

Summary of the Draft Western Oregon State Forest Habitat Conservation Plan

Summary and Status

In November 2018 the Oregon Board of Forestry (Board) directed Oregon Department of Forestry (ODF) staff to begin work to develop a draft Habitat Conservation Plan (HCP). The HCP was the means by which ODF would outline a strategy to comply with the Endangered Species Act for activities under ODF control. The HCP would facilitate Incidental Take Permit (ITP) applications to the U.S. Fish and Wildlife Service (USFWS) and NOAA Fisheries for take authorization for those activities (covered activities) and for select species (covered species) over a defined amount of time (permit term). Since November 2018 ODF staff have been working on the HCP in coordination with the Scoping Team and Steering Committee and through engagement with stakeholders, counties, and tribes.

The draft HCP provided to the Board is the culmination of nearly two years of technical work. Driven by the need to assess the economic, conservation, and social outcomes of a potential HCP against those that are likely to be realized under the current Forest Management Plan (FMP) or a potential draft FMP, ODF staff, consultants, and the Scoping Team have focused on the elements of the HCP needed to make that comparison. The draft HCP is nearly complete, but there is certainly more to do. The draft HCP available to the Board now has sufficient detail to compare potential outcomes with current and draft FMPs and the work left to do, should the Board give such direction, would not change the underlying assumptions described in the Comparative Analysis, nor would they substantially change any of the economic, conservation, or social outcomes.

Should the Board give ODF staff direction to continue work on the HCP the near-term goal would be to finalize the draft HCP into a complete administrative draft HCP that could then be assessed under the National Environmental Policy Act (NEPA). The issuance of permits by the USFWS and NOAA Fisheries is a federal action necessitating an assessment of whether the federal action (permit issuance) would have an impact on the human environment. That assessment occurs under NEPA. NOAA Fisheries will lead the NEPA review process with support from the USFWS. It is anticipated that it would take a few months to get the draft HCP finalized into an administrative draft and therefore that the NEPA process is likely to begin in early 2021.

Summary of HCP Elements

This section provides a summary of the key elements of the HCP and the relevant chapters or sections in the draft HCP where the Board can find more information on each topic.

HCP Mission and Vision

The mission statement for the HCP is as follows:

To provide protection and conservation for selected listed species and species likely to become listed under the federal or state Endangered Species Acts during the permit term, while providing for long-term, multi-benefit management of the State's public forestlands subject to the Western Oregon State Forest Management Plan. The HCP will support the range of economic, social, and environmental benefits that ODF is statutorily required to provide under the Greatest Permanent Value rule and will help to meet fiduciary responsibilities for Common School Forest Lands (CSFL). It will also meet specific criteria that must be satisfied before NOAA Fisheries and USFWS can issue ITPs.

The following vision for the HCP defines the future outcome of state forests with the HCP:

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The Western Oregon State Forest HCP ensures species protection and conservation as well as increased certainty that working state forestlands will continue to benefit all Oregonians. Multi-objective forest stewardship activities provide revenue to counties, rural communities, the Common School Fund, and ODF; create jobs; support resilient forest ecosystems, clean air, and high water quality; provide high-quality habitats for native fish and wildlife; and promote educational, recreational, and other partnership opportunities to enhance enjoyment of public forest benefits.

HCP Program Goals

ODF staff developed a set of five broad program goals for the HCP in collaboration with the HCP Steering Committee. These program goals were used as a foundation to develop the biological goals and objectives and the conservation strategy described in Chapter 4, *Conservation Strategy*.

1. Meet the regulatory requirements of the federal and state ESA through an approved HCP, using a multi-species approach to managing forest ecosystems across the landscape.
2. Ensure active and sustainable management of state forest lands under a Western Oregon HCP and an associated Forest Management Plan designed to meet the social, economic, and environmental goals articulated in the Greatest Permanent Value Rule.
3. Increase operational certainty, cost savings, and predictability of revenue generation (including related timber harvest, jobs, and other economic values) using the HCP as a programmatic approach to comply with the federal and state ESA over the permit term.
4. Increase certainty for long-term persistence of covered wildlife species by protecting and maintaining high-quality habitats, conducting habitat enhancement activities in areas of lower quality habitat, and mitigating the impacts of covered activities on covered species.
5. Advance partnerships and engagement related to management approaches and outcomes associated with, but not limited to, revenue generation and economic outcomes, conservation, forest conditions and health, tribal interests and traditional cultural uses, research, monitoring, education, recreation, and the equitable enjoyment of benefits that state public forests provide.
6. Use science-based forestry to promote conditions that create sustainable, productive forests that are resilient to large fires, climate change impacts, and other disturbance events. Use an adaptive management approach to address uncertainty and change over time.

