

FINDINGS AND RECOMMENDATIONS ON
ISSUANCE OF AN INCIDENTAL TAKE PERMIT (TE034609-0)
TO PLUM CREEK TIMBER COMPANY
FOR THEIR NATIVE FISH HABITAT CONSERVATION PLAN
FOR STATES OF MONTANA, IDAHO, AND WASHINGTON

I. DESCRIPTION OF PROPOSAL

The Plum Creek Timber Company of Seattle, Washington (Plum Creek) has applied to the U.S. Fish and Wildlife Service (Service) for an incidental take permit for their Native Fish Habitat Conservation Plan (NFHCP), and has requested that the Service enter into an Implementing Agreement (IA). This permit would authorize incidental take of seven native salmonid fish species (Permit species), including one species in the Pacific Northwest currently listed under the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1544), and six other unlisted species should they become listed in the future:

Permitted Species:

- Columbia River Basin bull trout Distinct Population Segment (CRB bull trout DPS) (*Salvelinus confluentus*)
- Redband trout (*Oncorhynchus mykiss gairdneri*)
- Coastal rainbow trout (*Oncorhynchus mykiss irideus*)
- Southwestern Washington/ Columbia River coastal cutthroat trout DPS (*Oncorhynchus clarki clarki*)-includes anadromous form
- Westslope cutthroat trout (*Oncorhynchus clarki lewisi*)
- Mountain whitefish (*Prosopium williamsoni*)
- Pygmy whitefish (*Prosopium coulteri*)

Incidental take authorization under the permit *would occur* on 1.6 million acres of Project Area lands in Montana, Idaho and Washington, in accordance with section I0(a)(1)(B) of the ESA (USFWS and NMFS 2000a). Under the proposed permit and IA, Plum Creek would manage its 1.6 million acres in the Project Area pursuant to the NFHCP that was developed as a supporting document for their permit application. In addition to the NFHCP, the application package includes the IA. Both the IA and the NFHCP are incorporated here, in their entirety, by reference. The Service has analyzed the effects of the No-Action (conditions likely to result if the permit and IA were not approved) and three action alternatives on all species for which Plum Creek seeks a permit and IA, as elaborated in their application package. An Environmental Impact Statement (EIS) was prepared concerning the proposed action of the Service issuing the permit and approving the IA. The EIS is also incorporated here, by reference (USFWS and NMFS 2000a). The Service has also analyzed effects to each of the Permit species in the biological opinion for this project (USFWS and NMFS 2000b) which is also incorporated here by reference.

The permit, NFHCP, and IA describe the responsibilities of the Service and Plum Creek. Permit issuance would allow Plum Creek to conduct land management actions in such a way as to provide for the conservation of all Permit species, consistent with section 10 of the Act, that may occur in the Project Area. The permit would authorize incidental take of listed species during otherwise lawful land management activities that would include; commercial forestry and associated activities (silviculture, road management, gravel quarrying); forest fire suppression; livestock grazing; miscellaneous forest and land product sales; conservation actions; special forest use permits; and manufacturing of forest products.

The IA explicitly describes the process by which Plum Creek would receive future incidental take permit coverage for presently unlisted species should they subsequently become listed. The IA also addresses unforeseen and changed circumstances that may trigger the need to revisit the minimization and mitigation aspects of the NFHCP . Those provisions of the IA are consistent with the Service's "No Surprises" regulations (50 CFR parts 17 and 222). The term of the permit, IA, NFHCP , and the associated minimization and mitigation commitments is 30 years.

Most of the proposed NFHCP Project Area lands are bordered by U.S. Department of Agriculture, Forest Service, lands currently managed in accordance with relatively low risk fish protection standards (USDA and USDI 1995a, 1995b) that are subject to review by the Service under Section 7 of the ESA The NFHCP would complement Federal efforts to assist in conservation of listed and other species. The NFHCP makes its contribution by addressing fish habitat and watershed protection needs on privately owned Plum Creek lands.

