Hood River Subbasin Plan

Including

Lower Oregon Columbia Gorge Tributaries

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Writer/editor

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1. Executive Summary

The Subbasin Plan defines fish and wildlife goals, objectives, and strategies for the Hood River Subbasin and the adjacent Lower Oregon Columbia Gorge Tributaries for the next 10 to 15 years. The plan will be submitted to the Northwest Power Planning Council for adoption under the Council's Fish and Wildlife Program. Its purpose is to help direct Bonneville Power Administration funding to projects that address fish and wildlife populations adversely impacted by the Columbia River hydropower system. The Subbasin Plan components are a 1) Assessment, or evaluation of current and historic biological and physical conditions; 2) Inventory of existing fish and wildlife programs and measures; and 3) Management Plan outlining measurable biological objectives and prioritized strategies to meet those objectives. Given major differences in land use and ecosystem characteristics between the Hood River Subbasin and the Lower Oregon Columbia Gorge Tributaries planning units, a separate Assessment and Management Plan was prepared for each of these areas.

In the Hood River Subbasin, chronic human-caused habitat disturbances are believed to intensify and prolong the effects of frequent large scale natural disturbances leading to population declines in the focal species bull trout, spring chinook, fall chinook, and summer and winter steelhead. Key limiting factors for chinook and steelhead included flow, channel stability, habitat diversity, key habitat quantity, and sediment load. The scheduled removal of the Powerdale Hydroelectric Project and dam in 2010, and restoration of physical habitat connectivity for adult and juvenile life stages at other dams and diversions have the potential to substantially increase the survival of focal species in the Hood River. Six habitat restoration scenarios were run for salmon and steelhead using the Ecosystems Diagnosis and Treatment model developed by Mobrand Biometrics, Inc. The largest predicted increase in spawner and juvenile outmigrant production for all species from a single restoration action was the Large Woody Debris restoration scenario. This scenario resulted in a 39% increase in summer steelhead smolts ranging up to a 365% increase for spring chinook. However, other assessment information indicates that flow restoration and fish passage will have significant positive effects on population abundance.

Preventing further losses of big game winter range, including oak, pine and grassland habitats for focal species lark sparrow and gray squirrel, was found to be important to the populations and persistence of many focal species. Wildlife corridors and habitat connectivity need to be maintained and actions taken to insure that movements and dispersal of wildlife can occur in the future. The spatial and temporal needs of wildlife need to be defined and considered to insure that increasing backcountry recreation and land development does not degrade available forest habitats and adversely affect populations, and biodiversity can be maintained.

For the Gorge Tributaries Planning area, retention and enhancement of bottomland hardwood stands, nest cavity development for purple martin, protection of large conifer and cottonwood perch and nest trees, and increasing aquatic and wildlife connectivity

across the Interstate 84/Union Pacific Railroad corridor were the priorities. Managing or preventing recreational disturbance near bald eagle nest trees and forage areas on sandbars was also identified as a need if bald eagle presence in the Gorge is to be maintained and enhanced. Fire fuels reduction plans in the urban-interface areas may better integrate wildlife habitat diversity needs, and mimic some of the results of natural fire processes.

2. Introduction

2.1 Description of Planning Entity

The plan was developed in collaboration with local communities and interests, state and federal agencies, the Mt. Hood National Forest-U.S. Forest Service, and the Confederated Tribes of the Warm Springs Reservation. It is intended to be consistent with requirements of Endangered Species Act recovery plans, Clean Water Act plans, tribal trust responsibilities and treaty rights, the Northwest Forest Plan, the Oregon Plan for Salmon and Watersheds, local land use plans, and Oregon Department of Fish and Wildlife basin plans and rules.

In late 2002, the Northwest Power Planning Council contracted with the Hood River Soil and Water Conservation District (SWCD) to serve as the fiscal and contract manager for the subbasin plan. Formed in 1953 under ORS Chapter 568, the mission of the SWCD is to provide educational, technical, and financial assistance to Hood River County landowners in order to protect, conserve, and restore natural resources. Five publicly elected directors serve on the District Board. The SWCD employs a 3 person staff including a Manager, Watershed Coordinator, and Agricultural Technician. The SWCD works closely with landowners, Oregon Department of Agriculture, Oregon State University Extension, and the Natural Resources Conservation Service to implement agricultural water quality, erosion control, and irrigation efficiency technical and cost-share programs, cooperative projects, and related public education. The SWCD formed the Hood River Watershed Group (council) in 1993 and serves as its fiscal manager.

The SWCD formed a Subbasin Planning Team to develop the plan. The Team included representatives from the Oregon Department of Fish and Wildlife (ODFW), Confederated Tribes of the Warm Springs Reservation of Oregon (CTWSRO), Hood River Watershed Group (HRWG), and the U.S. Forest Service (USFS) including the Mt. Hood National Forest and the Columbia River Gorge National Scenic Area. A Technical Work Group assisted the Planning Team by developing an ecosystem model for the Hood River, and contributing data, analyses, and reviews. An Advisory Committee of local government officials, business, and other stakeholders was formed to provide input to the Planning Team and to review draft plan chapters and policies. The HRSWCD contracted with Natural Resources Consultants– GIS, Inc. and the US Forest Service for technical assistance wildlife habitat and population assessments, GIS mapping, and habitat model development. Writing and editing were provided by Holly Coccoli under a service contract with the NWPPC. Additional support was provided by the Oregon Technical Assistance Team and Mobrand Biometrics, Inc.

