to the species (occupied habitat and high-quality habitat within 0.5 mile of occupied habitat) would be retained and provide for no significant diminishment in the value those designated lands are currently providing. As such, the removal of these habitats is not expected to decrease the value of DNR-managed lands to the survival and recovery of the species.

The enhancement and protection of almost 95 percent of DNR's occupied sites for the length of the permit period is a significant action. In comparison, the 5 percent of DNR occupied sites within the "low-quality" habitat which may be harvested would be expected to be of low-value for murrelet reproduction and survival, and contribute little to recruitment and maintenance of population levels. The proposed HCP would significantly contribute to murrelet conservation based on the commitments to survey all high quality habitat, protect all known occupied sites, and not harvest 50 percent of the high-quality unoccupied habitat.

Alternative C is similar to the DNR HCP alternative yet provides the greater level of conservation for this species because no harvest of marginal habitat and no harvest of surveyed, unoccupied habitat would occur until a long-term murrelet habitat management plan is developed and approved. These provisions provide the higher potential for habitat replacement if lost due to disturbance and provide the higher potential for providing adequate amounts and distribution of breeding site protection as well as providing unoccupied habitat for future murrelet colonization.

For all alternatives the level of take resulting from non-timber activities is minimal. Under the DNR HCP alternative take will be minimized by DNR's commitment to not exceed the 1996 levels and will be mitigated by the landscape management commitments. There is no such commitment under Alternative C.

Grizzly Bear

Under the No Action Alternative there are no actions directed towards grizzly bear conservation making recolonization of DNR managed lands by bears unlikely. Certain DNR designated lands such as Natural Resource Conservation Areas or Natural Area Preserves may provide habitat since these areas are usually in high elevations and contain unique habitats or features such as alpine meadows that are likely to be sought by grizzly bears. These areas would not be harvested, and non-timber activities are not likely to occur in them, and road densities may be reduced. However, there is little or no suitable bear habitat connecting these areas. The lack of actions directed towards grizzly bear conservation was one of the reasons the No Action Alternative was not adopted.

Both the DNR HCP alternative and Alternative C (the action alternatives) include the same provisions directed towards grizzly bear conservation. These measures include temporary conflict management and hiding cover. The action alternatives state that within 10 miles of a Class I grizzly bear observation, DNR would implement site-specific plans to limit human disturbance on DNR-managed lands inside the Recovery Zone. Those measures to limit disturbance would remain in effect until 5 years from the date of the sighting.

The action alternatives may also provide incidental hiding cover in key locations. Harvest unit size and configuration would not be specifically considered under the action alternatives; however, harvest units which do not exceed 600 feet from hiding cover would generally be the rule. Most harvest units of under 26 acres would meet this criteria even if perfectly round. Most harvest units are not perfectly round. A 1,200 foot by 2,400 foot harvest unit would contain over 66 acres. Most DNR sales are 40-60 acres. In addition, the west-side planning units leave tree strategy provides that 1 clump of leave trees be left for each 5 acres harvested. Clumps would likely be 200-400 feet apart. This may reduce sight distances and provide access to hiding cover. Hiding cover and secure areas are particularly important in areas surrounding streams, wetlands, ridges, avalanche chutes, shrub fields, parks, and slab-rock areas. It is expected that such cover may be provided incidentally through the habitat-based approach and timber-harvest logistics. The west-side riparian protection buffers (above applicable State regulations) are wide and may also provide hiding cover for grizzly bears. The provisions regarding special habitats such as caves, talus, and wetlands on the west-side planning units should further protect key areas and provide hiding cover.

The DNR HCP alternative and Alternative C does not appear to provide adequate minimization and mitigation measures to warrant issuance of a 70-year permit for grizzly bears. However, given the present low numbers of bears in the planning area, the minimization and mitigation

measures are adequate to issue a short-term permit for grizzly bears. A five-year permit is appropriate given the current provisions of these alternatives. The provisions for temporary conflict management with humans and incidental hiding cover are adequate to minimize the low level of take that may result during a five year permit.

For all alternatives the level of take resulting from non-timber activities is minimal. Under the DNR HCP alternative, take will be minimized by DNR's commitment to not exceed the 1996 levels and will be mitigated by the landscape management commitments. There is no such commitment under Alternative C.

Gray Wolf

Under the No Action Alternative, no specific conservation considerations would be directed towards wolves or public access in road strategy thereby slowing wolf recovery on DNR managed lands. Lack of conservation measures directed towards wolves was one of the reasons the No Action Alternative was not adopted.

Under both the DNR HCP alternative and Alternative C known den sites would be protected. Consideration would be given toward seasonal road closures and seasonal management of forest-management activities on ungulate fawning/calving areas and wintering grounds, which will also benefit wolf prey. Site-specific plans would be implemented around documented sightings. Cover would be provided through the stand-structures provided as part of the multi-species strategy on the west side of the Cascade Crest. This would also be expected to benefit wolf prey. Cover would also be provided in west-side riparian areas, even more so under Alternative C. Wolves are fairly adaptable. Wolves have high reproductive rates and flexible habitat needs (Wise, et al. 1991), and, although they can be impacted by roads and increased accessibility, they appear to be relatively unaffected by other forest-management activities, such as timber harvest and silvicultural prescriptions. Wolves would be better provided for under the proposed HCP, than they would be provided for without the proposed HCP and without an incidental take permit.

For all alternatives the level of take resulting from non-timber activities is minimal. Under the DNR HCP alternative take will be minimized by DNR's commitment to not exceed the 1996 levels and will be mitigated by the landscape management commitments. There is no such commitment under Alternative C.