Permit Area and Plan Area (draft HCP, Section 1.2)

The location where ESA permit coverage would apply must be defined and is called the permit area. The permit area in this HCP is defined as all ODF-managed lands in western Oregon. This includes all Board lands and Common School Forest lands owned by the Oregon Department of State Lands but managed by ODF. Collectively these lands include 639,489 acres. An additional 94,206 acres, known as the plan area, includes surrounding parts of the permit area where ODF has the potential to acquire or exchange lands with neighboring land owners in the future. Following a land exchange the ESA permits would apply to any lands newly acquired by ODF and permits would no longer apply to any lands that ODF no longer managed.

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Covered Activities (draft HCP, Chapter 3)

This HCP and the associated permits are proposed to cover and provide incidental take authorization for ODF's land management activities in the permit area, other activities that ODF has jurisdiction over, as well as the activities needed to carry out the conservation strategy, as described in Chapter 4. Covered activities must be "under the control" of the permit holder and occur within the permit term and in the permit area. Broad categories of the covered activities are listed below; detailed descriptions of the selection process and all covered activities are provided in Chapter 3, *Covered Activities*.

Covered activity categories include:

- Timber Harvest
- Stand Management
- Road System Management
- Recreation Infrastructure Construction and Maintenance
- HCP Conservation Actions

Covered Species (draft HCP, Section 1.2.5)

Covered species are those species for which USFWS and NOAA Fisheries will provide take authorization to ODF to conduct the covered activities. Species were selected for coverage if:

1. The species range overlaps with the permit area
2. The species is currently listed under the ESA or is likely to become listed during the permit term.
3. The species is likely to be impacted by covered activities.
4. There is enough data available to adequately assess the potential for covered activities to impact the species and to create a conservation strategy for the species that will adequately avoid, minimize, and mitigation the impact of any taking of the species that occurs from covered activities.

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There are 16 species proposed for coverage in the draft HCP; nine fish, three salamanders, two birds, and two mammals. The following table includes the list or proposed covered species.

Species	Listing Status		Federal Agency Jurisdiction
	State	Federal	
Fish			
Oregon Coast coho (<i>Oncorhynchus kisutch</i>)	--	FT	NOAA FISHERIES
Oregon Coast spring chinook (<i>O. tshawytscha</i>)	--	--	NOAA FISHERIES
Lower Columbia River coho (<i>O. kisutch</i>)	SE	FT	NOAA FISHERIES
Upper Willamette River spring chinook (<i>O. tshawytscha</i>)	--	FT	NOAA FISHERIES
Upper Willamette River winter steelhead (<i>O. mykiss</i>)	--	FT	NOAA FISHERIES
Columbia River chum (<i>O. keta</i>)	--	FT	NOAA FISHERIES
Southern Oregon/Northern California Coast coho (<i>O. kisutch</i>)	--	FT	NOAA FISHERIES
Lower Columbia River chinook (<i>O. tshawytscha</i>)	--	FT	NOAA FISHERIES
Eulachon (<i>Thaleichthys pacificus</i>)	--	FT	NOAA FISHERIES
Birds			
Northern spotted owl (<i>Strix occidentalis</i>)	ST	FT	USFWS
Marbled murrelet (<i>Brachyramphus marmoratus</i>)	ST	FT	USFWS
Amphibians			
Oregon slender salamander (<i>Batrachoseps wrighti</i>)	ST	UR	USFWS
Columbia torrent salamander (<i>Rhyacotriton kezeri</i>)	ST	UR	USFWS
Cascade torrent salamander (<i>R. cascadae</i>)	--	UR	USFWS
Mammals			
Coastal marten (<i>Martes caurina</i>)	--	PT	USFWS
Red tree vole (<i>Arborimus longicaudus</i>)	--	--	USFWS
SE = State Endangered; ST = State Threatened; FT = Federal Threatened; PT = Federal Proposed Threatened; UR = Under Review			

