



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

## **RECORD OF DECISION**

**Proposed Minor Modification of a Habitat Conservation Plan  
and respective Incidental Take Permit  
for Threatened and Endangered Species  
held by Plum Creek Timber Company  
for Lands in the I-90 Corridor  
of King and Kittitas Counties, Washington,  
as a result of the I-90 Land Exchange.**

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### **I. INTRODUCTION**

This Record of Decision (ROD) has been developed by the U.S. Fish and Wildlife Service (Service) and the National Marine Fisheries Service (NMFS) (collectively the Services) 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 a request for modification of a Habitat Conservation Plan (HCP) to incorporate acquired lands into the HCP land base and remove lands exchanged and donated to the U.S. Forest Service.

This ROD will: (1) state the Services' decision and present the rationale for its decision; (2) identify the alternatives considered in reaching the decision; (3) specify the environmentally preferable alternative(s); (4) state whether all practicable means to avoid or minimize environmental harm from implementation of the selected alternative have been adopted (40 CFR 1505.2); and (5) discuss all relevant factors used in decision-making. This ROD is based upon the modified HCP, Supplemental Environmental Impact Statement, and other documents listed later in this document (See Administrative Record).

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## II. BACKGROUND

Plum Creek's existing HCP (Plum Creek 1996) was approved and an incidental take permit (ITP) was originally issued in June 1996. The HCP and ITP apply to activities for the management of commercial timberland within a 170,600-acre Project Area intermingled within a 418,700-acre Planning Area that includes Federal lands. The Planning Area is located within east King County and west Kittitas County, Washington. HCP Figure 1 (page 45) illustrates the land ownership pattern that currently exists within the Planning Area. Figure 1 of this document depicts the post-exchange ownership. Most of the Planning Area is within the Mt. Baker-Snoqualmie and Wenatchee National Forests' outer boundary. It is bounded on the north by the Alpine Lakes Wilderness and on the south by the Norse Peak Wilderness. The Cedar River Municipal Watershed (City of Seattle) is located northwest of the Planning Area with only a small portion lying within the Planning Area. The Green River Municipal Watershed (City of Tacoma) is located adjacent to, and south of the Cedar River Watershed. The Green River Watershed covers a large portion of the Planning Area. Although the City of Tacoma, through agreements with the Forest Service and private landowners, maintains locked gates to restrict public access to portions of the Green River Municipal watershed, it is neither "closed" to the public, nor is public access restricted in the HCP Planning Area. The Planning Area is not contiguous to any tribal reservations or National Parks, nor does it include any incorporated cities. However, lands within the Planning Area are important to several Native American Tribes. The HCP and associated "unlisted species agreement" addressed all vertebrate species which may be found within the Planning Area.

The HCP contemplated that Plum Creek lands managed under the HCP and the ITP would likely change as a result of future land exchanges with the United States. Both, the HCP and its associated Implementation Agreement (IA) (Plum Creek et al. 1996) provide procedures and criteria for modification of the HCP to accommodate such exchanges.

The HCP describes two scenarios for land exchanges with the United States whereby "the biological integrity of the HCP would be either maintained or improved" (Section 5.3.4.2; HCP). "Scenario One" exchanges Plum Creek-owned lands in the Planning Area for government-owned lands outside of the Planning Area. "Scenario Two" describes an exchange of Federal and Plum Creek lands so that within the HCP Planning Area there is: (1) an increase in Forest Service lands managed as Late-Successional Reserves (LSR) or Adaptive Management Areas (AMA) under the Northwest Forest Plan (USDA and USDI 1994a and b); (2) a reduction in Federal ownership of lands managed as Matrix under the Forest Plan; and, (3) a net decrease in harvestable area. The IA explicitly provides that the Services will approve modification of the HCP to accommodate such a land exchange provided that it does not compromise the effectiveness of the HCP or result in a level of incidental take of Permit Species beyond that analyzed and authorized in the original HCP and ITP.

In October 1998, the United States Congress enacted the Interstate-90 Land Exchange Act, 105 Public Law 277 (112 Stat. 2681-326), Title VI, §§ 601-612 (1998), which authorizes and directs the United States Forest Service to complete a land exchange with Plum Creek involving lands within and outside of the HCP Planning Area. In November of 1999, the Interior Appropriations Bill (H.R. 2466) contained a number of amendments including Amendment No. 1630. Amendment 1630 adjusted the lands involved in the exchange. Other changes made to the legislation are discussed later in this document in Section VII. As a result of this HCP modification, lands within the HCP Planning Area that are exchanged from Plum Creek to the United States will be removed from coverage by Plum Creek's incidental take permit; and those lands exchanged from the United States to Plum Creek within the Planning Area may be added to

coverage by the incidental take permit. The land exchange directed by the Interstate-90 Land Exchange Act of 1998, as amended, is consistent with land-exchange scenarios in the original HCP that maintain or improve the biological integrity of the HCP.

Consistent with the procedures and criteria set forth in the HCP and IA, Plum Creek submitted a request to modify the HCP to accommodate the legislated land exchange (letter of October 23, 1998). Plum Creek's request is accompanied by a modification to the HCP (HCP Modification Document) (Plum Creek 1998), which describes the modifications in detail and analyzes the effects of those proposed modifications. Plum Creek's request has been reviewed by the Services and subjected to environmental review under NEPA. The NEPA process described later in this document consisted of the original HCP (Plum Creek 1996) and draft and final EIS (USDI and USDC 1995 and 1996) which formed the basis for the Supplement; internal scoping conducted in 1998 which led the Services to believe the use of a Supplemental EIS was appropriate for compliance with NEPA; the Draft SEIS (USDI and USDC 1998) and attached HCP Modification Document (Plum Creek 1998) which were released for public comment in December of 1998; and finally the FSEIS (USDI and USDC 1999) which contained responses to comments and the attached revised HCP Modification Document (Plum Creek 1999) which were released to the public in May 1999. This Record of Decision forms the final stages of NEPA compliance for the proposed action. Additional changes to the action were made by Congress and are described in greater detail later in this document.

### **III. PROJECT DESCRIPTION**

The Services propose to approve a minor modification to the HCP based upon a request by Plum Creek Timber Company. Plum Creek has presented the Services with a modified HCP which would: (1) amend the land base of the HCP to reflect the new ownership regime following the I-90 Land Exchange; (2) incorporate other ancillary changes to the HCP which are required or logical as a result of the new land base; and (3) revise the impact analyses accordingly.

This project of modifying the HCP consists of a land exchange which includes several donations by Plum Creek to the Forest Service. It also includes the potential transfer of additional land from Plum Creek to the Forest Service as a result of the lands held in escrow and the option to buy additional lands extended by Plum Creek.

Plum Creek will own about 130,000 to 148,300 acres within the HCP planning area as a result of this exchange, compared with about 170,500 acres prior to the exchange. Plum Creek will acquire about 8,600 acres from the Forest Service within the HCP Planning Area, and will exchange or donate about 30,800 to 49,000 acres to the Forest Service. There is no change to the outer boundary of the HCP Planning Area. Within the HCP Planning Area, Plum Creek ownership will increase about 2,000 acres in the Green River Basin and decrease about 22,300 to 40,000 acres in the Yakima River Basin. The Forest Service will acquire about 5,400 to 10,100 acres of northern spotted owl nesting, roosting, and foraging habitat; and about 6,200 to 10,000 acres of foraging and dispersal habitat. National Forest Lands will increase by about 5,300 to 9,300 acres in Late-Successional Reserves; increase by about 17,500 to 31,700 acres in Adaptive Management Areas; increase by as much as 12,000 acres in riparian reserves; and will decrease by about 700 acres in Matrix lands. Potential murrelet habitat on National Forest lands will decrease by about 470 acres. In addition, the Interstate-90 Land Exchange Act established the Kelly Butte Special Management Area of 5,616 acres which will consist of 2,408 acres of land from Plum Creek, 2,448 acres of previously Matrix lands, 434 acres of Late-Successional Reserve, and 326 acres of Administratively Withdrawn lands.

As a result of the land exchange and modified land base, a number of ancillary changes are being made to the HCP. The amounts of forested habitats (owl habitat categories and stand structural stages) are adjusted to reflect the same management regimes applied to different lands with different starting conditions. Spotted owl habitat harvest deferrals (HCP Section 3.2.1.1(pages 158-161)) are adjusted to reflect new site-specific conditions -- some deferrals are exchanged to the Forest Service or dropped, while additional deferrals are established. Additional lands (lands to be acquired by Plum Creek) have been identified to receive marbled murrelet surveys and, if occupied, the protections outlined in the original HCP. Goshawk nest harvest deferrals (HCP Section 3.5.2.4 (page 200)) will also be reduced. Demographic monitoring areas for spotted owls will be adjusted to reflect the new land base. Response reaches for aquatic monitoring will be designated to reflect the new land base, and additional adjustments will be made to aquatic monitoring to improve its effectiveness and increase the ability to learn from the collected data. For instance, it is expected that fish monitoring in Cabin Creek (as described in HCP section 5.1.6, Objective 3 (page 261)) may be discontinued, while similar fish monitoring may be added in the monitored response reaches described under Objective 1 (page 259), as amended in HCP Modification Document section 2.6.3 (page 26) and as amended in Section VII of this document.

Chapter 1 of the FSEIS Introduction (USDI and USDC 1999) and Section 1 of the HCP Modification document Background (Plum Creek 1999) provide additional descriptions of the project. The SEIS and HCP modification document examined recent changes in the affected environment including species resident in the Planning Area, and the SEIS examined in detail, the environmental consequences of the alternatives.

#### **IV. DECISION AND STATUTORY BASIS (40 CFR 1505.2(a))**

The Services considered three alternatives: (1) no action; (2) partial modification (release of lands transferred to Forest Service but no accommodation of lands acquired by Plum Creek); and (3) proposed modification. The Services herein adopt the Proposed HCP Modification as described in the FSEIS and attached HCP Modification Document, and as amended by Section VII of this document, Changes From The FSEIS. The statutory basis for this action is found in the Endangered Species Act (Act). In making this decision, the Services have also considered our Trust responsibilities to Native American Tribes, our responsibilities under NEPA, and our contractual obligations under the Implementation Agreement.

As a result of this decision, the Services will execute a letter of concurrence addressing the requested HCP modification. The Services' response to the requested modification will be based upon the HCP Modification Document (Plum Creek 1999) and contents of section VII herein. The rationale for this decision follows in the remainder of this document.