Bald Eagles

A cooperative management plan as required under the Washington State Bald Eagle Protection Rules (WAC-232-12-292) whenever DNR's forest-management activities are proposed near a verified bald eagle nesting territory would also be required without an HCP (No Action), as would some protection of winter communal roost sites. Although conservation measures under

the No Action Alternative are substantial, conservation measures proposed for the action alternatives are superior, and thus provide another reason for not adopting this alternative.

These above protections associated with the Bald Eagle Protection Act and State regulations would not be supplanted by the DNR HCP alternative. On both the east and west-side, the proposed HCP would provide additional protection of foraging areas associated with nest sites, pilot trees, and winter feeding concentration areas. In addition, implementation of the proposed HCP would yield substantial benefits as a result of riparian and wetland management west of the Cascade Crest. Large trees would be more likely in riparian and wetland management areas under the proposed HCP and may serve as potential nesting trees. Furthermore, the Fish and Wildlife Service expects contribution to eagle conservation under measures providing for large trees in harvest units on the west side of the Cascades. These measures would not be provided in the absence of the proposed HCP; and, therefore, demonstrate a benefit of the proposed HCP over current regulations. Fish populations (potential eagle prey) on the west side of the Cascade Crest are also expected to benefit substantially over the implementation of minimum State regulations.

Conservation measures under Alternative C are identical, however, the larger wetland and riparian buffers would be expected to provide additional roosting and foraging habitat for bald eagles.

For all alternatives the level of take resulting from non-timber activities is minimal. Under the DNR HCP alternative take will be minimized by DNR's commitment to not exceed the 1996 levels and will be mitigated by the landscape management commitments. There is no such commitment under Alternative C.

Peregrine Falcons

The DNR HCP alternative and Alternative C offer the same protection strategies for falcons: (1) Survey likely cliffs; (2) protect known and potential nest sites; (3) implement wetland and riparian strategies that benefit prey species; (4) implement cliff and talus strategies that provide incidental protection to potential nest sites. Each of these provides clear benefits over that expected in the absence of the proposed HCP (No Action), whereby only known sites would be protected.

The impacts are expected to be low based on the nature of the protection afforded potential and active nest sites. Foraging sites would be protected on the west side of the Cascade Crest by the wetland conservation strategy and are less likely to be disrupted as a result of timber-related activities on the east side of the Cascade Crest because many of the foraging sites would be nonforested uplands or wetlands. The mitigation to protect active aerie sites as well as protect potential sites is significant. The riparian and wetland strategies on the west side of the Cascade Crest would contribute habitat to the maintenance of prey species. The level of take would be

minimized to very low levels by protecting sites with the most potential to be used by falcons as aeries.

The Fish and Wildlife Service anticipates no incidental take of peregrine falcons due to disturbance from nontimber resource activities.

Aleutian Canada Geese

Due to the rare occurrence of Aleutian Canada geese on DNR-managed lands and their lack of association with habitats where timber management activities occur, the Fish and Wildlife Service does not anticipate these activities will incidentally take any Aleutian Canada geese. However incidental take in the form of harassment (disturbance) may be caused by timber harvest and nontimber resource activities, hence DNR requested that Aleutian Canada geese be included on the incidental take permit, even though the likelihood of taking this species is low and the proposed HCP would be unlikely to impact these geese.

DNR's nontimber resource activities occur almost exclusively in forested habitat and along roads with the exception of grazing leases, which occur east of the Cascade crest, and approximately 80 acres of leased electronic sites situated on non-forested mountain tops. Due to the rare occurrence of Aleutian Canada geese on DNR-managed lands and their lack of association with forested habitats, DNR's nontimber resource activities in 1996 had no impact on the Aleutian Canada goose.

The DNR HCP will provide benefits to Aleutian Canada Geese through implementation of the riparian strategy and wetland protection provisions. Aleutian Canada geese would be better provided for under the HCP than they would be without the proposed HCP. Due to the larger wetland and riparian buffers offered under Alternative C, this species could be potentially provided more habitat than under the DNR HCP alternative.

Columbian White-tailed Deer

Under any of the alternatives, forest management activities within the planning area are not expected to affect Columbian white-tailed deer unless they expand from their current range during the permit duration. Incidental take in the form of harassment (disturbance) may be caused by timber harvest and nontimber resource activities, hence the request from DNR to add this species to the permit.

Columbian white-tailed deer are not likely to be taken as a result of the HCP. However, the riparian strategy would mitigate for effects to the Columbian white-tailed deer if their range should expand in the future. Since the impacts are minimal, the incidental mitigation is adequate. DNR-managed lands within the deer's range are in the process of being transferred to the Fish and Wildlife Service as part of the Julia Butler Hansen Columbian White-Tailed Deer National Wildlife Refuge.

Oregon Silverspot Butterfly

DNR has requested that Oregon silverspot butterfly be included on the incidental take permit even though the likelihood of taking this species is low. DNR currently has no known lands that are occupied by Oregon silverspot butterflies. Therefore, impacts to Oregon silverspot butterflies, if any, are expected to be minimal since the species rarely occurs on DNR-managed lands and DNR has provided protective prescriptions under both action alternatives to ensure they would be protected if found on their lands. Should this species occur on DNR managed lands in the future, the HCP provides adequate minimization and minimization.

Unlisted Species and the Habitats On Which They Depend

Appendix B to the Services' Section 10 Statement of Findings presents an assessment of unlisted species and their habitats to help determine whether it is appropriate for the Services to approve the Implementation Agreement with the Washington Department of Natural Resources regarding unlisted species in accordance with their Habitat Conservation Plan (HCP). Appendix B forms the technical basis for the findings with respect to unlisted species, and it is therefore, incorporated here, by reference.