Permit Term (draft HCP, Section 1.2.3)

The draft HCP and associated permits are proposed to have concurrent terms of 70 years. The 70-year permit term was selected to balance the risks associated with shorter and longer terms. A term of less than 70 years would limit ODF's ability to conduct long-term forest management practices, which are typically conducted on roughly 10-year management cycles. A term of more than 70 years would increase the risk that unpredictable ecological changes could adversely affect the status of the covered

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species in the plan area and compromise the conservation strategy. The level of certainty associated with a 70-year term enables ODF to make long-term plans and investments with the assurance that they will be able to continue managing the forest in a manner that complies with ESA requirements.

Conservation Strategy (draft HCP, Chapter 4)

The conservation strategy includes measures to avoid, minimize, and mitigate the impact of the taking on covered species from covered activities. Generally the conservation strategy relies on 1) implementing best management practices when conducting covered activities to minimize effects on covered species, 2) designating areas on the landscape that will be managed for the benefit of covered species, and 3) the creation of a conservation fund that would be used to implement species and habitat management activities that would benefit covered species during the permit term.

The conservation strategy is best summarized by the biological goals and objectives, shown in Table 4-1 of the draft HCP and described for each covered species in Section 4.6. Biological goals and objectives state the intentions of the HCP and the measurable biological objectives become the threshold by which the success of the HCP will be judged. A commitment to continually make progress towards and ultimately achieve the biological objectives is the commitment ODF is making in the HCP. The monitoring program, summarized below and described in Chapter 6, is designed to track progress towards the objectives.

Biological goals and objectives for covered fish and aquatic salamanders focus on continual improvement of aquatic habitat quality. Specifically biological objectives state intentions for improving instream habitat quality through the recruitment of large wood, execution of stream enhancement projects, removal of barriers to fish movement, and protection against sediment and stream temperature increase. Biological goals and objectives for terrestrial covered species focus on increasing habitat quality and quantity during the permit term. Commitments are made to initially conserve and maintain habitat that is suitable or highly suitable currently and to then increase the total acres of suitable and highly suitable habitat through enhancement, including both passive and active management.

Twelve conservation actions are described in the draft HCP that will be used to achieve the biological goals and objectives. The conservation actions are described in Section 4.7. The list of conservation actions includes:

- Conservation Action 1: Establish Riparian Conservation Areas (RCA)
- Conservation Action 2: Riparian Equipment Restriction Zone
- Conservation Action 3: Stream Enhancement
- Conservation Action 4: Remove or Modify Artificial Stream Barriers
- Conservation Action 5: Standards for Road Improvement and Vacating
- Conservation Action 6: Establish Habitat Conservation Areas (HCA)
- Conservation Action 7: Manage Habitat Conservation Areas
- Conservation Action 8: Conservation Actions Outside HCAs and RCAs
- Conservation Action 9: Strategic Terrestrial Species Initiatives
- Conservation Action 10: Seasonal Operation Restrictions
- Conservation Action 11: Standards for Road Construction and Management
- Conservation Action 12: Establish and Maintain Conservation Fund

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Aquatic Conservation Strategy

The aquatic conservation strategy is centered on Riparian Conservation Areas (RCAs). RCAs are essentially stream buffers designed to reduce potential impacts from increased sedimentation or stream temperature. RCAs are further designed to maximize the amount of large wood that could be naturally recruited into the stream systems from streamside sources and from debris flows in the upper watersheds. RCAs vary by stream type, including stream size, seasonality, and whether or not it is a fish bearing stream. Approximately 77,000 acres are in RCAs across the permit area, 37,000 acres of which are in HCAs. There would be no forest management in RCAs. Activities would be limited to only essential activities needed to implement covered activities (e.g., road construction and maintenance) or to complete stream enhancement actions, including placement of large wood, channel restoration, and fish barrier removal. Additional conservation actions create operational and design standards for roads, equipment use, and the timing of activities to minimize effects on covered species and the stream environment generally.