The proposed NFHCP was prepared by Plum Creek with technical assistance from the Service and the National Marine Fisheries Service (NMFS). The proposed NFHCP seeks to minimize and mitigate take of listed species and comply with section 10 of the ESA under the regulatory certainty afforded by a Federal Permit. Under the proposed NFHCP, Plum Creek would implement a variety of management measures to minimize and mitigate impacts to fish species.

The NFHCP is a set of 56 conservation commitments and land management prescriptions in seven general categories that Plum Creek agrees to follow for 30 years (see NFHCP "Commitments At A Glance" table in Section 1 of the NFHCP, within USFWS and NMFS 2000a). These seven categories include: Forest Road and Upland Management; Riparian Management; Range Management; Land Use Planning; Legacy and Restoration; Administration and Implementation; and Adaptive Management and Monitoring. An eighth commitment category includes Plum Creek's Environmental Principles. The commitments are consistent with Plum Creek's "Environmental Forestry" philosophy, and are intended to address Federal fish conservation goals and meet the Services' objectives for fish conservation.

The NFHCP includes existing state and Federal regulations as a foundation, and supplements them with a broad array of conservation commitments that minimize or mitigate effects of

covered land management practices. The conservation commitments would provide long-term benefits for the conservation of Permit species, but some take of listed species would be authorized. The Service would have assurances that conservation measures would be implemented for activities or areas that pose the greatest risk of harm to Permit species.

Plum Creek would receive long-term regulatory certainty that they could manage their lands without the risk of noncompliance with the ESA. Monitoring of NFHCP implementation and performance would occur throughout the proposed 30-year Permit period, and results reported to the Service regularly. Every five years Plum Creek would compare effectiveness monitoring results to predetermined "triggers" agreed to by the Service and Plum Creek. If habitat conservation is not occurring to the degree expected at the time of permit issuance and a monitoring trigger is tripped, the Service will work with Plum Creek to assess conservation effectiveness and adapt management if necessary to ensure adequate conservation is being provided under the permit. The Service and Plum Creek can also modify triggers if necessary to ensure adequate monitoring and adaptive management trigger sensitivity. This flexible approach to adaptive management ensures the Service has the opportunity to continually revisit whether the NFHCP is meeting its biological goals and permit issuance criteria, and to make adjustments if necessary.

Analysis of Effects

Table 5.3-1 of the EIS, below, compares effects of the four alternatives analyzed in the EIS on native fish habitat, including the "four C's" of native fish conservation: Cold water temperatures for successful salmonid spawning and rearing; Clean stream substrates for successful fish spawning and egg incubation; Complex habitat features for adequate fish cover and food availability; and Connected habitats to allow movement of fish among various habitats serving different life-history stages. The combination of minimization and mitigation measures offered in the NFHCP would result in the greatest overall assurance of improvement in the four "C's" of native fish habitat of any alternative analyzed by the Service. The NFHCP would also provide the greatest opportunity to adapt management in the future to further reduce impacts, should it be necessary. The NFHCP offers several minimization and mitigation measures (e.g., restrictions on land sales, fish habitat restoration) that otherwise would not likely be implemented, or be required to avoid take, in the absence of a permit.

The NFHCP is expected to result in the greatest reduction in sediment delivery to stream fish habitat; the greatest rate and degree of restoration of habitat connectivity; the greatest mitigation of impacts to permit species from non-native species competition or predation; the greatest reduction in impacts from livestock grazing; the greatest reduction in risk of poaching of native fish on Plum Creek lands; the most concentrated attention to areas with the highest density of native fishes and highest number of permit species ("native fish assemblage" commitments); the greatest reduction of risk from sold lands being developed in a way that negatively impacts native fish habitat; the best opportunity to address changing

circumstances on Plum Creek lands that may occur as a result of large landslides, fires, or floods; and the greatest extent of adaptive management flexibility of any alternative analyzed by the Service.