To ensure that all unlisted species which may use the habitats present on DNR-managed lands west of the Cascade Crest are adequately addressed, both the action alternatives (alternatives B and C for non-OESF planning units and alternatives 2 and 3 for OESF planning units, otherwise known as the HCP alternatives) contain the same series of conservation measures. The Fish and Wildlife Service compared the impacts to species with the minimization and mitigation measures and also made comparisons to what would occur in the absence of the action alternatives. The Fish and Wildlife Service also focused on the results expected under these HCP alternatives to ensure that, in conjunction with adjacent habitats outside the HCP lands, the subject species will have their life-requisites fully addressed.

It is impracticable for the Fish and Wildlife Service to analyze each of the species separately. Rather, the Fish and Wildlife Service developed a number of habitat categories to assess which might be covered in the DNR HCP alternative and Alternative C. For each habitat category, the Fish and Wildlife Service provides a description of that habitat category or attribute, describes or quantifies the baseline condition or status, describes the expected future condition in the absence of an HCP (No Action or alternatives A and 1), and compares it to the expected result of the action alternatives.

Conifer-dominated Stands

Mature forest with structure and the "old-forest" component are the most limiting at present and are expected to be of most concern in the future. It is expected that younger stands will continue to be abundant due to short rotations on other properties. Continuation of management on

DNR-managed lands and continuation of stochastic events will continue to provide younger stands. The structures and diversity of younger stands are either less limiting to early seral species or are expected to improve anyway (i.e., residual structure left as a legacy from previous rotations). Therefore, the Fish and Wildlife Service continues to focus its attention on the most limiting components. These habitat components are those forests and forest structures associated with unmanaged forests and forests greater than 70 years in age.

The DNR action alternatives would maintain conifer-dominated forests in amount and quality that would continue to contribute valuable habitat for all species associated with west-side forests and the types of habitat found on DNR-managed lands. The oldest forests would remain as a function of riparian habitat buffers, uncommon habitat buffers, unstable slopes, high-elevation areas, poor growing-site potential, occupied murrelet stands, owl nesting patches, and Natural Resource Conservation Areas and Natural Area Preserves. High-elevation areas, poor site areas, and unstable slopes may not all have the capability to grow and retain older conifer forests. The managed forest, however, would also make a contribution through a combination of structural legacies and sufficient rotation age for those legacies to function in the context of a structurally diverse forest in a manner that emulates the natural condition as much as is possible on an economically productive managed tree farm. The amounts of structurally complex forest, and to a lesser degree, closed canopy forest, will work in concert with those stands providing older forest structures to provide landscapes which contain upland interior forest with the components and landscape juxtaposition necessary for many species. The amounts and quality of these habitats will exceed that expected without an HCP. Species dependent on all stages of conifer forest will be adequately addressed because all geographic areas will maintain some mix of older and younger stands and the quality of these stands will be better than without an HCP. But, more importantly, a sufficient quality, quantity, and juxtaposition of habitats will exist to meet the biological needs of the species associated with these conifer forests, and, therefore, these species will be adequately addressed by an HCP.

Deciduous Forest Stands

In general, the quality and quantity of deciduous forests is expected to be similar to natural levels under either DNR HCP alternative. Reductions in burning as site preparation, in conjunction with the resultant decreased need for herbicide spray will allow stands of young forest to develop with a better balance of deciduous and conifer trees. Early stages of forest stands in which significant deciduous components exist will be of higher quality under an HCP due to the structural legacies retained from the previous stand. A preference will be given for leave trees of species with propensity for cavities, such as maple. Areas which are naturally inclined to support deciduous forest will be maintained as deciduous forest and not converted to conifer species. Deciduous stands may currently be higher in amount than would occur naturally. These stands are often short-lived in comparison to conifer stands and dependent on natural disturbance regimes in most areas for their continuation. Under either DNR HCP alternative, those natural processes are expected to continue and would continue to dominate as a determining factor in

location and amount of deciduous forest. The species which are adapted to the natural types and amounts of these deciduous habitats will continue to be adequately addressed.

Forest Stand Attributes

Forest stand attributes such as snags, large wildlife trees, cavities, and downed logs are forest-habitat structures that provide many functions important to wildlife species. These forest stand attributes are expected to be of higher quality with an HCP than without it. At the time of final harvest, site preparation, which includes less burning and then subsequently less spraying, will maintain a better mix of species in future stands. Retention of residual features such as downed wood and standing trees will be important to later stands. Both DNR HCP alternatives would provide large, quality snags; very large or unique trees; and other green recruitment trees for each acre harvested on the average. This would equate to an average number of stems per acre which would provide for a range of species similar to pre-harvest stands. Slight preference will be shown for certain species as snags, and younger green recruitment trees are more likely to be shade-tolerant species. The distribution of these residual trees will be variable; when possible, they will be distributed in several patches throughout the harvest unit. Snags and coarse woody debris will likely be in higher amounts in special management areas such as NRF-management areas, dispersal-management areas, riparian and wetland buffers, and in association with other special habitats. Generally speaking, the quantity of snags is more limiting than coarse woody debris. If sufficient snags and green trees are retained, they will eventually become coarse woody debris. The snags and leave trees retained under the DNR HCP alternatives will be left permanently. Mid-rotation thins will therefore maintain snags and coarse woody debris and are also likely to accelerate understory development. Taken as a whole, the combination of shrubby understory with features such as snags, large trees, and coarse woody debris will act synergistically and provide benefits for many forest-dwelling species dependent on such attributes.