#### **V. THE ALTERNATIVES (40 CFR 1505.2(b))**

The SEIS described and analyzed the effects of several alternatives and also eliminated other alternatives from detailed analysis. The reasonable alternatives are described in the SEIS. The rationale for eliminating the other alternatives from detailed analysis was presented in the SEIS in section 2.3. The DSEIS and FSEIS (together referred to as the SEIS) are incorporated here by reference.

In determining the scope of the proposed action, the Services and Plum Creek (Permittee) considered their respective purposes and needs. These purposes and needs were stated in the SEIS, 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 Act. The Permittee's purposes and needs corresponded to its duty to comply with the Act.

### **Alternatives Considered**

No formal public scoping was conducted for the environmental-review process associated with the SEIS, consistent with 40 CFR 1502.9(c)(4). During the development of the HCP modification, the Services generated and considered 5 alternatives. These included: (1) no action; (2) partial HCP modification; (3) proposed HCP modification; (4) dissolve the HCP; and (5) require additional mitigation. Alternatives 4 and 5 were not analyzed in detail in the SEIS. The Services determined that neither of those Alternatives (4 or 5) would meet both the statutory and regulatory requirements of the Act, and all of the purposes and needs of the proposed action as described in the SEIS. This decision was made, in part, based upon the assurances provided to the Permittee in the 1996 Implementation Agreement.

### **Alternatives Analyzed**

The SEIS provides descriptions of the alternatives analyzed (Chapter 2. Alternatives, Including the Proposed Action) and comparisons of the impacts (Chapter 4. Environmental Consequences).

#### No-Action Alternative

The No-Action Alternative described the Permittee's existing HCP and continued implementation in the absence of a land exchange. This alternative was not adopted because it did not meet the purposes and needs of the parties as expressed in the SEIS. The No-Action Alternative was unsatisfactory in comparison to the preferred alternative because it does not provide the ability for Plum Creek and the Forest Service to meet the needs of the I-90 Land Exchange, or for the Forest Service to meet the needs of the Snoqualmie Pass Adaptive Management Area (SPAMA) Plan (USDA 1997a and b). In addition, the Interstate-90 Land Exchange Act of 1998 directed the Forest Service to conduct this exchange. The Forest Service must also comply with NEPA and has addressed their purpose and need, as well as the No-action scenario in draft and final EIS documents (USDA 1998c and 1999a) which address the action of exchanging lands and how the federally acquired lands will be managed.

#### Proposed HCP Modification

The Services have identified the Proposed HCP Modification as both agencies' (Fish and Wildlife Service and National Marine Fisheries Service) preferred alternative because it best meets the purposes and needs of the Services and the Permittee. The proposed action is described in great detail in the HCP Modification Document and was summarized under the section entitled Project Description above.

#### Partial HCP Modification

The Partial HCP Modification alternative would allow the exchange to move forward and would remove newly acquired Federal lands from the coverage of the HCP. However, lands acquired by Plum Creek would not be managed under the HCP. Instead, those lands would be managed in compliance with State and Federal regulations, including section 9 of the Act. This alternative was not selected because it would not be consistent with the Implementation Agreement and because it would not protect special habitat types upon which many species rely. This alternative would not meet the purpose and need of the project proponent or the Services.

### **Identification of Environmentally Preferred Alternative(s) (40 CFR 1505.2(b))**

Both the Proposed HCP Modification and the No-action Alternative are considered by the Services to be the environmentally preferable alternatives. The Proposed HCP Modification may be considered one of the environmentally preferable alternatives because it provides a clear increment of benefit for most fish and wildlife species within the Planning Area. However, it is not as preferable for some other species as the No-action Alternative. As discussed in SEIS section 4.15 Conclusion, the Proposed HCP Modification provides benefits for some aspects of the human environment, but it does not provide as much benefit as the No-action Alternative provides for other aspects of the human environment. For most species, the existing checkerboard pattern of ownership would provide an interspersion of habitats which would be beneficial. The additional contiguous areas of older forest expected with the Proposed HCP Modification are viewed by many to be a preferred environmental condition because they believe that fragmentation may be a limiting factor for many species and because the existing areas of contiguous older forest are generally without roads and offer recreational opportunities and aesthetic values not generally associated with commercially managed forests. The Proposed HCP Modification is a series of trade-offs as described in SEIS section 4.15 Conclusion. While the amount of National Forest Lands within the Yakima River Basin will increase dramatically, there will be a small decrease in the Green River Basin. This may seem like an overall environmental improvement, but to species which only utilize the Green River Basin for habitat within the Planning Area (such as marbled murrelets and Puget Sound chinook salmon), the No-Action Alternative of the existing HCP and ownership pattern will appear to be the environmentally preferable alternative. The same situation exists for the Muckelshoot Indian Tribe whose usual and accustomed area is found within the Green River Basin and who are very concerned about the status and future of Puget Sound chinook found in the Green River, and other Green River salmonids and wildlife. For these reasons, the Services identified both the No-action Alternative and the Proposed HCP Modification as environmentally preferable alternatives.

Both of these alternatives offered clear benefits beyond the Partial HCP Modification Alternative. In the Partial HCP Modification Alternative, special habitat features would not receive important protection measures. For instance, wildlife species such as the Larch Mountain Salamander would be severely impacted on a local basis by this alternative.

### **VI. THE SELECTED ALTERNATIVE (40 CFR 1505.2(c))**

As stated above, the Services have adopted the Proposed HCP Modification Alternative in its entirety, as modified by section VII of this document, Changes From The FSEIS. The Services believe this alternative best meets the needs of the agencies and Plum Creek. This alternative provides protection to fish, wildlife, and other resources; meets the direction provided by the Implementation Agreement and the I-90 Land Exchange Act; and is considered as one of the environmentally preferable alternatives.

The Services selected this alternative as it best meets the needs of the Forest Service, as expressed in their planning documents; Plum Creek, as expressed in the purpose and need in the SEIS; and fully meets the needs of the Services, as expressed through our obligations under the Endangered Species Act and as implemented through the Services' HCP programs.

### **Avoidance of Harm (40 CFR 1505.2(c))**

The Services have adopted the HCP Modification Alternative, and thereby have adopted all means provided therein to avoid or minimize environmental harm by their implementation. In

adopting this alternative, the Services also adopt the monitoring program contained in that alternative, as described in Section 5 of the HCP. To avoid redundancy (40 CFR 1500.4(j)), the descriptions contained in the HCP and the FSEIS 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 covered under the permit, is given in the EIS (USDI and USDC 1995 and 1996) and Biological Opinion (Service 1996a) for the Services' actions on the Plum Creek ITP application of 1996. The HCP, IA, Biological Opinion, and EIS are herein incorporated by reference.

### **Implementation**

The Proposed HCP Alternative will be implemented as provided in HCP Section 5, Implementation, as amended, and as provided in the Implementation Agreement.

### **Minimization and Mitigation**

By adopting the Proposed HCP Modification, the Services have adopted all means provided therein to avoid or minimize environmental harm by its implementation. By definition, HCPs must provide sufficient means to minimize and mitigate the effects of take that might be permitted. The Proposed HCP Modification focuses on adjusting the minimization and mitigation elements to conform to the landscape and ownership pattern that would result from the land exchange. Measures to be implemented by Plum Creek to minimize and mitigate effects on vertebrate species are fully described in the HCP, and are amended by the HCP modification document. These measures also minimize and mitigate the effects on other aspects of the human environment as summarized in Table 2 of the FSEIS. The adequacy of the minimization and mitigation measures for fish and wildlife species are being addressed by the respective Services in their section 10 findings.

Chapter 4 of the SEIS provides comparisons of the impacts under the alternatives, including the proposed HCP Modification. The HCP Modification document also contains a description of the impacts expected under the proposed modification. Conservation measures have been carefully designed and adjusted to minimize and mitigate adverse environmental effects associated with timber harvest and other forest-management activities covered under the incidental take permit.

### **Monitoring and Reporting (40 CFR 1505.2 (b)).**

Plum Creek is required to monitor key criteria annually for the Permit Period and provide reports to the Services at years: 2, 5, 10, 15, 20, 30, 40, and 50, and at 10-year intervals during Phase II. The complete schedule of monitoring and reporting is presented in HCP Table 31 and HCP section 5.1 describes the monitoring program in additional detail. Monitoring will include the following types: implementation monitoring, habitat monitoring, owl monitoring, owl prey monitoring, breeding-bird monitoring, amphibian monitoring, aquatic monitoring (including effectiveness, water temperature, invertebrate indicators, and fish populations). Appropriate adjustments to the areas being monitored are contained within the HCP modification document. Additional adjustments are expected to continue as the HCP is implemented.

### Modifications and Amendments

Built into the HCP and IA are a number of opportunities to adjust the plan in response to new circumstances and information. In the event that a change to the plan is deemed desirable or necessary by the Services, we will have the following opportunities to effect change (presented in order of urgency):

- 1) Request Plum Creek to avail itself of the HCP flexibility;
- 2) Utilize, where applicable, the provisions for consultation with the Services;
- 3) Utilize, where applicable, the adaptive-management process;
- 4) Propose either minor changes or material amendments as necessary;
- 5) Seek additional mitigation from nearby Federal lands in the event of extraordinary circumstances;
- 6) Require redistribution of conservation measures as a result of extraordinary circumstances;
- 7) Terminate the Permit with respect to that species, if needed, to avoid jeopardy.

The Services anticipate utilizing the vast resources of the Federal Government to address species conservation on the subject ownership and other ownerships prior to resorting to the last element in this list. The existence of the above opportunities to address changing conditions and uncertainty enforce the Services' belief that all practicable means to avoid harm have been and will continue to be employed. Such a hierarchy of actions is consistent with the No Surprises Policy as it existed in 1996 and as codified in the February 23, 1998, Federal Register (63 FR 8859).

For instance, in response to requests by the Services, results of completed Watershed Analyses, and the judgement of Plum Creek staff, Plum Creek has agreed to measure the Riparian Habitat Areas beginning at the outside edge of the Channel Migration Zone or Channelized Debris-flow Zone. This displays the additional protection which can be achieved under the HCP as new information surfaces.