Across the project area, most of the activities and prescriptions intended to provide the greatest improvement to fish habitat quality under the NFHCP would occur in stream segments most important to native salmonid Permit species (i.e., where the most sensitive life-history stages of permit species are most likely to occur). Bull trout, in particular, would be positively affected to the greatest extent under the NFHCP because of their more extensive distribution within the Project Area, their relatively greater sensitivity to some habitat conditions that will improve under the NFHCP, and because of additional NFHCP riparian conservation commitments intended to benefit this species (specifically, by further reducing the risk of elevated stream water temperatures and sediment delivery to key stream reaches).

Overall, the NFHCP will provide an improving trend in Permit species habitat quality of significant magnitude. Sediment delivery from forest roads managed by Plum Creek will decrease by 50% from current conditions (increased "Clean" habitat); shade will increase by a range of 0-44% from current conditions (increased "Cold" habitat); in-stream large woody debris will increase to a range of LWD (36-166 pieces per 1000 feet of stream) that spans the natural average observed for the Project Area (increased "Complex" habitat); and habitat connectivity will be restored in essentially 100% of all areas that have been impacted by past forest management actions (e.g., impassable road culverts; increased "Connected" habitat).

The actual percent improvement in habitat parameters for the four "C's" will vary across the Project Area. For example, in areas heavily impacted by sediment from forest roads, or by high water temperatures from past removal of forest canopy close to streams, the actual percent increase in habitat quality will be greater than the expected averages. And in areas with little past or current impacts, percent increases will likely be smaller than reported.

Whether the anticipated magnitude of trends in habitat improvement is sufficient to allow for, or not preclude recovery, for all permit species in all portions of such a large Project Area cannot be known with certainty. In fact, it is possible that in some specific portions of the Project Area, some of the proposed NFHCP conservation commitments may be inadequate to sufficiently reduce impacts to permit species habitat to meet the biological goals of the NFHCP. Therefore, the Service and Plum Creek have agreed to extensive habitat quality monitoring commitments throughout the Project Area, specific triggers that will be evaluated with monitoring data to determine whether the plan is functioning adequately, and a detailed process for adapting management in the event that a trigger is tripped and adequate minimization and mitigation is not being provided. The Service can also work with Plum Creek to adjust the triggers if necessary to more precisely or accurately measure the effects of the commitments, if necessary.

These evaluations, changes and adaptations will be made collaboratively, with neither party having the authority to unilaterally deny or impose changes. In the event of a substantive disagreement over the viability of the NFHCP conservation measures and the need to make changes, the parties will complete a dispute resolution process. In the event the dispute resolution process fails to produce an agreement, the Service may suspend or revoke the permit across a portion of, or all of the Project Area, and/or Plum Creek can choose to relinquish the permit.

These monitoring and adaptive management commitments, coupled with the up-front commitments that are anticipated to result in significant improvements in permit species habitat quality, lead the Service to conclude that section 10 permit issuance criteria will be met by the NFHCP. Overall, issuing this permit will allow for, or not preclude, recovery, and in many cases it will likely promote recovery of or removal of threats to permit species.

Although no recovery plans exist for any of the seven permit species, the Service can still confidently issue this permit for the NFHCP, despite uncertainties posed by the absence of long-term recovery planning documents, because: (1) Plum Creek is making firm, measurable commitments to reduce instream sediment levels and stream water temperatures, as well as to increase stream habitat complexity and connectivity; (2) Plum Creek is offering significant additional conservation commitments for road upgrades, range management, land use planning, and legacy and restoration that would otherwise not occur in the absence of this permit; (3) only 20 percent of streamside forest stands on Plum Creek lands would be accessed within the first 10 years of the permit, which minimizes the risk of extensive negative effects if some of the conservation benefits of planned riparian prescriptions are found to be inadequate; (4) Plum Creek is offering significant adaptive management flexibility to accommodate the Service's uncertainty that is associated with issuing such a long-term permit with regulatory assurances, and (5) the Service can suspend or revoke the permit if Plum Creek chooses not to adapt management to meet the biological goals of the NFHCP and permit issuance criteria.