Landscape Attributes

DNR Harvest units will be about 60-70 acres on the plan area. This size is a compromise between making numerous small clearcuts, which results in maximum fragmentation, and requires many roads for accessing each unit, and making few clearcuts that are very large, which produces a lot of interior forest when the subsequent stand matures, but also creates a large void on the landscape that is not fully utilized by the edge-dependent species. Rotation length is probably the single greatest determinant influencing the amount of edge versus interior forest on a landscape. Secondary considerations include size of harvest units and distribution within the planning area. DNR's average rotation is an improvement over the normal operations conducted on other commercial forest lands in the region. Harvest units might often be located near recently harvested areas to the extent allowed by State regulations regarding green-up. This would facilitate periods of activity in subbasins, followed by periods of inactivity during which time roads could be closed or abandoned. Another benefit of this management is that these harvested areas would be of similar age and, after a number of years, would start to represent

larger blocks of old forest. This will also help maintain a low ratio of edge habitat to interior habitat for blocks of mature forest, and may help to reduce the risk of wind-throw. Initial estimates of stand structures indicate that sufficient amounts of habitat will be in structurally complex forest to provide large blocks and connectivity. The riparian areas will serve as additional connective corridors. Landscape levels of closed canopy forest should ensure that connectivity of habitat patches exists at high levels.

Riparian Habitat

Past forest-management practices such as insufficient buffers and instream structures, deforested and unstable slopes, and too many and poorly designed roads have resulted in riparian systems which have been degraded in several ways. The DNR HCP alternatives would rectify this by providing better riparian buffers, limiting activities within the riparian areas and on unstable slopes, and protecting natural processes, water quality and quantity, and features important to all riparian wildlife. Both DNR HCP alternatives incorporate adaptive management to take advantage of additional information as it becomes available and would incorporate the results of Watershed Analysis. Active restoration would be conducted on some riparian ecosystems. Under the DNR HCP alternative, DNR will develop a comprehensive road management plan, provide buffers on stream types 1 through 4, and will develop a plan to manage Type 5 streams on stable slopes. Under Alternative C, DNR will develop a comprehensive road management plan, will provide buffers on stream types 1 through 5, and will develop a plan to manage Type 5 streams on stable slopes. In these ways the DNR HCP alternatives will rectify the adverse impacts of past management and will minimize and mitigate for the impacts that will result from DNR forest-management activities.

Wetlands

Wetland buffers under the DNR HCP alternatives are larger and more robust than would be expected without an HCP. Alternative C provides larger no-harvest buffers than the DNR HCP alternative. Under the No Action Alternative forested wetlands would not receive protection. Natural hydrology would be maintained by provisions of the DNR HCP alternatives. Species dwelling within wetlands will benefit from the protection of water quality and natural processes associated with the riparian and wetland areas. Species which seek forested habitats in association with wetlands will benefit from both the forested wetland protection as well as the features retained in wetland buffers such as snags and coarse woody debris.

Aquatic Habitats

The combination of provisions for riparian areas, wetlands, and springs provide for conservation of aquatic species. Ecosystem protection would be derived largely from management directed at maintaining and restoring riparian ecosystem function as well as older forest conditions across much of the managed uplands which are expected to benefit all aquatic species. This management should provide the clean, cool water and the habitat components needed by these

species because the HCP protects natural processes. It is expected that the protection of those natural processes, which operate in a dynamic fashion upon the aquatic environment will sustain water quality, within-water structures, and sedimentation rates at natural levels to adequately address the species adapted to life in these habitats. Management actions under the No Action Alternative (meaning current Forest Practices Regulations) are not nearly as robust as those provided for under the DNR HCP alternatives thereby increasing risk of continued degradation to aquatic habitats and the species on which they depend.

Other Special Habitats

Special habitats in the DNR HCP alternatives include caves, cliffs, talus, oak woodlands, prairies, grasslands, and meadows, subalpine meadows and shrub fields, alpine tundra, Krumholtz, and glaciers. The DNR HCP alternatives provide identical measures to reduce the impacts of timber harvest upon these habitat categories and the species they support. Where these habitats and features are found on DNR-managed lands, they would persist and continue to function as wildlife habitat under the HCP. Without an HCP, there would likely be little or no conservation measures for these habitats.

Nontimber-related Activities

The assessment of nontimber-related activities does not include the effects which might result from removal of timber associated with those nontimber activities. The activity of timber harvest was already considered separately earlier. However, ground disturbance from activities such as sand and gravel extraction and construction of roads, trails, and campgrounds are considered. Disturbance and displacement of species is perhaps the most common form of impact resulting from these nontimber activities. The 1996 level of impact cannot be exceeded without an HCP amendment.

At the present time, the Services do not have sufficient information concerning the 1996 levels of impacts resulting from sand and gravel mining on DNR-managed lands to be able to find that mining activities within riparian areas and the 100-year flood plain are sufficiently minimized and mitigated to allow a 70 to 100 year incidental take permit, when or if anadromous salmonids or other aquatic and riparian species are listed under the ESA. DNR currently has up to 40 such contracts, with 15 to 20 contracts in forested areas for the sale of sand or gravel, affecting up to 1,000 total acres. Sales under these contracts are subject to the State Environmental Policy Act (SEPA) and to DNR's SEPA policy for the elimination of conditions that are hazardous to fish. The measures needed to accomplish this are not described. DNR has advised the Services that sand and gravel mining are subject to water quality permits administered by the Washington Department of Ecology.

Due to the lack of specific information on the location and intensity of mining activities in riparian areas and the 100-year flood plain, the Services conclude that effects or impacts to any anadromous fish or other aquatic and riparian dependents species resulting from such mining

activities on DNR-managed lands will only be covered by the unlisted species provisions of the IA for a period ending on January 30, 1998. Thereafter, impacts or effects from sand and gravel mining or other mining contracts will not be covered by the unlisted species provisions of the IA unless DNR has provided additional information concerning the location of such activities, and the extent of their impacts to anadromous fish and other aquatic and riparian wildlife. This information is necessary for the Services to conclude that mining would be adequately minimized and mitigated for in the HCP, and would not appreciably reduce the likelihood of the survival and recovery of anadromous salmonid species or other aquatic and riparian dependents species in the wild.