## **VII. CHANGES FROM THE FINAL SEIS**

In response to information received following the release of the Final Supplemental Environmental Impact Statement (FSEIS), the Services have made the following changes to the FSEIS and/or requested the following changes to Plum Creek's HCP Modification Document:

### **Marbled Murrelet Detections**

A number of changes are described below to incorporate the recent observations of murrelets in the Green River Basin and to clarify some of the previous language regarding critical habitat designation in the Green River Basin.

#### **FSEIS Section 3.7.2.2 Marbled Murrelets and HCP Section 2.10.2.3 Plum Creek's Marbled Murrelet Surveys**

The following paragraphs are added to reflect new information:

In the spring of 1999, the Fish and Wildlife Service and Plum Creek cooperatively identified lands likely to be surveyed under the modified HCP. The lands to be surveyed under the modified HCP are identified in Figure 1 of the Record of Decision. The procedures and location of survey stations were coordinated with the Washington Department of Fish and Wildlife.

On June 11, 1999, a Plum Creek murrelet survey crew made visual and audial detections of murrelets in upper Champion Creek. Visual and audial detections were also made on the following days and verified by radar observations. Circling behavior was observed associated with several detections. In subsequent surveys of adjacent sections, murrelets were again detected. Following these results, the Fish and Wildlife Service and Plum Creek cooperatively identified stands which would have been protected according to HCP Section 3.2.1.2 (3) Marbled Murrelet – Nest-Site Protection. As discussed in the HCP modification document and FSEIS, additional occupied stands may be identified as a result of surveys to be conducted under the HCP on remaining habitat. Should such required surveys identify occupied murrelet stands, those stands will also be protected under the HCP.

### **HCP Section 2.10.2.2 Occurrence in the Planning Area**

The following changes have been made to reflect new information:

Marbled murrelet use of the Planning Area is unlikely to be at a low level based on a combination of: (1) relatively low murrelet populations in southern Puget Sound; (2) ~~lack~~dearth of suitable habitat in the Planning Area west of the Cascade crest; and (3) ~~apparent absence~~low numbers of observed murrelets in the Planning Area, based on current site-specific surveys and strategic radar work. Reductions in the amount of mature forests in the Planning Area west of the Cascade crest may be one of the primary factors ~~precluding~~impeding greater murrelets from using use of the area. In fact, when proposing critical habitat for the murrelets in the western Cascade range, the FWS designated forested areas north and south of the Planning Area (Figure 6), but the area within the Green River basin was not considered as critical habitat presumably because forests of sufficient age and areal extent necessary to support murrelet nesting requirements are uncommon in most of the watersheds in the basin. The Service designated portions of 10 sections (about 6,800 acres) as critical habitat within the Green River Basin (HCP Figure 6)(May 24, 1996, Federal Register; 61 FR 26256-26320). Murrelets were subsequently discovered by Plum Creek Timber Company and their contractors in two separate stands occurring on two of the sections designated as critical habitat.

### **Landbase Adjustments**

In November 1999, the United States Congress amended the Interstate-90 Land Exchange Act to reflect the removal of two sections originally going from the Forest Service to Plum Creek. While conducting marbled murrelet surveys required in the HCP for those sections that were planned to be acquired by Plum Creek and that contained suitable habitat, Plum Creek scientists discovered the presence of murrelets. Since the HCP requires a set aside of acreage when murrelets are present, Plum Creek declined to accept those two sections in which presence was detected. Eight Plum Creek sections were withdrawn to offset the value contained in the two murrelet sections. The Interstate-90 Land Exchange Act requires that the exchange of lands must be for equal value (Interstate-90 Land Exchange Act, Section 605(a)(1)). Since the Forest Service expressed a desire to acquire the 8 Plum Creek sections, it was agreed to place them in escrow for 3 years to allow enough time for the Forest Service to obtain the funding for the purchase. The eight sections will continue to be covered in the HCP as long as they remain in Plum Creek ownership. Should they be purchased by the Forest Service they will be removed from the HCP. Sales to the Federal Government are covered in Section 5.3.4.2 of the HCP.

Specifically, Amendment No. 1630 amended the Interstate-90 Land Exchange Act of 1998 to require certain lands described in the Act be placed in escrow by Plum Creek, according to terms and conditions acceptable to the Secretary and Plum Creek, for a 3-year period beginning on the

Specifically, Amendment No. 1630 amended the Interstate-90 Land Exchange Act of 1998 to require certain lands described in the Act be placed in escrow by Plum Creek, according to terms and conditions acceptable to the Secretary and Plum Creek, for a 3-year period beginning on the later of the date of enactment of this Act or consummation of the land exchange. During the period the lands are held in escrow, Plum Creek shall not undertake any activities on these lands except for fire suppression and road maintenance, without the approval of the Secretary [of Agriculture], which shall not be unreasonably withheld. The amendment also provided that equalization of values in the exchange could be accomplished through conveyance of any other lands or by cash payments. It stated that as funds or lands are provided to Plum Creek by the Secretary, Plum Creek shall release to the United States deeds for lands and interests in land held in escrow based on the values determined during the Appraisal process in the context of the whole estate to be conveyed. Deeds shall be released for lands and interests in lands in the specified order. The Secretary and Plum Creek shall make the adjustments directed in the Act and consummate the land exchange within 30 days of enactment of the Interstate-90 Land Exchange Amendment, unless the Secretary and Plum Creek mutually agree to extend the consummation date.

Therefore, as a result of removal from the package of the two sections (about 1,276 acres), the Forest Service lands being offered to Plum Creek are of less economic value as a total package. To compensate for that decrease in value, a number of sections of Plum Creek land (containing about 4,700 acres) were proposed to be dropped from the immediate exchange package. Due to a continued desire to have those sections transferred to Federal ownership, the 1999 legislation addressed these Plum Creek lands as "escrow lands". These sections were to be placed into escrow and held for 3 years for future acquisition by the Federal Government.

Also in the November 1999 Amendment, Forest Service lands in the Gifford Pinchot National forest were withdrawn from the exchange. To offset the value of those dropped Forest Service sections, Plum Creek withdrew 19 sections within the HCP Planning Area. Due to a desire to have those 19 sections transferred to the Forest Service, Plum Creek also agreed to offer options to the Forest Service and an assortment of environmental/recreational organizations for up to 4 years to buy the 19 sections at the value established in the land-exchange appraisal. The 19 option sections will also remain covered by the HCP under Plum Creek ownership, but will be removed when purchased. Sales to nonfederal government parties are covered in Section 5.3.4.3 of the HCP. The analysis in this ROD and other documents assumes that lands identified as "escrow" or "option" lands (Figure 1) will be actively managed according to the applicable HCP standards or according to the current designations under the Northwest Forest Plan.

### **Effects of Landbase Adjustments**

As a result, the two sections containing occupied murrelet stands will no longer be included under the land exchange, will not be transferred to Plum Creek, and will receive the protections offered by Federal ownership.

Because the lands placed in escrow or offered as "option lands" are not guaranteed to be transferred to the Forest Service within the 3-year period, it remains possible that fewer lands will be transferred to the Forest Service in the land exchange and subsequent acquisition efforts than originally depicted in the FSEIS. This action of modifying the HCP covers the range of possibilities such as escrow/option lands being transferred to Federal ownership and escrow/option lands remaining with Plum Creek. Such a change in the exchange as described above resulting from the discovery of murrelets and the subsequent adjustments to exchange lands (with or without the escrow/option lands) will change the statistics displayed in the Final SEIS for ownership acres by Northwest Forest Plan designations, miles of streams, amount and

location of owl deferrals, and acres and percentages of habitat types. Appendix B contains revised tables and information to reflect these adjustments. Under any of the potential outcomes of the 1999 Amendment, the I-90 Land Exchange will result in a net increase in Federally managed Late-Successional Reserve and Adaptive Management Areas, a decrease in Federal Matrix, and a net decrease of harvestable lands within the Planning Area.

#### **Other Minor Adjustments**

##### **HCP Modification Document Section 2.3.1.1 and 2.5.1 (3) and (4) Spotted Owl Deferrals; HCP Section 3.2.1.1 and 3.6.1**

As a result of the two sections of murrelet habitat which will now remain with the Forest Service, Plum Creek is reinstating one of the harvest deferrals which would have been dropped. This decreases the number of owl sites subject to potential short-term impacts to 16. If the escrow and option sections are acquired by the Forest Service, Plum Creek will maintain 1,102 acres of NRF deferrals and 1,267 acres of FD deferrals. Should the escrow and option sections remain with Plum Creek, Plum Creek would maintain 1,855 acres of NRF deferrals and 2,287 acres of FD deferrals.

##### **HCP Modification Document Section 2.3.3.3 Northern Goshawk and 2.5.3 (17); HCP Section 3.5.2.4 and 3.6.5**

If the escrow and option sections are retained by Plum Creek, Plum Creek will maintain 262 acres of goshawk deferrals. If the escrow and option sections are transferred to the Forest Service, Plum Creek will maintain 101 acres of deferrals for goshawks.

##### **HCP modification Document Section 2.5.4 Riparian Management; HCP Section 3.6.7**

As a result of recent analyses, it appears that 3 east-side watershed administrative units will fall below 10 percent Plum Creek ownership. Plum Creek would no longer be able to initiate Watershed Analysis in those watersheds, under WAC 222-22-040. As a result, Plum Creek's commitment would apply to 17 watersheds. It is noted, however, that Plum Creek has already completed analysis in a watershed for which they no longer would have sufficient ownership to initiate in the future. It is expected that the HCP will directly result in the completion of 18 watershed analyses in the first 10 years. Table 1 of this document displays the Watershed Administrative Units which will remain unchanged, will be added, or which will be deleted from the schedule as a result of the land exchange and provides an update on the status of each. Riparian management has been and will continue to be an important focus for adaptive management and research/monitoring efforts in the HCP. Since implementation in 1996, several areas of interest regarding riparian-management strategies in the HCP have emerged. For instance, the role and management of small streams, which may be narrow and often perennial for at least a portion of their length, will be investigated relative to the importance in supporting fish and wildlife resources in the HCP area. Information gained from research and monitoring efforts authorized by the HCP will be used to refine management guidelines in the future. An example of such a change made recently is the measurement of Riparian Habitat Areas beginning at the Channel Migration Zone or Channelized Debris-Flow Zone.