For these reasons, impacts likely to affect the seven permit species that may occur in habitats in the Project Area as a result of approval of the permit and IA would be fully minimized and mitigated by conservation measures described in the NFHCP. Further, the NFHCP is expected to provide conservation benefits for habitat types that occur in the Project Area, and those fish species associated with them, when compared to conditions that would result in the absence of approval of the permit and IA.

In the biological/conference opinion on the proposed action (USFWS and NMFS 2000b), the Service assessed impacts to listed and unlisted species which may occur in habitats in the Project Area, and found that approval of the permit and IA are not likely to jeopardize the continued existence of any permit species or any other listed species. This analysis and determination was used in developing the findings in this document.

TABLE 5.3-1
EIS Alternatives Summary of Effects

	<u>EIS Alternatives</u>			
	<u>No Action</u>	<u>NFHCP</u>	<u>Internal Conservation Plan</u>	<u>Simplified Prescriptions</u>
<u>Clean</u>				
<u>Roads: Net reduction in sediment delivery from baseline conditions.</u>	<u>28%</u>	<u>49%</u>	<u>33%</u>	<u>35%</u>
<u>Grazing: reduction of sediment delivery resulting from trampled stream banks.</u>	<u>none</u>	<u>large</u>	<u>moderate</u>	<u>large</u>
<u>Road abandonment</u>	<u>none</u>	<u>~1,000 miles</u>	<u>~200 miles</u>	<u>~1,950 miles</u>
<u>Cold</u>				
<u>Net increase in canopy cover in timbered riparian stands.</u>	<u>0-33%</u>	<u>0-44%</u>	<u>0-42%</u>	<u>7-47%</u>
<u>Grazing: reduction in "severely impacted" stream reaches through restoration of riparian vegetation.</u>	<u>0%</u>	<u>100%</u>	<u>9%</u>	<u>< 100%</u>
<u>Increase in shrubby and woody canopy cover associated with legacy and restoration work.</u>	<u>none</u>	<u>moderate</u>	<u>some</u>	<u>none</u>
<u>Complex</u>				
<u>Provide large woody debris to streams (pieces per 1,000 feet of stream)</u>	<u>30-73</u>	<u>36-166</u>	<u>33-78</u>	<u>49-181</u>
<u>Restoration of streambank integrity due to grazing measures</u>	<u>none</u>	<u>large</u>	<u>moderate</u>	<u>large</u>
<u>Increase in overhanging banks associated with legacy and restoration projects</u>	<u>none</u>	<u>large</u>	<u>some</u>	<u>none</u>
<u>Connected</u>				
<u>Restore fish passage where restricted by road culverts.</u>	<u>some</u>	<u>Essentially all fish passage restored by year 15</u>	<u>some</u>	<u>moderate</u>
<u>Restore fish passage where impacted by diversions</u>	<u>none</u>	<u>Eliminate and minimize impacts from some to most diversions</u>	<u>none</u>	<u>none</u>

II. PUBLIC REVIEW OF HCP

The Service published a notice of receipt of the permit application to allow the incidental take of listed species by Plum Creek, and a draft NFHCP, in the Federal Regis on December 17, 1999. Copies of the NFHCP and other draft documents were broadly distributed. Publication of the notice initiated a review period, during which 82 persons and entities commented. The Service made changes to the draft NFHCP, and responded to comments. Responses are summarized in Appendix F of the final EIS; the final NFHCP and comment responses were made available to the public on September 22, 2000.