Conclusion

Most of the habitat types improve in both fish and wildlife habitat quality and quantity, and others only improve in quantity. The younger stand stages are not expected to increase in acreage numbers but will continue to be available at adequate amounts, especially considering the availability of these habitat types on other ownerships. The younger stand stages should increase in quality due to the retention of structures from previous rotations and protections of natural processes. Restrictions on herbicide use will benefit herbaceous and deciduous components of younger stands and older mixed conifer/deciduous stands.

Older conifer forest will increase in both quality and quantity over time. While projected amounts of habitat without an HCP also include increases in the old forest amount, these amounts are not guaranteed. In the absence of an HCP, attrition and movement of owl territories would allow timber harvest leading to decreasing amounts old forest habitat and greater habitat fragmentation. Under both DNR HCP alternatives, an increase in older forests and a higher quality of forest is expected in other stands that will provide older forest attributes across the landscape. The DNR HCP alternatives provide certainty that these older forest habitat types will increase in both quality and quantity.

Special habitat types such as riparian and wetland areas, caves, and talus slopes have also been addressed by provisions of the DNR HCP alternatives and are expected to provide better fish and wildlife habitat through implementation. For many of these types, there is little or no protection without an HCP. Under both DNR HCP alternatives, a number of species-specific measures are also included to provide further conservation for species of concern such as the harlequin duck, Pacific fisher, and Vaux's swift.

Fish Species, including Anadromous Salmonids

The proposed HCP has been specifically designed to protect instream fish habitat and maintain healthy riparian habitats. Effects on resident and anadromous fish species have been discussed in terms of the HCP's strategic approach to management of fish habitat, especially, riparian management

Effects on Fish Habitat

Although instream habitat and riparian conditions are generally degraded throughout the HCP area, the measures taken in the HCP alternatives will help to restore instream and riparian habitat across the five westside planning units and OESF. Specifically, the RMZs on fish-bearing streams will provide for the growth and development of a properly functioning riparian zone that will provide over the life of the HCP the following riparian functions: sufficient shade, bank stability, litter inputs for healthy nutrient supply, and a continual source of LWD for instream structural elements important to fish. Other prescriptions will minimize sediment inputs due to landslides, assess the condition of fish habitats and riparian stands, and monitor the effects of forest practices on aquatic habitats. Also, in accordance with the comprehensive landscaped-based road network, prescriptions will reduce sediment delivered to aquatic resources, and blockages to fish passage will be cleared and retrofitted. The effectiveness monitoring and research will test assumptions made in some of the prescriptions, as well as monitor additional variables. Because these elements form the basis of adaptive management in this HCP, the incorporation of new information and the ability to change management strategy is assured. This adaptive management strategy is key to assuring this HCP will improve conditions for anadromous salmonids in the HCP area.

The No-Action Alternative would result in no improvement of fish habitat or populations as historical practices would be continued. The Action Alternatives would all call for direct action to conserve and improve habitat through the implementation of the Riparian Management Strategy described in section IV.D of the HCP. Alternatives C/3 would provide slightly increased conservation in the riparian management strategy by limiting the level of management in managed buffers to a greater extent than alternatives B/2 (for a more detailed description of the differences in the riparian management strategy for the action alternatives, please see sections 4.2.3 and 4.4.2 of the EIS). Furthermore, since the majority of all species that might inhabit the Planning Area have primary or secondary reliance on riparian habitat, all of these species would be adversely effected under the No-Action Alternative and benefitted under the action alternatives. The analysis that leads the Services to these conclusions has been elaborated in the EIS, described in the BO and Section 10 Statement of Findings, and summarized elsewhere in this ROD to explain the increased protection being accorded treaty-associated resources (specifically, anadromous salmonids) under the Services' trust responsibility to Native American Tribes.

Other Issues Analyzed

In addition to the issues which must be specifically considered under Section 10 of the ESA, the Services analyzed effects on issues including water and air quality, soils, cultural resources, and employment and income effects.

The EIS analyzed effects to water quality issues as a function of riparian area protection. The Riparian Management Strategy was analyzed as a component of Alternatives B and C for the eight non-OESF planning units and Alternatives 2 and 3 for the OESF. The No-Action Alternative would not include the Riparian Management Strategy. Instead, the No-Action Alternative would probably result in adherence to state regulatory minimums which are exceeded in every respect by the proposed Riparian Management Strategy. The Services concluded that each of the action alternatives would provide about the same amount of water quality protection, each exceeding the No-Action Alternative. The comparisons that enable this conclusion are also presented in this document to illustrate the extent to which the proposed HCP alternative goes in addressing fisheries resources as a matter of the Services' trust responsibility to Native American Tribes. Please refer to that discussion below for a more detailed comparison of Washington State minimum forest practices regulations (No-Action Alternative) and the HCP riparian management strategy.

In the EIS, the Services analyzed effects to plants in terms of species listed under the ESA, proposed for listing, and candidate species. Generally, the Services concluded that the plants described in Tables 4.5.5 and 4.5.6 of the EIS have very limited ranges, narrow habitat requirements and are restricted to very small areas. As a result, the DNR could manage them effectively while meeting other land management objectives such as timber production. Under No-Action, listed and sensitive plants would receive protection incidental to areas that are otherwise off-limits to timber harvest such as for spotted owl and murrelet take avoidance. However, when owl sites prove unoccupied, these areas would become available for harvest without prescription. For the Action Alternatives, listed and sensitive plants would receive protection incidental to the riparian management strategy and other protection strategies that entail buffering such as for special habitats and other "uncommon habitat" areas such as talus, cave entrances, and wetlands. Other harvest deferral prescriptions such as for seasonal nest and den protection will also provide similar incidental protection for these resources. Such protection would exceed the level provided under the No-Action alternatives which does not provide seasonal protection.