**HCP Modification Document Section 2.6.3 Aquatic Resources Monitoring;  
(HCP section 5.1.6)**

The FSEIS and attached HCP Modification Document made a correction to the list of Objective 1 subbasins which were expected to contain response reaches (HCP Modification Document section 2.6.3 on page 26). In the original HCP (section 5.1.6 Aquatic Resources Monitoring, page 259), it was stated that "Response reaches will be identified in conjunction with the Services". While this remains the case, additional adjustments may become necessary to the list of subbasins. Plum Creek committed to identify response reaches in conjunction with the Services. It is the intent of Plum Creek and the Services to coordinate such discussion with technical experts from the affected Tribes. As a result, the final list of subbasins may differ from what was presented on Page 26 of the HCP Modification Document. Therefore the following addition is made to that section:

The following paragraph is added to the end of Method 1 of the section to reflect potential adjustments:

The above list of subbasins may be adjusted upon final designation of response reaches. The intent of such designation is to place the response reaches in different watersheds and subbasins, while at the same time maximizing the information which can be learned from such monitoring.

**HCP section 5.1.6 Aquatic Resources Monitoring; Objective 3 Assess fish populations in the context of recovery of habitat conditions in Cabin Creek.**

The changing ownership pattern and analysis of which monitoring was occurring in various watersheds has lead to reconsideration of the benefits being obtained by Objective 3 as originally contained in the HCP. Cabin Creek is not expected to contain much management activity in the near future and is confounded by a pattern of natural disturbance. Objective 3 as written would perhaps have provided interesting documentation of how a degraded watershed might recover, provided that repeated activity from the ancient deep-seated landslide does not continue to set back the recovery and/or confound the data.

Instead, the Service and Plum Creek believe a better monitoring scenario can be devised where fish populations are monitored at several locations in conjunction with HCP treatments and monitoring of other features, such as those listed under Objective 1. We believe the most direct means possible for monitoring the connections in the riparian pathways will provide the best management feedback. Measuring changes in the Riparian condition, in association with channel and in-stream habitat effects, and ultimately fish population effects, will provide the most-useful management feedback. It is the intent of Plum Creek and the Services to coordinate such discussion with technical experts from the affected Tribes in association with the changes proposed under Objective 1. Pending results of those discussions, appropriate interim adjustments are proposed herein, including an increase in the number of fish population survey segments and an adjustment in the length to conform with standard methodologies. Therefore, the following changes are made to the Section:

**Objective 3: Assess fish populations in the context of recovery of habitat conditions in Cabin Creek habitat associations.**

~~Cabin Creek has had a history of disturbance from landslides and large floods during the past 20 years. During this period the watershed was intensively managed for timber production. As the watershed revegetates and prescriptions identified following watershed analysis are~~

~~implemented, aquatic habitat conditions are expected to improve. Intensive monitoring of each watershed will provide an opportunity for Plum Creek to measure changes in fish populations as habitat recovers from recent disturbances.~~

~~In the lower portion of Cabin Creek, below the "Falls Hill landslide", fish~~ Fish population surveys will be conducted in a minimum of ~~five 100-meter~~ two 75-meter sections for each of the response reaches identified under Objective 1. Each Fish-population survey section will be selected by stratified random sampling. Surveys will be conducted using standard electrofishing techniques, with block nets. Habitat surveys will be conducted concurrently using the elements of the cross-sectional surveys described under Objective 1. Additional habitat features, such as riparian vegetation and aquatic insect community conditions, will be evaluated at the discretion of Plum Creek. Plum Creek will conduct fish population surveys during the Years 1,2,3,4,6,8,10, and then, every 10 years thereafter, during the HCP Phase. Adaptive management (Section 5.4.2) would be particularly important if monitoring detects trends which may require corrective actions.

### **Withdrawal of Pipeline Proposal**

The cumulative effects analysis considered the potential cross-Cascades oil pipeline that was proposed. This proposal was much criticized for the adequacy of its effects analysis and proposed mitigation. As a result of these criticisms and other events, the proposal was withdrawn.

### **Reversal of Huckleberry Land Exchange**

In an opinion filed on May 19, 1999, in Muckleshoot Indian Tribe and Pilchuck Audubon Society vs. U.S. Forest Service, No 98-35043, the Ninth Circuit panel of Judges Fletcher, Reinhardt, and Thomas reversed the favorable opinion by Judge Dwyer of the WDWA on NEPA and National Historic Preservation Act grounds. This opinion resulted in an injunction on "further activities" on lands exchanged even though the exchange occurred over a year earlier (March 1998). Conveyance of property to another does not moot a case. Federal courts are authorized to "void a property transaction" where necessary.

It is unclear what the final outcome of that exchange will be as additional appeals are expected. The analysis for this land exchange was not modified to reverse the Huckleberry land exchange based on the small amount of acreage involved relative to the HCP Planning Area and the consequent small effect on landscape level amounts of habitats and forest stand stages.

## **VIII. INTERAGENCY COORDINATION**

The Services coordinated closely with each other in the conduct of this action and joint preparation of documents. The Services also provided staff to coordinate with the U.S. Forest Service in the conduct of the Northwest Forest Plan, and the I-90 Land Exchange in particular. Biological Opinions are being prepared by the Services to address the Federal action of exchanging lands which is an action being conducted by the U.S. Forest Service. Internal consultations under section 7 of the Act are also being conducted regarding the Federal actions of the Services with respect to the HCP modification as discussed and examined in this document.

## **IX. COMPLIANCE**

### **Endangered Species Act**

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 certain mandatory elements (Section 10(a)(2)(A)): (1) the impact which will likely result from such taking; (2) what steps the applicant will take to minimize and mitigate such impacts, and the funding that will be available to implement such steps; (3) what alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized; and (4) such other measures that the Secretary may require as being necessary or appropriate for purposes of the plan. The Secretary shall issue the requested permit if the Secretary (delegated to SERVICE and NMFS) finds that the issuance criteria (section 10(a)(2)(B)) are being met. The issuance criteria are that: (1) the taking will be incidental; (2) the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking; (3) the applicant will ensure that adequate funding for the plan will be provided; (4) the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and (5) the measures, if any, required under subparagraph (A)(iv) will be met; and that the Secretary has received such other assurances as he may require that the plan will be implemented. The mandatory elements and issuance criteria for the Services are further defined in their respective regulations: 50 CFR 17.22, 17.32, and 222.22.

The Services conclude that the proposed permit continues to meet these criteria for the reasons discussed in the respective Services' Set of Findings. The Services also conclude that the modification of the HCP will not appreciably reduce the likelihood of the survival and recovery of the permit species, or any other listed species, in the wild. The documentation of those conclusions can be found in the respective Biological Opinions.

### **Tribal Trust Resources and Treaty Rights**

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 in the FSEIS (including the responses to comments submitted by the Muckleshoot Indian Tribe), the Services have concluded that the proposed HCP modification is consistent with this Trust responsibility.

### **Tribal Consultation**

Beginning early in project development, the Services contacted affected Tribes to notify them of the pending action and to receive their questions, concerns, and suggestions. The Services contacted staff of the Muckleshoot Indian Tribe, Puyallup Tribe, Tulalip Tribes, and the Yakama Indian Nation (FWS letters of July 25, 1997, and May 8, 1998, as well as telephone conversations in May 1998 and January 1999). The Services met with the Muckleshoot Indian Tribe on December 16, 1998; January 13, 1999; and May 7, 1999. The Services will continue to consult with interested Tribes regarding ongoing HCP implementation. The Services believe that the Tribes can provide the Services with valuable site-specific knowledge, as well as technical expertise, that will assist us in conserving species of mutual concern.

## **State Forest Practices Regulations**

The Washington Forest Practices Act (RCW 76.09) and implementing Forest Practices Rules and Regulations (WAC 222) (WFPB 1998) are the principal means of State regulation of activities on private forest lands in Washington State. Administered and enforced by the Washington State Department of Natural Resources (DNR), the Forest Practices Rules and Regulations set standards to address many issues of concern on nonfederal forest lands, including harvest practices; harvest unit size and green-up; planting and regeneration; watershed-analysis procedures; road design and construction standards; culvert sizing and placement; chemical application; stream and wetland protection; and protection of other public resources such as cultural resources, water quality, fisheries, and wildlife. All harvest activities on private forest lands require a Forest Practices Notification or Approval from the DNR, the issuance of which is contingent upon compliance with provisions of the Washington Forest Practices Act and implementing regulations. Most or all provisions within the regulations ultimately influence fish and wildlife habitat by regulating how and when certain activities may take place on private forest lands.

The intent of the Plum Creek Cascades HCP is that compliance with State Forest Practices Rules and Regulations would continue throughout the Permit period. State Forest Practices Rules and Regulations, such as road construction standards and minimum leave tree requirements are not intended to be supplanted as a result of implementation of the HCP. However, it should be noted that WAC 222-16-080 contains an exemption for forest-practice activities covered under an HCP with respect to the covered species from the provisions of that section with regard to critical wildlife habitat requirements for those species.

Nothing in this action exempts Plum Creek from compliance with State regulations. As mentioned above, a provision does exist in WAC 222-16-080 whereby certain stipulations with regard to critical wildlife habitat do not apply for a species if the forest practices are consistent with an HCP and incidental take permit covering such species. This provision is maintained by the State at their discretion and may be amended by the State to require adherence to State regulation provisions. Because State regulations allow for the HCP provisions to functionally substitute for State regulations regarding critical wildlife habitat, compliance with the HCP is consistent with State regulations. Management under the HCP will proceed in full compliance with applicable State regulations.

## **NEPA Process**

NEPA requires Federal agencies, to the fullest extent possible, to carry out their programs in accordance with NEPA's policies of environmental protection. To this end, NEPA requires disclosure of the environmental effects for major federal actions significantly affecting the quality of the human environment. At the time of its decision, the Federal agency is required to prepare a record of decision: (1) stating what the decision was; (2) identifying the alternatives considered in reaching its decision; (3) specifying the alternative(s) which was/were considered to be environmentally preferable; (4) discussing all relevant factors the agency used in making its decision; and (5) stating whether all practicable means to avoid or minimize environmental harm from the selected alternative have been adopted, and if not, why not.

NEPA requires Federal agencies to prepare detailed statements 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 prepared a Supplemental Environmental Impact Statement (SEIS) for the Federal action of approving the HCP modification.