Terrestrial Conservation Strategy

The centerpiece of the terrestrial conservation strategy is the establishment of Habitat Conservation Areas (HCAs) that are designed to conserve, maintain, and enhance habitat. HCAs comprise approximately 275,000 in the permit area (including 37,000 of RCAs). Combined, RCAs and HCAs encompass 49% of the permit area. The size of HCAs varies widely, due to land ownership patterns and species needs. In locations where ODF land ownership includes large blocks HCAs are generally larger, in locations where ODF land ownership is more scattered and intermixed with private and federal land owners, the HCAs are generally smaller. Within HCAs both passive and active management will occur with the long term objective of an increase in habitat quality and quantity for terrestrial covered species over time. Suitable and highly suitable habitat for northern spotted owl is estimated to increase five-fold and for marbled murrelet eight-fold, during the 70-year permit term. Those new acres of suitable and highly suitable habitat are primarily located inside of HCAs and are the result of passive management but also strategic active management of stands to grow habitat faster. Active management will include treatment of stands that will be less likely to grow into habitat without management, specifically hardwood stands or Douglas fir stands infected by Swiss needle cast, but will also utilize forest management prescription (e.g., thinning) to promote tree growth and understory diversity. This increase in the quality and quantity of habitat for covered terrestrial species is the primary tool used to offset the impact of the taking from continued habitat loss during the same period.

Beyond habitat creation through passive and active management conservation actions are included to retain important habitat features on the landscape outside of HCAs and RCAs, including leave trees and downed wood. ODF will continue to minimize effects on known covered species locations, particularly known nesting locations for northern spotted owl and marbled murrelet, through seasonally restricting operations. Finally, by establishing the conservation fund, ODF can invest in strategic terrestrial initiatives including regional support of barred owl removal efforts, new initiatives to boost or speed recovery of covered species, and research and monitoring efforts aimed at better understanding species distribution and conservation needs to more efficiently and effectively implement the conservation strategy, and to inform species management generally in western Oregon.

Conservation Fund

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The Conservation Fund is described in Section 4.7.12 and more detail is provided in Section 9.2.2. The Conservation Fund will be derived from timber sales and utilized to implement three types of conservation projects: 1) aquatic enhancement projects, 2) upland restoration projects, and 3) strategic species initiatives. The creation of the Conservation Fund will allow ODF to meaningfully engage with partners to implement conservation projects to benefit covered species. Funds will be accrued annually but there will be flexibility to roll funds over year to year in order to fund larger and more complex conservation projects. Based on modeled harvest estimates the conservation fund is estimated to accrue on average \$1 million/year throughout the permit term. The division of funding among initiatives, in support of the biological objectives, is described in Section 9.2.2 and will be tracked and reported on annually.

Effects Analysis (draft HCP, Chapter 5)

One of the key elements of the HCP is to assess whether and how covered activities will effect covered species. The effects analysis focuses on the ways in which covered activities could influence the ability of covered species to persist on the landscape. Effects can be direct, such as mortality or habitat loss, or indirect, like longer term effects on water temperature or reduced nest success due to an increase in predation risk. An effects analysis is carried out for each covered species, although in this HCP some species (e.g., covered fish species) are combined due to overlapping species ranges and habitat requirements.

Effects on Aquatic Species (draft HCP, Sections 5.3, 5.4, 5.5)

Effects on aquatic species, including covered fish species but also Columbia and Cascade torrent salamanders, are analyzed to determine whether covered activities will result in a reduction in habitat quality at any point during the permit term. Habitat quality is measured broadly in terms of stream temperature, water quantity, whether activities will result in an increase in sediment delivery, and whether in stream habitat structure, including large wood, will continue to be adequately supplied over time. In the draft HCP the assessments are made with the guidance of the limiting factors analysis summarized by the Oregon Department of Fish and Wildlife (ODFW). Net effects are determined by accounting for the benefits of implementing riparian conservation areas, as described in the conservation strategy.

Effects on Terrestrial Species (draft HCP, Sections 5.6 – 5.10)

Effects on terrestrial species is largely focused on habitat loss. Terrestrial species habitat suitability models allowed for the estimation of habitat loss from timber harvest activities over the course of the permit term. This allowed for the estimation not just of habitat loss under current conditions, but also habitat loss under future conditions as the forest grows and habitat develops in new locations. The effects analysis focuses on loss of suitable or highly suitable habitat or areas otherwise known to support covered species. The net effects summary accounts for the acres of suitable and highly suitable habitat estimated to be lost during the permit term balanced against the amount of suitable and highly suitable habitat estimated to grow during the same time period. For species where a lot of information exists on known locations and occurrences, such as northern spotted owl and marbled murrelet, an analysis of net effects on those locations was also completed. Since nearly all known nest locations of northern spotted owl and marbled murrelet are located inside of HCAs, the overall effects on those species, and other terrestrial species, is expected to be low.