Air Quality was analyzed in terms of two pollutant sources related to forest management-activities: prescribed burning and airborne dust from logging roads. From the EIS the Services concluded that effects to air quality would be approximately the same for all alternatives with somewhat lower effects under Alternatives B and 2 (the DNR HCP Alternatives). Amount of fire used in site preparation would not be altered by any of the alternatives. Prescribed burning as a tool to lessen the risk of wildfire with its attendant air quality impacts, would increase under Alternatives B/2 resulting in a net benefit to air quality when compared to the No-Action Alternative and Alternatives C/3. Airborne dust would be expected to be reduced under the action alternatives, the result of DNR's shift to improvement of its road management. Generally, road usage would be expected to remain the same under all alternatives analyzed.

Soils impacts were analyzed in terms of levels of management induced disturbance. For the five West-side, non-OESF planning units management induced disturbance of soil would be lower

under Alternatives B and C than under the No Action Alternative as the result of the increased protection of areas that are traditionally potentially vulnerable to soils disturbance during forest management. For the 3 East-side planning units the level of disturbance would be about the same under Alternative B and C as under the No Action Alternative. Amongst the OESF Alternatives, soil disturbance under Alternative 1 would approximate relative levels expected under the non-OESF No Action Alternative, as the strategies would be the same. Alternatives 2 and 3 would yield lower soils-related impacts relative to the No Action Alternative as the result of the increased protection of areas that are traditionally potentially vulnerable to soils disturbance during forest management.

Effects to cultural resources would be expected to be the same under any of the alternatives. This is because 1) the DNR is required to avoid intentional harm to certain cultural resources under State law, and 2) DNR current procedure is to survey areas and obtain as much information from tribes and other interested parties before a timber sale is executed and this policy would remain in effect regardless of the alternative implemented. The DNR stated goal is to prevent timber harvesting and related activities from inadvertently damaging cultural resources. Mitigation measures that will be applied regardless of alternative implemented will include modification of practices, physical protection of resources, data recovery, and where appropriate, seeking of additional professional assistance.

Socioeconomic concerns were analyzed according to comparative effects on regional employment and personal income, by planning unit, based on predicted differences in harvest levels amongst the alternatives. Alternatives B and 2 (DNR HCP Alternatives) would provide higher expected harvests when compared to the No Action Alternative and to Alternative C (Added Conservation Alternative). In turn, according to the analysis presented in the EIS, affected communities could expect the most promising outlook for employment and income under Alternatives 2 and B compared to the rest of the alternatives analyzed.

On the basis that the DNR HCP Alternatives comprehensively address the conservation of the habitat on the Planning Area, meet the statutory criteria for permit issuance under Section 10(a)(2)(B) of the ESA, incorporate mitigation measures to the extent practicable, and meet the Services trust responsibility to native Americans, the Services have adopted the DNR HCP alternative for its NEPA decision. The Services believe the HCP Alternative's prescriptive strategies for the owl, Oregon silverspot butterfly, murrelet, grizzly bear, gray wolf, peregrine falcon, and bald eagle, combined with Riparian Management Strategy, prescriptive measures for special habitats, and landscape management, will conserve habitat for all species dependent on the habitat types present in the plan area. This assessment is based on an overall comparison of the benefits and disadvantages that exist amongst the alternatives that were analyzed in detail in the EIS, BO, and Findings.

ESA Section 10 Issuance Criteria

The findings presented in the Services' Section 10 Statement of Findings are herein incorporated by reference.

Trust Responsibility

Tribal Consultation

Communication with interested Native American Tribes and representative entities such as the Northwest Indian Fisheries Commission has been an important component of the development of this proposed action. The Services are utilizing a cooperative agreement with the Northwest Indian Fisheries Commission to ensure the involvement of interested Tribes in the HCP process.

On March 26, 1996, the Services met with members and representatives of interested Tribes to discuss the HCP process, and to focus on concerns of the Tribes regarding the subject proposal as well as other pending HCP proposals.

The Services and Applicant have discussed the DNR HCP at forums attended by representatives from the Lummi, Tulalip Tribes, Squaxin Island, Jamestown Klallam, Port Gamble S'Klallam, Northwest Indian Fisheries Commission, Hoh, Skokomish, Skagit System Cooperative, Bureau of Indian Affairs, DNR Tribal Relations Liaison, Yakama Indian Nation, the Puyallup Tribe of Indians, and the Muckleshoot Indian Tribe. On June 5, 1996, representatives of the HCP Program from the Services traveled to Toppenish, Washington for a presentation and dialogue for the benefit of Eastside (of the Cascade Mountain Range) Tribes at the Natural Resources Offices of the Yakama Indian Nation. Subsequently, a presentation on the HCP was given at the Northwest Indian Fisheries Commission on June 12, 1996 and was attended by all of the above-mentioned representatives except the Yakama Indian Nation. The June 12, 1996 meeting was called to address concerns of twenty Tribes regarding the Washington DNR HCP and residual concerns regarding other currently pending proposals. In addition to aquatic resources and slope stability issues relative to healthy fisheries, tribal biologists raised concern about the conservation measures and impacts pertaining to deer and elk in the DNR HCP. The Tribes further expressed a cultural need for seclusion in a relatively aesthetic setting in the forest.

The Services will continue to consult with interested Tribes regarding HCP development and implementation. Since some of the strategic planning approaches described in the HCP will be followed by detailed planning during implementation, and the agreement provides for Services involvement in the development of implementation plans, the Services believe that by extension, the Tribes would be able to provide the Services with the site specific knowledge and technical expertise.