The SEIS analyzed in detail the direct, indirect, and cumulative effects of the alternatives. Other concurrent and reasonably foreseeable future actions examined in this analysis included management of Federal lands under the Northwest Forest Plan and management of private forest lands under current regulations. It also included other actions such as potential construction of a cross-Cascades pipeline and raising of the pool level for Howard Hanson Reservoir. The SEIS also considered cumulative effects through the modeling of multiple ownerships within the Planning Area and the assessment of landscape-level amounts of habitat. The effects to various resources have been analyzed for a 50- to 100-year period, the potential duration of the two phases of the existing Permit. Not only did the SEIS address impacts to fish and wildlife resources and plants (issues specifically considered under section 10 of the ESA as well), but also analyzed effects on abiotic resources and a variety of elements of the human environment (e.g., water quality, soils, cultural resources, employment, and visual resources). Impacts to these resources are summarized in SEIS Table 2.

The SEIS compared effects of alternatives to the baseline of effects that would be expected to occur under the no-action alternative. The Services focused on habitat available to the species in the Planning Area that is of most concern, such as mature forest with structure in the uplands and riparian areas. The SEIS compared effects of the Plum Creek has requested modification of the HCP to accommodate the new land-base resulting from enactment of the Interstate-90 Land Exchange Act alternatives on factors that contribute to properly functioning riparian areas, and to aquatic habitats, and the great number of species that depend on those habitats. The analysis also examined the effects of alternatives across the multiple stand stages and, by association, the species and lifeforms dependent on those habitats. The Services also compared the effects of alternatives on special habitats such as talus slopes, wetlands, and residual woody features. The analyses contained in the HCP modification document and the original 1996 HCP also contained analyses which were incorporated into the respective NEPA documents by reference.

The SEIS 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. The scientific foundations of the original HCP alternatives and effects analyses were subjected to peer review. The SEIS and HCP modification document relied on the same analyses for their conclusions. Computer modeling of habitats and populations, including updated and improved information, and other factors were used to inform the analysis.

NEPA requires the disclosure of the agencies' analysis by the publication of their detailed statements. Accordingly, the Draft SEIS (DSEIS) was sent out for a 52-day review period. The Services were available at two public meetings and participated in three meetings with the Muckleshoot Indian Tribe. The review period generated written comments on behalf of 12 individuals and organizations, as well as comments received in public meetings and government-to-government meetings with the Tribes, which were summarized and addressed in a 151-page appendix to the FSEIS. Comments led to clarification and changes to the SEIS. The FSEIS was filed with EPA on May 14, 1999, and released to the public. The availability of the FSEIS was announced by the Services in the Federal Register on May 19 (64 FR 27236) and by EPA on May 21 (64 FR 27781). A more-detailed description of the disclosure is contained in the Public Involvement section below.

### **Other Human Environment Considerations**

NEPA regulations require a determination of possible conflicts between the proposed action and the objectives of Federal, State, and local land-use plans, policies, and goals for the project area. The major land-use considerations on this particular landscape are consistency with Federal land-

management plans associated with the Northwest Forest Plan, State regulations for the protection of the northern spotted owl and the landscape goals thereof, County land-use planning under the Growth Management Act, as well as goals of the City of Tacoma and the City of Cle Elum for their municipal watersheds. Another major consideration is the concern for their usual and accustomed areas held by the affected Tribes.

The original HCP was determined to complement the Northwest Forest Plan and contribute to attainment of the goals of the Northwest Forest Plan. This action not only continues to complement the Northwest Forest Plan, but assists the attainment of those goals by effectuating the land-exchange objectives contained with the SPAMA Plan. The exchange was designed, in part, to address the issue of connectivity. This action is consistent with and furthers those Federal objectives.

Under the guidance of the Northwest Forest Plan, National Forest Management Act, NEPA, as well as other applicable laws, regulations, and guidance; the U.S. Forest Service prepared an Environmental Impact Statement regarding the Forest Service action of exchanging lands with Plum Creek. In those documents (draft and final EISs)(USDA 1998c and 1999a) and in the Record of Decision (USDA 1999b), the Forest Service addressed a number of other mandates, topics, and issues: General Exchange Act; Federal Land Policy and Management Act; Comprehensive Environmental Response, Compensation, and Liability Act; National Historic Preservation Act; American Indian Religious Freedom Act; Endangered Species Act; Clean Water Act; Executive Orders 11988 (Floodplains), 11990 (Wetlands), 12898 (Environmental Justice); as well as other laws, regulations, direction, and comprehensive plans. Those determinations and descriptions are herein incorporated by reference.

The original HCP was designed to meet the objectives of demographic support and connectivity for the northern spotted owl. Connectivity across the landscape includes more than just wide expanses of dispersal habitat. To that end, the HCP provided both nesting habitat and foraging/dispersal habitat on the Plum Creek lands which are intermingled with Federal lands. The HCP modification improves that situation. Since issuance of the original permit, the State has promulgated new regulations based on landscape objectives. Specific areas of importance to spotted owls were designated as Spotted Owl Special Emphasis Areas (SOSEAs) in anticipation of a similar action by the Federal Government. The SOSEA designation and associated regulations do not directly apply to Plum Creek as a result of the State exemption for HCPs discussed earlier. However, in an effort to assess the relationship of the subject action with respect to the SOSEAs, the Washington Department of Fisheries and Wildlife requested such information. The Services included such analyses in the FSEIS and in the Fish and Wildlife Services' reinitiation of the 1996 Biological Opinion. The results indicate that the HCP continues to contribute to the goals of those SOSEAs.

King and Kittitas Counties have designated areas to be managed for long-term forestry in their Growth Management Plans. The lands contained within the HCP Planning Area are also within the long-term forestry designations of those Counties. For that reason, it is expected that the HCP will continue to be consistent with the land-use guidelines at the County level. Potential effects on employment within the respective counties were addressed in the FSEIS Section 4.9. The effects of the land exchange, and subsequent HCP modification, on employment and local economies is primarily derived from projected decreases in timber harvest within Kittitas County.

The City of Tacoma operates its municipal water supply from the Green River Basin downstream of the HCP Planning Area. The City of Cle Elum utilizes Cle Elum Lake as a source for its drinking water. The primary concern in this regard is water quality. The HCP is expected to

meet the needs of both salmon and human health and well-being with regard to the Green River Basin and the Yakima River Basin. Water quality is addressed in a number of sections in the FSEIS. Water quality is expected to improve in the Green River and Yakima River Basins in both the no-action and proposed action alternatives. The Plum Creek HCP is consistent with the goals of the City of Tacoma and City of Cle Elum. However, it should be noted that the HCP does not provide Plum Creek with a Clean Water Act exemption nor does it relieve them from any regulatory control exercised by the City of Tacoma within its municipal watershed. For these reasons, the Services believe there is no conflict at the municipal level in either drainage.

The affected Tribes are concerned about a number of resources potentially impacted by the land exchange. The Yakama Indian Nation will likely benefit from the increased Federal ownership in the Yakima River Basin to a marginal extent. Newly acquired lands would be managed under the Northwest Forest Plan. However, Plum Creek's HCP already required significant riparian buffers and improved road-management practices. Conversely, the Muckleshoot Indian Tribe is particularly concerned about the effects of decreased Federal ownership in the Green River Basin. The net change in ownership as a result of the land exchange is relatively small for the Green River basin, about 2,000 acres. The net change only affects a few miles of streams. Additionally, the effects of the loss of Federal land-management protections on those lands is ameliorated by the high level of protection afforded under the HCP. This issue is discussed in greater detail in Appendix A of the FSEIS in response to comments submitted by the Muckleshoot Indian Tribe. For the reasons contained in the Services responses, the Services believe there is no conflict between the goals of the Muckleshoot Indian Tribe, such as recovery of chinook salmon to harvestable levels, and the HCP modification. Cultural Resources and the effects of the alternatives upon those resources were discussed in sections 3.10 and 4.10 of the FSEIS.

Executive Order 12898 requires Federal agencies to develop strategies to identify and address programs, policies, and activities which would result in disproportionately high adverse human health or environmental effects on minority and low-income populations. Minority populations within the Planning Area and its area of influence include the Muckleshoot Indian Tribe and Yakama Indian Nation, the indirect impacts to which were described above. A number of rural residents also live adjacent to the Planning Area. Primary effects of this action to minority and low-income populations would be through effects upon trust resources and the local economy. Both of these issues were addressed in the SEIS. The Services believe that the proposed action of approving the requested HCP modification would not result in disproportionately high adverse human health or environmental effects on minority and low-income populations.

## **X. PUBLIC INVOLVEMENT**

There was extensive public involvement in the development of the original Plum Creek HCP and associated documents. This involvement and review included public meetings, tours, review and comment opportunities, as well as scientific peer review. The Service completed scoping, a DEIS, and eventually a FEIS for issuance of the permit. The Record of Decision (SERVICE and NMFS 1996) was completed in June 1996, and the permit was issued. A full description of the public involvement process used in the original HCP is contained in the 1996 Record of Decision.

As the land exchange discussions continued, the Services notified the affected Tribes and the Washington Department of Fish and Wildlife that Plum Creek would likely request such an HCP modification in the near future and made itself available for discussions. The Services also announced to the public (63 FR 24823; May 5, 1998) the availability of our staff at four meetings

held with the Forest Service and the public to discuss the Forest Service's DEIS and to discuss the potential HCP modification.

On December 9, 1998, the Services announced our intent to prepare a Supplemental EIS (63 FR 67914). The Draft SEIS (DSEIS), with the attached draft HCP Modification Document was sent out for a 52-day review period. The Services were available at two public meetings (64 FR 482; January 5, 1999) and participated in three meetings with the Muckleshoot Indian Tribe. The review period generated written comments on behalf of 12 individuals and organizations, as well as comments received in public meetings and government-to-government meetings with the Tribes, which were summarized and addressed in a 151-page appendix to the FSEIS. Comments led to clarification and changes to the SEIS. A complete description of the public-involvement process to the point of FSEIS publication is contained in the FSEIS section entitled Context. The FSEIS was then mailed to interested parties and filed with the Environmental Protection Agency (EPA) on May 14, 1999. The availability of the FSEIS was announced by EPA in the May 21, 1999, Federal Register (64 FR 27781). The Services also published a Federal Register document on May 19 (64 FR 27236). The Services did not receive any comments on the FSEIS.