III. INCIDENTAL TAKE PERMIT CRITERIA - ANALYSIS AND FINDINGS

Findings

1. The taking of fish species will be incidental.

Any take of species will be incidental to otherwise lawful forest management and incidental land use and monitoring activities by Plum Creek, as specified in their NFHCP .

2. Plum Creek will, to the maximum extent practicable, minimize and mitigate the impacts of taking on species including one listed and six unlisted permit fish species.

Plum Creek will minimize and mitigate impacts of their actions to the maximum extent practicable by: (1) significantly reducing effects of their actions on fish habitat (see Analysis of Effects section of this document) by implementing the NFHCP, which, although it was not the most protective alternative analyzed for some discrete parameters (e.g., riparian buffer protection), was the best alternative overall for permit species protection and recovery that was analyzed by the Service; (2) providing a net improvement in habitat for permit species over time, ensuring they more than compensate for any potential take or adverse effects that may occur; (3) agreeing to conduct extensive and intensive habitat monitoring to help inform the Service's future evaluations of plan effectiveness; (4) agreeing that if at any point in the future the Service determines that the improving trend in habitat quality is insufficient to remove threats to permit species, the Service can ask Plum Creek to provide more minimization and mitigation; and (5) agreeing that if necessary management adaptations are not made by Plum Creek under the NFHCP, the Service can suspend or revoke the permit.

3. Plum Creek will ensure that adequate funding for the NFHCP and procedures to deal with unforeseen circumstances will be provided.

The NFHCP and IA commit Plum Creek to adequately fund implementation of the NFHCP . The Service determined that the rate of minimization and mitigation of impacts to permit species will occur at a rate greater than the rate of potential take, providing a "pay-as-you-go" approach (USFWS and NMFS 2000a). For example, most road enhancement projects - and benefits to permit species through reduced sediment delivery to streams and increased habitat

connectivity - will occur in the first ten years of the permit, while any potential take from road management (e.g., ongoing sediment delivery to streams from use of roads) would occur throughout the 30-year permit period. Also, the overall rate of increase in riparian canopy closure leading to reduced summertime water temperatures across the project area will exceed any potential rate of reduction in canopy closure from timber harvest near streams. The NFHCP and IA also contain provisions that are to be used in the event of unforeseen circumstances and changed circumstances, allowing for adjustments to ensure adequate implementation.

4. Any taking of species will not appreciably reduce the likelihood that the species will survive and recover in the wild.

The legislative history of the ESA establishes the intent of Congress that this issuance criteria be based on a finding of "not likely to jeopardize" under section 7(a)(2) [see 50 CFR 402.02]. As a result, approval of Plum Creek's permit application and the IA has also been reviewed by the Service under section 7 of the Act. In a biological/conference opinion (USFWS and NMFS 2000b), which is incorporated by reference, the Service concluded that the issuance of an incidental take permit to Plum Creek would not jeopardize the continued existence of any listed species or unlisted permit species, would allow for recovery of listed species, and reduce threats to currently unlisted species. The Service's opportunity to obtain additional minimization and mitigation measures for permit species to achieve the biological goals of the plan at any point during the permitting process provides certainty that implementation of the NFHCP will not jeopardize permit species; if any necessary management adaptations are not made by Plum Creek under the NFHCP, the Service can suspend or revoke the permit.

5. Other measures, as required by the Director of the Service, have been met.

The NFHCP and IA incorporate all elements determined by the Service to be necessary for issuance of the incidental take permit and approval of the IA.

6. The Director of the Service has received the necessary assurance that the plan will be implemented.

Signing of the IA by Plum Creek and the Service assures that the NFHCP will be implemented.

Alternatives to the Proposed Action

Following is a brief description of the no action, and three action alternatives considered by the Service. A more detailed description and analysis of the following alternatives are contained in the EIS.