Effects on Tribal Resources of Concern

One of the factors the Services considered in making their decision on DNR's application was consistency with the Federal trust responsibility to Native American Tribes. The trust responsibility imposes a duty on Federal agencies to protect trust resources of Tribes-(depending upon the circumstances this may include, for example, Tribal lands, water rights, or hunting, fishing and gathering rights guaranteed by Treaty). The mitigation measures incorporated in the HCP for fish and other wildlife (summarized below) demonstrate that implementation of the HCP will provide protection in excess of that which would be provided in the absence of the HCP, to trust resources within the Planning Area.

Without question, the vast majority of the dialogue with interested tribes during the development of the underlying HCP focused on measures proposed to avoid, minimize and mitigate effects of commercial forestry on fish. Accordingly, salmonids and their habitat were a major focus of the DNR HCP. The goals of this HCP include increasing instream and riparian habitat quality so as to develop properly functioning fish habitat capable of supporting both resident and anadromous fish species. The actions taken under this HCP should result in fish habitat conditions that allow for increases in fish population numbers above populations likely to result under state forest-practices regulations, which would apply in the absence of the HCP. In other words, the HCP measures designed to benefit fish are substantially greater than the goals and effects of State forest-practices regulations and would be expected to help increase the harvestable numbers of fish.

The HCP's riparian strategy is composed of the following elements: Fishbearing Streams -- Riparian Management Zones (RMZs) would equal one site potential tree height, average 150 feet with a range of 100 to 215 feet. In areas of high potential windthrow, an added wind buffer would extend the windward side of the RMZ by 100 feet for Type 1 and 2 waters and 50 feet for Type 3 waters larger than five feet wide. Nonfishbearing Streams -- Type 4 RMZs would be 100 feet wide. RMZs for Type 5 water would be defined by the area of unstable slope protection and in the absence of unstable slopes when necessary to protect non-timber resources such as water quality, fish and wildlife habitat, and sensitive plant species. No harvest other than that related to restoration activities would be allowed within 25 feet of the active channel margin on waters Type 1-4. Restoration management would be allowed between 25 -100 feet from the active channel margin on waters Type 1-4.

In contrast to the HCP, State regulations do not require no-harvest buffers and only require minimal numbers of leave trees in the riparian zones. For instance, under State rules a fishbearing stream less than 5 feet wide will receive a 25-foot riparian management zone containing 25 trees per 1,000 linear feet. These trees can be as small as 6 inches in DBH and half of the number of retained trees can be deciduous. Some additional number of small trees or shrubs may be needed to meet shading requirements specified in the rules. Under the proposed HCP, Relative Density and Quadratic Mean Diameter requirements for foraging and dispersal (FD) habitat will result in a higher density stand composed of larger trees. For example, on the

west side the quad mean diameter (QMD) requirement is 10 inches. If the trees retained are all 10 inches in DBH, the resulting stand will contain 175-280 trees per acre. In comparison, management by the State regulations will retain just under 44 trees per acre as small as 6 inches.

The Services are acutely aware of tribal concerns regarding trust resources and desire for involvement in implementation planning, particularly the importance anadromous salmonids play in tribal culture and economy. The Services share tribal interests in maintaining and increasing harvestable numbers of fish, and firmly believe the conservation measures identified in this HCP will further that objective. While there are more conservative habitat conservation measures for riparian habitats on nearby federal lands, the Service's believe the riparian conservation measures in this HCP will increase the quality of riparian and instream fish habitat and thereby increase fish production in the long term.

Tribal representatives have also recently raised concerns with regard to elk, because of the HCP's emphasis on mitigation measures provided to minimize the effects of the predicted take of northern spotted owls. However, the HCP also contains conservation measures that will benefit elk as described in the FEIS on page 3-51 to 3-52. In addition to open areas for calving, the Services note that elk requirements for sufficient cover, mature forests for foraging habitat late in the growing season, security and thermal cover, and reduced vulnerability resulting from such cover. Each of these habitat-based elk needs would result from HCP implementation landscape management measures providing for a full range of forest stand conditions through time. On the other hand, provision of these improving factors would be uncertain in the absence of the HCP. The availability of quality forage and hiding cover contribute to the year-round distribution of elk; during some times of the year, elk often seek larger, more-secure, blocks of cover. These habitat attributes will likely improve under the HCP. Elk also show preferences for moist sites during portions of the year, such as spring parturition and lactation periods, and in later summer and fall. The Service believe that many of the special habitat provisions for wetlands and forested wetlands will benefit elk by providing the above-mentioned benefits.

For these reasons, the Services believe that the HCP would contribute to conserving Native American trust resources. In response to Tribal comments and concerns, the Services have included provisions in the IA to provide further assurances to the Tribes that trust resources would be protected in the event of unexpected circumstances in the future. First, a provision was included in section 28.0 of the IA to state that "*Nothing contained in this Agreement is intended to unlawfully limit the authority or responsibility of the United States government or DNR to invoke penalties or otherwise fulfill their respective responsibilities as public agencies in accordance with law.*" This provision was included, in part, to clarify that any Service action to add a new species to the incidental take permit in the future would be consistent with its trust responsibility to Native American Indian Tribes. Second, the requirement for additional mitigation in the case of extraordinary circumstances can be invoked when a substantial material adverse change in the species' status arises. In this way, the Services would be able to address a species' need for additional mitigation before that species declined to the level of jeopardy rather

than after it reaches that point. This provision also ensures that the Services would have the means necessary to continue to comply with their trust responsibilities.

Conclusion

The Services have adopted Alternatives B/2, the proposed DNR HCP. This decision was made because the HCP proposed by DNR to comply with the Endangered Species Act, as well as its legal and constitutional mandates as the Trustee manager of State timber lands, meets the statutory criteria for issuance of an incidental take permit under section 10 of the ESA, as well as the Services' trust responsibility to native American tribes

The DNR HCP Alternatives, as described in the HCP, analyzed in the EIS, and summarized above, provides a comprehensive package of conservation prescriptions and activities as to all species for which the DNR seeks coverage. The Proposed HCP Alternative specifically addresses seven listed species, riparian habitat management which captures the majority of species that might inhabit the plan area, including anadromous salmonids which are a resource subject to the Services' trust responsibility. Furthermore, the Proposed HCP Alternative provides management goals for all forest types and associated species, as well as special habitat management for habitats such as large trees, caves, talus slopes, wetlands, oak woodlands, down logs, and standing snags.