## **XI. REVIEW AND APPROVAL**

### **Contingencies**

The decision of the Services to approve this HCP Modification is contingent on the closing of the Interstate-90 Land Exchange transaction of deeds and sufficient control by Plum Creek of the exchange lands addressed by this modification to ensure that the conservation measures contained in the HCP, as modified, are guaranteed to be conducted.

### **Administrative Record**

The administrative record for this action includes the Final Supplemental Environmental Impact Statement (SEIS) for a Request by Plum Creek Timber Company for Approval of Modifications to its Cascades Habitat Conservation Plan, which is tiered to the Draft and Final EISs (USDI and USDC 1995 and 1996) for the Final Habitat Conservation Plan (Plum Creek 1996). The administrative record also includes the Service's biological opinion on the issuance of the ITP (Service 1996a), the NMFS's Unlisted Species Analysis and Findings (NMFS 1996), the Service's Unlisted Species Assessment (Service 1996b) and Findings (Service 1996c), and the Service's biological opinion and Findings on the addition of Columbia River bull trout (Service 1998a and 1998b). The administrative record relied on by the Services also includes the Final EIS for the I-90 Land Exchange (USDA 1999a); the Final EISs and Land and Resource Management Plans for the Mt. Baker-Snoqualmie National Forest (USDA 1990a) and the Wenatchee National Forest (USDA 1990b), as amended by the Record of Decision for Amendments to the Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl (USDA and USDI 1994b) and its accompanying Supplemental EIS (USDA and USDI 1994a) and environmental documents; the Snoqualmie Pass Adaptive Management Area Plan, Supplemental EIS, and Record of Decision (USDA 1997a and b); the Final EIS for the Huckleberry Land Exchange (USDA 1996); the Final EIS for Green River Access Requests, Mt. Baker-Snoqualmie National Forest (1998a); the Final EIS for Plum Creek Checkerboard Access Project, Wenatchee National Forest (1998b); and all environmental documents referenced in the bibliography for the Final Supplemental EIS for the Plum Creek HCP Modification (USDI 1999), which are incorporated by reference into the Final Supplemental EIS and the administrative record for this decision pursuant to 40 C.F.R. § 1502.21.

**Effective Date**

This decision becomes effective on the date of signature.

**Signatures**

By signing this Record of Decision together, we exercise our respective authorities over only those portions relevant to our authority.

*WB Zimmerman*

*(for)*

**Thomas J. Dwyer,  
Deputy Regional Director  
United States Fish and Wildlife Service**

*William Stelle, Jr.*

**William Stelle, Jr.,  
Regional Administrator  
National Marine Fisheries Service**

December 23, 1999

**Dated**

*Dec. 23, 1999*

**Dated**

# APPENDIX A

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- U.S. Fish and Wildlife Service. 1996c. Findings and Recommendations on Issuance of an Incidental Take Permit (PRT-808398) for Northern Spotted Owls, Marbled Murrelets, Grizzly Bears, and Gray Wolves to the Plum Creek Timber Company, L.P., and for Approval of an Unlisted Species Agreement, King and Kittitas Counties, Washington. Portland, OR. June 1996.
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- U.S. Fish and Wildlife Service. 1998b. Findings and Recommendations on Amendment of an Incidental Take Permit (PRT-808398) Held by Plum Creek Timber Company.
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# **APPENDIX B**

## **Revised Tables and Information from the Final SEIS**

**Table 4A. Post-Land Exchange. Acres of land ownership in each of the designated areas under the Northwest Forest Plan within the Planning Area. MARBLED MURRELET, ESCROW AND OPTION SECTIONS USFS**

Designated Area	USFS	%	Plum Creek	%	Other	%	Water	%	TOTAL
Congressionally Reserved Area	9,410	4.0	100	0.1					9,510
Late-Successional Reserve	63,160	26.7	30,680	23.6	3,560	7.9			97,400
Adaptive Management Area	122,020	51.5	36,490	28.0	12,690	28.0	6,560	100	177,760
Managed Late-Successional Area	20	0.0							20
Administratively Withdrawn Area	4,630	2.0							4,630
Matrix	37,640	15.9	35,190	27.0	8,260	18.2			81,090
Not designated			27,670	21.3	20,790	45.9			48,460
<b>TOTALS</b>	<b>236,880</b>	<b>100</b>	<b>130,130</b>	<b>100</b>	<b>45,300</b>	<b>100</b>	<b>6,560</b>	<b>100</b>	<b>418,870</b>
Percent of Total HCP Area		56.6		31.0		10.8		1.6	100.0

NOTE: USFS – U.S. Forest Service

Designated Areas and Matrix applicable to Federal lands only

**Table 24A. Post-Land Exchange. Estimated percentages of Plum Creek (PC) and all ownerships (HCP) in the Planning Area providing spotted owl habitat and forest structural stages as a result of modification of the HCP. Percentages are estimated and displayed by decade for the 50-year Permit period. MARBLED MURRELET, ESCROW AND OPTION SECTIONS USFS**

Category*	Year											
	1996		2006		2016		2026		2036		2045	
	PC	HCP										
<b>Spotted Owl Habitat</b>												
NRF	18	29	8	27	6	26	6	27	6	28	7	28
F/D	14	18	9	15	7	15	15	19	26	23	32	25
<b>Total (Percent)</b>	<b>32</b>	<b>47</b>	<b>17</b>	<b>42</b>	<b>13</b>	<b>41</b>	<b>21</b>	<b>46</b>	<b>32</b>	<b>51</b>	<b>39</b>	<b>53</b>
<b>Structural Stages</b>												
SI/SS/YF	52	30	64	32	48	22	32	15	24	11	26	10
Pole Timber	8	5	8	6	27	15	31	15	30	14	22	11
Dispersal Forest	13	13	10	10	9	11	20	16	29	19	32	21
MF/MOG/OG	22	39	13	39	11	39	12	41	12	43	15	45
Non-Forested	5	13	5	13	5	13	5	13	5	13	5	13
<b>Total (Percent)</b>	<b>100</b>											

\*NOTES: Goals for spotted owl habitat and structural stages will be achieved if measurements are within 10 to 20 percent of the values estimated in the table.

NRF - Nesting/Roosting/Foraging

FD - Foraging/Dispersal

SI - Stand Initiation

SS - Shrub/Sapling

YF - Young Forest

MF - Mature Forest

MOG - Managed Old Growth

OG - Old Growth

**Table 26A. Post-Land Exchange. Estimated percentages of all ownerships in the Planning Area providing primary (P) and total suitable habitat (SH) for each lifeform resulting from modification of the HCP. Percentages are estimates and displayed by decade for the 50 year Permit period. MARBLED MURRELET, ESCROW, AND OPTION SECTIONS USFS**

Lifeform	Year											
	1996		2006		2016		2026		2036		2045	
	P	SH										
2	64	75	64	75	68	77	72	79	75	81	76	81
3	64	75	64	75	68	77	72	79	75	81	76	81
4	49	53	45	51	49	53	53	55	52	54	53	55
5	88		89		86		81		71		61	
6	19	53	16	51	10	48	8	47	3	45	1	44
7	28	57	31	59	29	58	27	57	24	55	22	54
8	27	53	34	59	34	59	28	57	23	54	18	51
9	26	52	26	53	29	58	27	57	24	55	22	54
10	57	68	55	69	65	75	72	79	76	80	77	81
11	57	72	55	71	65	76	72	80	76	82	77	82
12	64	66	64	67	68	72	72	75	75	79	76	81
13	52	64	49	62	50	66	57	70	61	72	66	74
13a	39	46	39	51	39	60	41	62	42	63	46	64
14	52	70	49	68	50	69	57	72	61	74	66	77
14a	39	46	39	44	39	45	41	49	42	52	46	56
15 (early)	30		32		22		15		10		10	
15 (middle)	18		16		26		31		34		31	
15 (late)	39		39		39		41		42		46	
16	64	75	64	75	68	77	72	79	75	81	76	81

<sup>1</sup> - Percentage of the HCP search area containing Primary Habitat

<sup>2</sup> - Percentage of the HCP search area containing Suitable Habitat = Primary Habitat + (Secondary Habitat/2)

<sup>3</sup> - Percentage of the HCP Planning Area within 0.5-miles of an "edge" between forage and cover habitats

<sup>4</sup> - Expresses the percentage of habitat in the HCP Planning Area containing early, middle, and late-aged forests.

Search Area: RHAs only (Lifeforms 1,2,3,6,7,9,12,16); Rocks and Talus (Lifeform 4); Entire Planning Area (Lifeforms 8,10,11,13,13a,14,14a,15)

**Table 27A. Post-Land Exchange. Miles of DNR stream types within each Northwest Forest Plan designated category on Plum Creek's land in the Planning Area. MARBLED MURRELET, ESCROW AND OPTION SECTIONS USFS**

DNR Stream Type	Northwest Forest Plan Category			
	AMA	LSR	Matrix	TOTAL
1 - 3	21	23	22	66
4	54	32	45	131
5	132	162	135	429
9	109	46	64	219
<b>TOTAL</b>	<b>316</b>	<b>263</b>	<b>266</b>	<b>845</b>

NOTE: AMA - Adaptive Management Areas; LSR - Late Successional Reserves

Stream Type 9 - unclassified or unknown stream status

**Table 28A. Post-Land Exchange. Approximate miles and percentage of DNR stream types within each riparian protection strategy by ownership in the Planning Area. MARBLED MURRELET, ESCROW AND OPTION SECTIONS USFS**

Stream Type	U.S. Forest Service			Plum Creek Timber Company, L.P.					Other Private			Total
	300' RCA	150' RCA	Sub-Total	200' RHA	100' RHA	25' RLTA	No Buffer	Sub-Total	Std. RMZ	No Buffer	Sub-Total	
1	19 (28%)		19	10 (15%)				10	39 (57%)		39	68
2	59 (87%)		59	7 (10%)				7	2 (3%)		2	68
3	117 (55%)		117	68 (32%)				68	29 (13%)		29	214
4		273 (53%)	273		127 (26%)	45 (9%)		172	64 (12%)		64	509
5		854 (56%)	854				536 (35%)	536		137 (9%)	137	1527
9 <sup>b</sup>		425 (50%)	425				309 (37%)	309		104 (1%)	104	838
<b>Total</b>	<b>195</b>	<b>1552</b>	<b>1737</b>	<b>85</b>	<b>127</b>	<b>45</b>	<b>845</b>	<b>1102</b>	<b>134</b>	<b>241</b>	<b>375</b>	<b>3224</b>

<sup>a</sup> Watershed analysis will require buffers on streams prone to landslides/debris flows.