Existing Regulations-No Action Alternative. The No Action Alternative would provide applicable compliance with Federal and state laws, including forest

practice regulations, but no Incidental Take Permit would be issued and the NFHCP would not be implemented. This alternative would lack the regulatory certainty offered by a Permit under the ESA that any take that may occur would be authorized. This alternative would not result in implementation of measures specifically intended to benefit permit species.

Plum Creek's Native *Fish* Habitat Conservation Plan (NFHCP)-Proposed NFHCP. This plan represents Plum Creek's HCP to conserve native salmonids and their habitat as required under Section 10(a) of the ESA. The proposed NFHCP is intended to satisfy the requirements of Section 10(a)(2)(A) of the ESA so the Service can issue the Permit authorizing the incidental take of the Permit species.

Internal Bull Trout Conservation Plan Alternative. This alternative consists of a package of defensive, science-based land management practices and conservation measures that could be developed and implemented by Plum Creek. Plum Creek's intent would be to avoid take of ESA-listed fish species, but the measures could be adequate as HCP commitments to authorize incidental take for some of the proposed Permit species. This alternative could potentially be used to authorize incidental take for a single-species or listed species only HCP. This alternative and the NFHCP-alternative serve to contrast a single-species approach with a multi-species approach that includes unlisted species.

Simplified Prescriptions Alternative. This represents a general approach to road, riparian buffer, and grazing restrictions, with either no or minimal commitments to other practices that conserve fish. This alternative, if developed, is intended to be adequate for Permit issuance. This general approach contrasts with the focused conservation approach of the proposed NFHCP.

IV. GENERAL CRITERIA AND DISQUALIFYING FACTORS - ANALYSIS AND FINDINGS

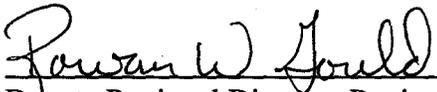
The Service has no evidence that the permit should be denied on the basis of the criteria and conditions set forth in 50 CFR 13.21(b)-(c). Plum Creek has met the criteria for the issuance of the permit and approval of the IA, and does not have any disqualifying factor that would prevent the permit or IA from being approved under current regulations.

V. RECOMMENDATION ON PERMIT ISSUANCE AND IA APPROVAL

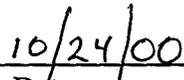
Based on the foregoing findings with respect to the proposed action, I recommend approval of the IA and issuance of a permit to authorize incidental taking of listed species that occur in Plum Creek's 1.6 million acre Project Area in accordance with the NFHCP and IA.

Assistant Regional Director, Region 1
U.S. Fish and Wildlife Service

Date



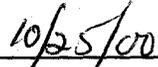
Deputy Regional Director, Region 1
U.S. Fish and Wildlife Service



Date



Regional Director, Region 6
U.S. Fish and Wildlife Service



Date

attachments

VI. LITERATURE CITED

U.S. Department of Agriculture and U.S. Department of the Interior. 1995a. Inland native fish strategy. Environmental assessment: Decision notice and findings of no significant impact. Interim strategies for managing fish-producing watersheds in eastern Oregon and Washington, Idaho, western Montana and portions of Nevada [INFISH]. USDA, Forest Service, Intermountain, Northern, and Pacific Northwest Regions.

U.S. Department of Agriculture and U.S. Department of the Interior. 1995b. Decision notice/decision record, FONSI, EA, appendices for the interim strategies for managing anadromous fish-producing watersheds in eastern Oregon, and Washington, Idaho and portions of California [PACFISH]. Washington D.C., USDA, Forest Service, USDI, Bureau of Land Management.

U.S. Fish and Wildlife Service, National Marine Fisheries Service. 2000a. Final Environmental Impact Statement and Plum Creek Timber Company Native Fish Habitat Conservation Plan. September, 2000.

U.S. Fish and Wildlife Service and National Marine Fisheries Service. 2000b. Biological Opinion on the Plum Creek Timber Company Native Fish Habitat Conservation Plan. U. S. Fish and Wildlife Service. October, 2000.