While the No-Action Alternative (together, Alternatives A/1) might provide protection for spotted owls through "owl circle management," that protection would not be provided with any certainty. No-Action would provide the weakest riparian habitat protection of the alternatives analyzed. It would also do nothing more than continue to implement minimum State regulatory practices for the special habitats mentioned above. Listed species would be protected by force of regulation eliminating any management activities in the absence of agreed upon mitigation. No landscape level management would occur.

While Alternatives C/3 propose some added conservation measures, C/3 would result in lower harvest volumes than would result under Alternative B/2 and lower revenues would be generated for the trust beneficiaries. As this would hinder and perhaps prevent DNR from fulfilling its fiduciary obligations to the trust beneficiaries, the DNR did not propose C/3 in its application package. In addition, according to the economic analysis presented in the EIS, regional employment and income would be adversely affected under Alternative C/3 compared to the DNR HCP alternative. (Under No Action, regional employment and income would also be subject to greater disruption than they would under Alternative B (FEIS section 4.10).) Nevertheless, Alternative C/3 met the Services' purposes and needs for the action, and was analyzed in detail along with Alternative B/2. However, it was not selected for adoption because the Services have determined that the proposed permit application meets the statutory criteria for permit issuance under ESA Section 10.

Implementation

The DNR HCP Alternative will be implemented as provided in section 6, "Implementation," of the HCP and as provided in the Implementation Agreement.

Public Involvement

There has been extensive public involvement in the scoping of the underlying plan and subsequent review of project associated documents. In 1993, as management alternatives for the OESF began to be developed, these concepts were shared with interested individuals, tribes, the State Trust Lands beneficiaries, industry and environmental groups. In December 1993, informational workshops in Olympia and Port Angeles, Washington to inform the public of the OESF HCP Planning effort, were announced. In February 1994, over 600 scoping notices regarding the OESF HCP were mailed. On March 8 and 16, 1994, press releases were issued announcing a public scoping meeting to be held on the doorstep of the OESF, in Forks, Washington. Subsequently, a scoping meeting was held on March 29, 1994, and attended by the applicant and Services.

Scoping meetings for the DNR HCP were held over a 7-week period from April 25 to June 6, 1994. During the first week, out 1,600 scoping notices were mailed requesting public comment and providing information about a series of public scoping workshops. The written notice served as a determination of significance/scoping notice under SEPA and as a notice of intent to prepare an EIS under NEPA.

A total of 10 workshops were held in the following Washington cities: Olympia (3), Mount Vernon, Port Townsend, Ellensburg, Hoquiam, Enumclaw, Vancouver, and Okanogan. A list of key issues, concerns and potential impacts that were raised included coordination with Tribes, and Treaty rights and tribal resources.

Public Scoping dates and cities included: May 4, 1994--Olympia; May 5, 1994--Olympia; May 10, 1994--Mt. Vernon; May 11, 1994--Port Townsend; May 17, 1994--Ellensburg; May 18, 1994--Hoquiam; May 19, 1994--Enumclaw; May 24, 1994--Vancouver; May 26, 1994--Olympia; June 2, 1994--Okanogan.

HCP Workshops included: February 1995--The DNR Board of Natural Resources held 4 special meetings to hear public input. April 20, 1995--DNR Board of Natural Resources open HCP Workshop. October 3, 1995--DNR Board of Natural Resources open HCP Workshop.

The Applicant, with technical assistance from the Services continued to develop and refine the HCP. Interim drafts were reviewed by the Washington Department of Fish and Wildlife and the Northwest Indian Fisheries Commission.

Upon completion of draft documents, distribution to interested parties was initiated and a Federal Register notice was published on April 5, 1996 (61 F.R. 15297) which announced receipt of the application for an Incidental Take Permit and IA with unlisted species provisions. The application package was announced available for public review at that time. An additional notice was published on April 10, 1996, announcing dates for additional DNR Board of Natural Resources Workshops held during the public comment period. Those meetings included: April 15, 1996--Vancouver, Washington; April 16, 1996--Spokane; April 18, 1996--Seattle; April 30, 1996--Port Angeles; May 6, 1996--Olympia.

The NEPA/SEPA/ESA public comment periods ran concurrently from the date of the announcement in the Federal Register, from April 5, through May 20, 1996. Written comments were received from all meetings, and extensive written comment was received through the mail during the Public Comment Period.

During the comment period over 900 copies of the DEIS and HCP were distributed to interested parties and agencies and an additional 3,624 copies of the executive summaries for the HCP and the EIS were also distributed. A detailed distribution list appears in Appendix 2 of the FEIS and is incorporated here, by reference.

As a result of public comment, the Services made clarifying changes in the DEIS, HCP, and IA and prepared written responses to comments. Because of the volume of public and other response, and because of the amount of overlap of issues covered in comments, the Services developed a topical outline summarizing comments received and mentioning variations on concerns raised in public comments. From these topical comment summaries, the Services were able to prepare written responses which, assembled with the topical summaries, appear in section 3 of the FEIS.

The Services announced the availability of the final application package and FEIS in the Federal Register on November 1, 1996 (61 F.R. 56563). The FEIS was distributed according to the Distribution Plan provided in Appendix 2 to the FEIS.

Signatures



Michael J. Spear, Regional Director
U.S. Fish and Wildlife Service



William Stelle, Jr., Regional Director
National Marine Fisheries Service

Dated: JAN 30 1997

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