<sup>b</sup> Type 9 streams are currently unclassified or of unknown status; however, the vast majority of Type 9 streams would likely be classified as Type 5 streams.

Std. - Standard

RCA - Riparian Conservation Area

RHA - Riparian Habitat Area

RMZ - Riparian Management Zone

RLTA - Riparian Leave Tree Area

**Table 30A. Post-Land Exchange. Estimated percentage of each structural stage for the entire Planning Area, Riparian Habitat Areas (RHAs), and rocks and talus slopes. MARBLED MURRELET, ESCROW AND OPTION SECTIONS USFS)**

Habitat Area	1996		2006		2016		2026		2036		2045	
	PC <sup>1</sup>	HCP <sup>2</sup>	PC	HCP								
<b>HCP<sup>3</sup></b>												
Non Habitat	5	13	5	13	5	13	5	13	5	13	5	13
Stand Initiation	3	8	9	4	9	3	7	2	8	3	11	3
Shrub/Sapling	8	3	17	9	9	3	6	2	4	1	8	3
Young Forest	40	18	38	20	29	17	20	11	12	7	8	4
Pole Timber	8	5	8	6	27	15	31	15	30	15	22	11
Dispersal Forest	13	13	10	10	9	11	20	16	29	19	31	21
Mature Forest	18	26	10	20	8	19	8	20	9	20	11	21
Managed Old Growth	3	8	2	11	2	12	2	12	2	13	2	14
Old Growth	2	6	1	7	1	7	1	9	1	9	1	10
TOTAL	100	100	100	100	100	100	100	100	100	100	100	100
<b>RHAs<sup>4</sup></b>												
Non Habitat	6	14	6	14	6	14	6	14	6	14	6	14
Stand Initiation	3	6	0	1	0	0	0	0	0	0	0	0
Shrub/Sapling	7	1	2	5	1	0	0	0	0	0	0	0
Young Forest	33	10	37	10	21	10	8	8	3	3	2	1
Pole Timber	9	3	9	6	23	8	28	6	23	8	14	9
Dispersal Forest	12	12	15	10	16	11	21	12	30	13	34	12
Mature Forest	23	32	24	28	26	27	30	28	30	27	35	28
Managed Old Growth	5	12	5	16	5	18	5	18	5	20	4	21
Old Growth	2	10	2	10	2	12	2	14	3	14	4	15
TOTAL	100	100	100	100	100	100	100	100	100	100	100	100
<b>TALUS<sup>5</sup></b>												
Non Habitat	21	44	21	44	21	44	21	44	21	44	21	44
Stand Initiation	1	1	6	1	3	1	2	0	4	1	5	1
Shrub/Sapling	1	0	19	5	7	1	2	0	4	1	3	0
Young Forest	16	5	8	4	23	7	12	4	5	2	6	2
Pole Timber	10	4	11	4	13	4	29	7	25	6	9	3
Dispersal Forest	19	12	11	8	9	8	10	9	18	9	34	12
Mature Forest	26	24	20	21	20	19	19	19	17	19	16	17
Managed Old Growth	5	7	3	8	3	11	4	11	4	12	3	15
Old Growth	1	3	1	5	1	5	1	6	2	6	3	6
TOTAL	100	100	100	100	100	100	100	100	100	100	100	100

**NOTES:**

<sup>1</sup> Percentage of ownership, Plum Creek

<sup>2</sup> Percentage of all ownerships in the HCP Planning Area

<sup>3</sup> Search area within entire HCP Planning Area

<sup>4</sup> Search area within Riparian Habitat Areas and wetlands

<sup>5</sup> Search area within Plum Creek's management units containing rock and talus slope areas

**Table 4A. Post-Land Exchange. Acres of land ownership in each of the designated areas under the Northwest Forest Plan within the Planning Area. MARBLED MURRELET SECTIONS USFS, ESCROW AND OPTION SECTIONS PC**

Designated Area	USFS	%	Plum Creek	%	Other	%	Water	%	TOTAL
Congressionally Reserved Area	9,410	4.3	100	0.1					9,510
Late-Successional Reserve	59,140	27.0	34,700	23.4	3,560	7.9			97,400
Adaptive Management Area	107,820	49.4	50,690	34.1	12,690	28.0	6,560	100	177,760
Managed Late-Successional Area	20	0.0							20
Administratively Withdrawn Area	4,630	2.1							4,630
Matrix	37,640	17.2	35,190	23.7	8,260	18.2			81,090
Not designated			27,670	18.7	20,790	45.9			48,460
<b>TOTALS</b>	<b>218,660</b>	<b>100</b>	<b>148,350</b>	<b>100</b>	<b>45,300</b>	<b>100</b>	<b>6,560</b>	<b>100</b>	<b>418,870</b>
Percent of Total HCP Area		52.2		35.4		10.8		1.6	100.0

NOTE: USFS - U.S. Forest Service

Designated Areas and Matrix applicable to Federal lands only

**Table 24A. Post-Land Exchange. Estimated percentages of Plum Creek (PC) and all ownerships (HCP) in the Planning Area providing spotted owl habitat and forest structural stages as a result of modification of the HCP. Percentages are estimated and displayed by decade for the 50-year Permit period. MARBLED MURRELET SECTIONS USFS, ESCROW AND OPTION SECTIONS PC**

Category*	Year											
	1996		2006		2016		2026		2036		2045	
	PC	HCP										
<b>Spotted Owl Habitat</b>												
NRF	19	29	9	27	7	26	7	27	7	28	8	28
F/D	15	18	10	15	9	15	18	19	28	23	34	26
<b>Total (Percent)</b>	<b>34</b>	<b>47</b>	<b>19</b>	<b>42</b>	<b>16</b>	<b>41</b>	<b>25</b>	<b>46</b>	<b>35</b>	<b>51</b>	<b>42</b>	<b>54</b>
<b>Structural Stages</b>												
SI/SS/YF	51	30	61	32	45	22	30	15	24	11	24	10
Pole Timber	8	5	8	6	27	15	31	15	27	14	20	10
Dispersal Forest	13	13	11	10	10	11	21	16	30	19	35	22
MF/MOG/OG	23	39	15	39	13	39	13	41	14	43	16	45
Non-Forested	5	13	5	13	5	13	5	13	5	13	5	13
<b>Total (Percent)</b>	<b>100</b>											

\*NOTES: Goals for spotted owl habitat and structural stages will be achieved if measurements are within 10 to 20 percent of the values estimated in the table.

NRF - Nesting/Roosting/Foraging

FD - Foraging/Dispersal

SI - Stand Initiation

SS - Shrub/Sapling

YF - Young Forest

MF - Mature Forest

MOG - Managed Old Growth

OG - Old Growth

**Table 27A. Post-Land Exchange. Miles of DNR stream types within each Northwest Forest Plan designated category on Plum Creek's land in the Planning Area. MARBLED MURRELET SECTIONS USFS, ESCROW AND OPTION SECTIONS PC**

DNR Stream Type	Northwest Forest Plan Category			
	AMA	LSR	Matrix	TOTAL
1 - 3	34	24	22	80
4	73	37	45	155
5	168	186	135	489
9	137	49	64	250
<b>TOTAL</b>	<b>412</b>	<b>296</b>	<b>266</b>	<b>974</b>

NOTE: AMA - Adaptive Management Areas; LSR - Late Successional Reserves

Stream Type 9 - unclassified or unknown stream status

**Table 28A. Post-Land Exchange. Approximate miles and percentage of DNR stream types within each riparian protection strategy by ownership in the Planning Area. MARBLED MURRELET SECTIONS USFS, ESCROW AND OPTION SECTIONS PC**

Stream Type	U.S. Forest Service			Plum Creek Timber Company, L.P.					Other Private			Total
	300' HCA	150' RCA	Sub-Total	200' RHA	100' RHA	25' RLTA	No Buffer	Sub-Total	Std. RMZ	No Buffer	Sub-Total	
1	13 (28%)		13	16 (15%)				16	39 (57%)		39	68
2	56 (87%)		56	10 (10%)				10	2 (3%)		2	68
3	111 (55%)		111	74 (32%)				74	29 (13%)		29	214
4		249 (53%)	249		151 (26%)	45 (9%)		196	64 (12%)		64	509
5		794 (56%)	794				596 (35%)	596		137 (9%)	137	1527
9 <sup>b</sup>		393 (50%)	393				341 (37%)	341		104 (1%)	104	838
<b>Total</b>	<b>180</b>	<b>1436</b>	<b>1616</b>	<b>100</b>	<b>151</b>	<b>45</b>	<b>937</b>	<b>1233</b>	<b>134</b>	<b>241</b>	<b>375</b>	<b>3224</b>

<sup>a</sup> Watershed analysis will require buffers on streams prone to landslides/debris flows.

<sup>b</sup> Type 9 streams are currently unclassified or of unknown status; however, the vast majority of Type 9 streams would likely be classified as Type 5 streams.

Std. - Standard

RMZ - Riparian Management Zone

RCA - Riparian Conservation Area

RLTA - Riparian Leave Tree Area

RHA - Riparian Habitat Area

**Table 26A. Post-Land Exchange. Estimated percentages of all ownerships in the Planning Area providing primary (P) and total suitable habitat (SH) for each lifeform resulting from modification of the HCP. Percentages are estimates and displayed by decade for the 50 year Permit period. MARBLED MURRELET SECTIONS USFS, ESCROW AND OPTION SECTIONS PC**

Lifeform	Year											
	1996		2006		2016		2026		2036		2045	
	P	SH <sup>2</sup>	P	SH								
2	64	75	67	77	69	78	73	80	77	82	76	81
3	64	75	67	77	69	78	73	80	77	82	76	81
4	49	53	46	51	47	52	51	54	52	54	52	54
5	88		89		86		81		72		64	
6	19	53	13	50	10	48	8	47	2	44	1	44
7	28	57	28	57	27	57	24	55	21	54	20	53
8	27	53	34	59	34	59	28	57	23	54	17	51
9	26	52	23	52	27	57	24	55	21	54	20	53
10	57	68	55	69	65	75	72	79	76	80	77	81
11	57	72	55	71	65	76	72	80	76	82	77	82
12	64	66	67	70	69	73	73	76	77	81	76	81
13	52	64	49	62	50	66	57	70	61	72	67	75
13a	39	46	39	57	39	60	41	62	42	63	46	64
14	52	70	49	68	50	69	57	72	61	74	67	77
14a	39	46	39	44	39	45	41	49	42	52	46	57
15 (early)	30		32		22		15		11		10	
15 (middle)	18		16		26		31		34		31	
15 (late)	39		39		39		41		42		46	
16	64	75	67	77	69	78	73	80	77	82	76	81

<sup>1</sup> - Percentage of the HCP search area containing Primary Habitat

<sup>2</sup> - Percentage of the HCP search area containing Suitable Habitat = Primary Habitat + (Secondary Habitat/2)

<sup>3</sup> - Percentage of the HCP Planning Area within 0.5-miles of an "edge" between forage and cover habitats

<sup>4</sup> - Expresses the percentage of habitat in the HCP Planning Area containing early, middle, and late-aged forests.