Monitoring and Adaptive Management

In order to demonstrate that ODF is operating in compliance with the HCP and permits and to determine whether the conservation strategy is performing as expected, a monitoring program is required. The types of monitoring are described in Section 6.2. Compliance monitoring will focus on whether the HCP is being implemented as written and as required by the permits. The results will be summarized in an annual report to USFWS and NOAA Fisheries. Effectiveness monitoring will be completed to track progress towards the biological goals and objectives. Effectiveness monitoring will include validation of habitat development as estimated by species habitat models and species response to changes in habitat quality. Tables 6-1 and 6-2 show how the monitoring program will address the biological goals and objectives.

Based on the results of the monitoring program some elements of the conservation strategy may need to be adjusted through adaptive management. An adaptive management framework is described in Section 6.3. The process of adaptive management is described and a range of potential program adjustments, including example adaptive management triggers are provided in Sections 6.3.3 and 6.3.4 respectively.

Changed and Unforeseen Circumstances (draft HCP, Chapter 7)

The HCP describes circumstances that may influence ODF's ability to implement the conservation strategy as described. These circumstances are described as though that can be expected, based on historical information or the general understanding of the landscape. Thresholds are described for when an event exceeds what was reasonably anticipated and becomes an unforeseen circumstance. Categories of changed and unforeseen circumstances addressed in Chapter 7 include: new species listing, wildfire, storm events, invasive species and disease, and stream temperature change. The role that climate change is likely to play in the frequency, duration, and extent of these events in the future is described in the examination of each.

HCP Implementation (draft HCP, Chapter 8)

The draft HCP describes how ODF will implement the commitments made therein. A discussion about roles and responsibilities from state and federal agencies is included in Section 8.2. A summary of the reporting program, including annual reports on implementation activities and monitoring results, 5-year habitat validation reports, and 10-year comprehensive program reviews are described in Section 8.3. The role that the HCP has in the timber sale program and related decision-making are further described in Section 8.5. Finally, the possibilities and options for modification of the HCP in the future, and the thresholds for decision making related to those changes is described in Section 8.6 and 8.7.

Cost and Funding (draft HCP, Chapter 9)

It is required that the HCP detail the cost of implementing the conservation strategy as well as a demonstration of how the HCP commitments will be funded for the duration of the permit term. The major cost categories are listed below along with draft HCP chapter sections where more information can be found, including the assumptions behind each cost.

1. HCP Administration and Staffing (draft HCP, Section 9.1)
2. Conservation Strategy (draft HCP, Section 9.2)

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3. Monitoring and Adaptive Management (draft HCP, Section 9.3)
4. Remedial Measures for Changed Circumstances (draft HCP, Section 9.4)

The table below (draft HCP, Table 9-4) summarizes all costs for the HCP program over a 70-year permit term.

Total Estimated Costs for draft Western Oregon State Forest HCP

Cost Category	Annual Cost	Cost Over 70-Year Permit Term
HCP Administration	\$101,763	\$7,123,410
Conservation Strategy	\$1,257,273 ¹	\$88,009,110
Monitoring	\$1,838,023 ²	\$128,661,610
Adaptive Management	\$183,802 ³	\$12,866,140
Remedial Measures	\$62,864 ⁴	\$4,400,480
Total	\$3,443,725	\$241,060,750

Notes:

¹ Costs are comprised of \$1,000,000/year for the Conservation Fund and \$257,273/year for staff to oversee and implement the conservation strategy.

² Costs are comprised of \$138,023 for staff time to oversee the monitoring program and summarize and report results, plus \$1,700,000 to fund the monitoring activities.

³ Costs are estimated to be 10% of monitoring costs over the permit term.

⁴ Costs are estimated to be 5% of the cost of the conservation strategy over the permit term.

Funding assurances are provided from timber harvest revenue from state forest land. A history of timber harvest revenue and a narrative on expectations for how the program will continue into the future is described in Section 9.4