2.2 List of Participants

The following list shows project organization and membership.

Fiscal and Contract Management

Anne Saxby, Hood River Soil and Water Conservation District

Subbasin Planning Team

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Advisory Committee

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Larry Hoffman, Oregon Department of Forestry
Brian Connors, Middle Fork Irrigation District
Katie Skakel, Farmers Irrigation District
John Buckley, East Fork Irrigation District
Brian Nakamura, Hood River Grower-Shippers Association
Steve Hansen, Longview Fibre Company
Richard McCulley, City of Cascade Locks
Chuck Daughtry, Port of Cascade Locks
Bob Willoughby, City of Cascade Locks
Robert Barnhart, Oregon Department of Transportation
Dave Harlan, Port of Hood River
John Trumbell, Union Pacific Railroad

2.3. Stakeholder Involvement Process

Organizations, businesses, and agencies in the planning area with potential direct interests in local land use, natural resource use, and fish and wildlife concerns were contacted and invited to participate on the Advisory Committee. Public and stakeholder involvement was facilitated through monthly meetings of the Hood River Watershed Group. The Watershed Group is a voluntary watershed council organization of landowners, irrigation districts, interested citizens, Confederated Tribes of the Warm Springs Reservation, the Forest Service, and government agencies involved in land and natural resource use in the Hood River Valley. Most stakeholders and Subbasin Planning Team members regularly participate in Hood River Watershed Group meetings. Additional meetings with stakeholders with specific interest in the Columbia Gorge Tributaries planning area were held in the City of Cascade Locks. Meeting announcements were published in the Hood River News and through mailings to the Hood River Watershed Group. The planning effort was introduced in October 2002 by Eric Bloch, Oregon member of the NWPPC, at a meeting of the Hood River Watershed Group after publicity in the Hood River News.

2.4. Overall Planning Approach

The Subbasin Plan was prepared according to guidance materials provided by the Oregon Subbasin Planning Coordination Group and the NWPPC[1.]

For planning purposes, the planning area was divided into 2 watershed areas (Appendix A, Map 1):

1. **Hood River Subbasin**. The major stream is the Hood River, which drains 339 square miles, and flows into the Columbia River 22 miles upstream of the Bonneville Dam.
2. **Oregon Columbia Gorge Tributaries Watershed**. This area drains 143 square miles of land between Bonneville Dam and the Hood River, and is part of the Columbia Gorge Subbasin. Herman and Eagle creeks are the largest of the 19 independent Columbia River tributaries within this watershed.

The Subbasin Plan consists of an assessment, inventory, and management plan for each of the areas noted above. The assessment provides an updated technical evaluation of the historical and current biological and physical characteristics for the subbasin. The assessment describes scientific assumptions and hypotheses about species-habitat relationships and the predicted effectiveness of proposed habitat strategies. The inventory describes the existing fish and wildlife programs, plans and project accomplishments so that action gaps or needs can be highlighted. Based on the assessment, biological objectives and measurable targets for fish and wildlife habitat recovery were identified. A management plan was formulated to meet the biological

[1] Technical Guide for Subbasin Planners, Council Document 2001-20; Oregon Specific Guidance, October 2, 2002; Outline for Oregon Subbasin Plan revised 4/16/2003

objectives. In preparing the plan, existing data, reports, and information was used as much as possible, and updated as necessary. Existing aquatic habitat information for the Hood River and its tributaries was compiled into a database for use in a computer model called the Ecosystem Diagnosis and Treatment Model (EDT). The EDT model predicts the response of chinook and steelhead populations to different habitat conditions. Model results were compared to prior assumptions about habitat conditions developed in earlier assessments. A second spreadsheet model called Qualitative Habitat Analysis was applied for resident trout and for salmon and steelhead in the Columbia Gorge Tributaries Watershed, and for cutthroat trout in the Hood River subbasin. The Interactive Biological Information System database developed for subbasin planning by the Northwest Habitat Institute was used as much as time allowed.

Subbasin plan development was coordinated as much as possible with other on-going programs and plans for fish, wildlife, water quality, resource use, and watershed restoration. These included available Endangered Species Act recovery plans; the Columbia Basin Fish and Wildlife Program activities in the Hood River; watershed planning through the Oregon Plan for Salmon and Watersheds and Oregon Watershed Enhancement Board (OWEB), the Northwest Forest Plan, the Columbia River Gorge National Scenic Area management, Oregon Statewide Land Use Planning Goals, and the Total Maximum Daily Load (TMDL) water quality study.

2.5. Process and Schedule for Revising/Updating the Plan

The Subbasin Planning Team will meet every two years to review the plan and incorporate changes as needed. Prior to adoption, comments on proposed revisions will be sought from Technical and Advisory Committee members and other stakeholders at a watershed council meeting, and public notice will be provided in the Hood River News.