**Search Area:** RHAs only (Lifeforms 1,2,3,6,7,9,12,16); Rocks and Talus (Lifeform 4); Entire Planning Area (Lifeforms 8,10,11,13,13a,14,14a,15)

**Table 30A. Post-Land Exchange. Estimated percentage of each structural stage for the entire Planning Area, Riparian Habitat Areas (RHAs), and rocks and talus slopes. MARBLED MURRELET SECTIONS USFS, ESCROW AND OPTION SECTIONS PC**

Habitat Area	1996		2006		2016		2026		2036		2045	
	PC	HCP <sup>2</sup>	PC	HCP								
<b>HCP<sup>3</sup></b>												
Non Habitat	5	13	5	13	5	13	5	13	5	13	5	13
Stand Initiation	3	8	9	4	9	3	8	2	8	3	9	3
Shrub/Sapling	8	3	14	9	9	3	5	2	4	1	6	2
Young Forest	40	18	38	19	27	16	18	11	12	7	10	5
Pole Timber	8	5	8	6	27	15	30	15	28	15	20	10
Dispersal Forest	13	13	11	10	10	11	21	16	30	19	35	21
Mature Forest	18	26	12	21	10	20	10	20	10	20	12	22
Managed Old Growth	3	8	2	11	2	12	2	12	2	13	2	14
Old Growth	2	6	1	7	1	7	1	9	1	9	1	10
TOTAL	100	100	100	100	100	100	100	100	100	100	100	100
<b>RHAs<sup>4</sup></b>												
Non Habitat	6	14	6	14	6	14	6	14	6	14	6	14
Stand Initiation	2	6	0	1	0	0	0	0	0	0	0	0
Shrub/Sapling	5	1	2	5	1	0	0	0	0	0	0	0
Young Forest	30	10	33	8	20	10	8	8	3	3	2	1
Pole Timber	11	3	9	6	21	7	26	5	21	7	15	9
Dispersal Forest	14	12	17	10	18	10	21	11	30	12	32	10
Mature Forest	25	32	26	29	27	27	31	27	31	27	36	28
Managed Old Growth	5	12	5	17	5	19	5	19	6	21	5	22
Old Growth	2	10	2	11	2	13	3	16	3	16	4	16
TOTAL	100	100	100	100	100	100	100	100	100	100	100	100
<b>TALUS<sup>5</sup></b>												
Non Habitat	21	44	21	44	21	44	21	44	21	44	21	44
Stand Initiation	1	1	3	1	3	1	2	0	3	1	3	1
Shrub/Sapling	1	0	16	5	8	1	3	1	3	1	4	1
Young Forest	16	5	9	4	18	7	13	4	6	2	5	2
Pole Timber	8	4	8	4	12	4	22	6	22	6	10	3
Dispersal Forest	18	12	11	8	10	8	12	9	17	9	31	11
Mature Forest	30	24	28	21	24	19	22	19	21	19	20	17
Managed Old Growth	4	7	3	8	3	11	3	11	4	12	3	15
Old Growth	1	3	1	5	1	5	2	6	3	6	3	6
TOTAL	100	100	100	100	100	100	100	100	100	100	100	100

**NOTES:**

<sup>1</sup> Percentage of ownership, Plum Creek

<sup>2</sup> Percentage of all ownerships in the HCP Planning Area

<sup>3</sup> Search area within entire HCP Planning Area

<sup>4</sup> Search area within Riparian Habitat Areas and wetlands

<sup>5</sup> Search area within Plum Creek's management units containing rock and talus slope areas

# FIGURE 1

## Map of Post Land Exchange Ownership and Marbled Murrelet Surveys

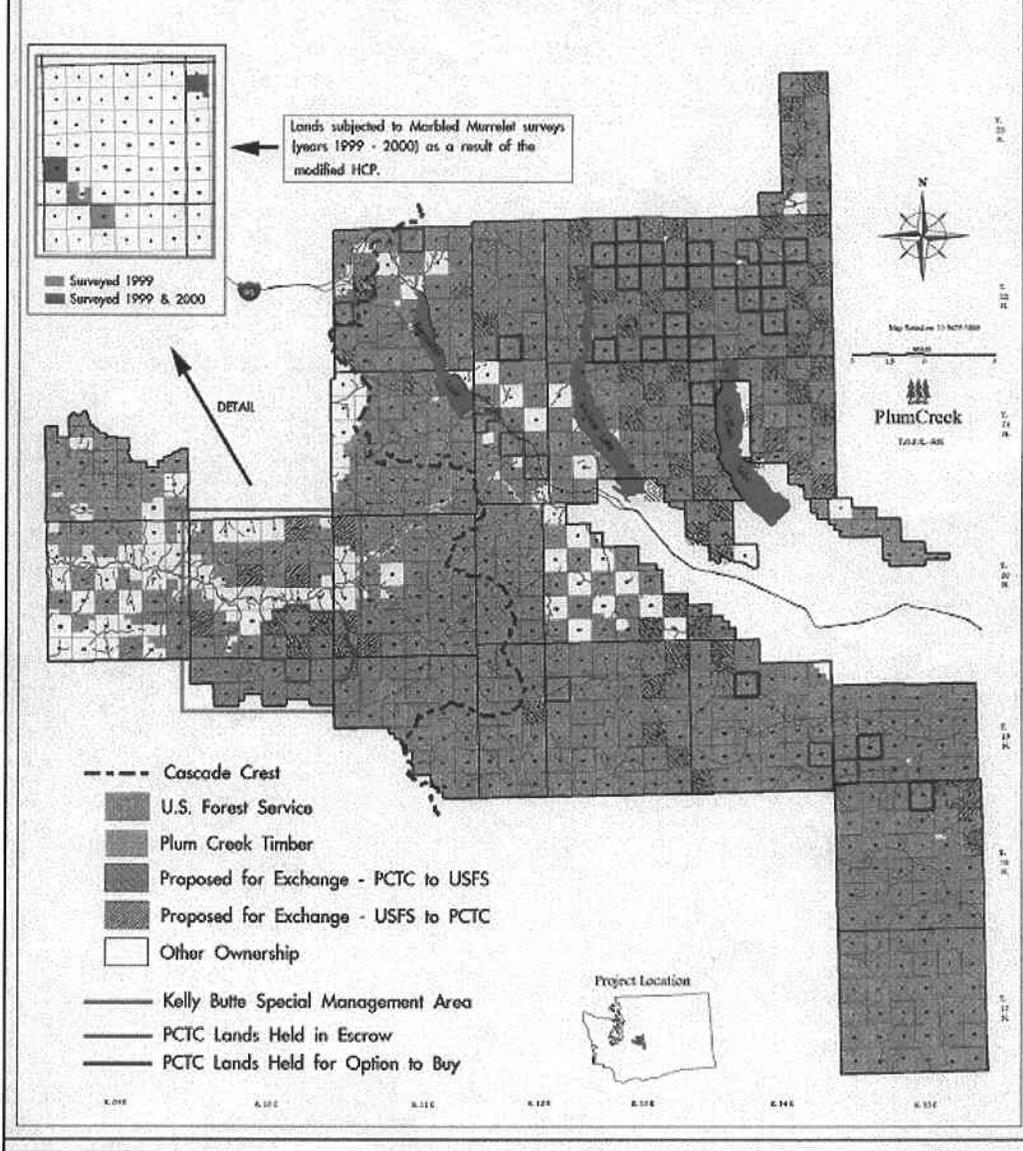


Figure 1. Map of exchange, escrow, and option lands.

**Table 1. Watershed Analysis Schedule.**

<b>ORIGINAL HCP</b>	<b>POST LEX</b>	<b>OPTION TO BUY</b>
1 ALPS	*	*
2 BIG CREEK	1 BIG CREEK	1 BIG CREEK
3 CABIN CREEK	2 CABIN CREEK	2 CABIN CREEK
4 CLE ELUM	3 CLE ELUM	3 CLE ELUM
5 CLE ELUM RIDGE S	4 CLE ELUM RIDGE S	4 CLE ELUM RIDGE S
6 CLIFFDELL	5 CLIFFDELL	5 CLIFFDELL
7 COOPER LAKE		
8 GREEN	6 GREEN	6 GREEN
9 HOWARD HANSEN	7 HOWARD HANSEN	7 HOWARD HANSEN
10 KACHEES	8 KACHEES	
11 KEECHELUS	9 KEECHELUS	8 KEECHELUS
12 LANNIGAN SPRINGS	10 LANNIGAN SPR. **	9 LANNIGAN SPR. **
13 LESTER	11 LESTER	10 LESTER
14 MOSQUITO CREEK	12 MOSQUITO CREEK	11 MOSQUITO CREEK
15 NACHES PASS	13 NACHES PASS	12 NACHES PASS
16 NORTH FORK GREEN	14 NORTH FORK GREEN	13 NORTH FORK GREEN
17 QUARTZ MOUNTAIN	15 QUARTZ MOUNTAIN	14 QUARTZ MOUNTAIN
18 SMAY	16 SMAY	15 SMAY
19 SUNDAY	17 SUNDAY	16 SUNDAY
20 TEANAWAY WF	18 TEANAWAY WF	17 TEANAWAY WF

\* Alps Watershed is already completed.

\*\* Only 266 acres in HCP. May extrapolate.