Chapter: 6

State(s): Oregon

Recovery Unit Name: Hood River

Region 1
U.S. Fish and Wildlife Service
Portland, Oregon

DISCLAIMER

Recovery plans delineate reasonable actions that are believed necessary to recover and protect listed species. Recovery plans are prepared by the U.S. Fish and Wildlife Service and, in this case, with the assistance of recovery unit teams, State and Tribal agencies, and others. Objectives will be attained and any necessary funds made available subject to budgetary and other constraints affecting the parties involved, as well as the need to address other priorities. Recovery plans do not necessarily represent the views nor the official positions or approval of any individuals or agencies involved in plan formulation, other than the U.S. Fish and Wildlife Service. Recovery plans represent the official position of the U.S. Fish and Wildlife Service *only* after they have been signed by the Director or Regional Director as *approved*. Approved recovery plans are subject to modification as dictated by new findings, changes in species status, and the completion of recovery tasks.

Literature Citation: U.S. Fish and Wildlife Service. 2002. Chapter 6, Hood River Recovery Unit, Oregon. 66 p. *In*: U.S. Fish and Wildlife Service. Bull Trout (*Salvelinus confluentus*) Draft Recovery Plan. Portland, Oregon.

ACKNOWLEDGMENTS

The Hood River Recovery Unit Team includes technical experts from Oregon familiar with the Hood River Basin. A bull trout technical working group made up of area biologists was organized in the early 1990's to coordinate survey, monitoring, and restoration activities in the Hood River Basin. Group membership has varied throughout the meetings, and has expanded to include other resource professionals and interested parties. The team continued their activities after bull trout were formally listed under the Endangered Species Act (1998), and in addition to gathering new information, has lent their technical expertise to developing this recovery unit plan for bull trout.

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HOOD RIVER RECOVERY UNIT CHAPTER
OF THE BULL TROUT RECOVERY PLAN

EXECUTIVE SUMMARY

CURRENT SPECIES STATUS

The U.S. Fish and Wildlife Service issued a final rule listing the Columbia River distinct population segment of bull trout (*Salvelinus confluentus*) as a threatened species under the Endangered Species Act on June 10, 1998 (63 FR 31647). The Hood River Recovery Unit includes the Hood River and Sandy River basins. The Hood and Sandy River basins are located wholly in Oregon. The Hood River drains an area of approximately 912 square kilometers (352 square miles) and is approximately 77.5 kilometers (48 miles) from its headwaters to the confluence with the Columbia River, 272 kilometers (169 miles) from the mouth of the Columbia River at the Pacific Ocean. Hood River enters the Columbia River 35 kilometers (22 miles) upstream of the Bonneville Dam.

The Hood River Recovery Unit Team identified one core area, the Hood River and its tributaries, containing two local populations (Clear Branch and Hood River local populations). The Clear Branch local population is currently contained in Clear Branch Hood River, Laurance Lake, and Pinnacle Creek, and the Hood River local population is currently contained in Bear Creek, Coe Branch, Compass Creek, Eliot Branch, the mainstem Hood River, and Tony Creek. Although bull trout have been sighted in East Fork Hood River tributaries and in the West Fork of Hood River, insufficient information exists at present to define local populations there. They are considered potential local populations, and establishing secure local populations utilizing these two major tributaries is essential for full recovery to occur. The Sandy River contains core habitat but additional research on bull trout use of the Sandy River is needed.

HABITAT REQUIREMENTS AND LIMITING FACTORS

A detailed discussion of bull trout biology and habitat requirements is provided in Chapter 1 of this recovery plan. The limiting factors discussed here are specific to the Hood River recovery unit chapter.

Within the Hood River Recovery Unit, historical and current land use activities have impacted bull trout local populations. Bull trout in the Hood River Recovery Unit are primarily threatened by isolation from dams and seasonally impaired water quality, and impacts to stream systems from past and ongoing forest management and agricultural activities. Bull trout above Laurance Lake in the Clear Branch of Hood River are considered to be at risk of a random extinction event due to low numbers, isolation, and restriction to a single known spawning area (USFWS 1998).

RECOVERY GOALS AND OBJECTIVES

The goal of the bull trout recovery plan is to **ensure the long-term persistence of self-sustaining, complex interacting groups of bull trout distributed throughout the species' native range, so that the species can be delisted**. To achieve this goal the following objectives have been identified for bull trout in the Hood River Recovery Unit:

- Maintain the current bull trout distribution within the core area and re-establish bull trout in previously occupied areas within the Hood River Recovery Unit.

- Maintain stable or increasing trends in bull trout abundance in the Hood River Recovery Unit.

- Restore and maintain suitable habitat conditions for all bull trout life history stages and strategies.

- Conserve bull trout genetic diversity and provide opportunity for genetic exchange.

RECOVERY CRITERIA

Recovery criteria for the Hood River Recovery Unit reflect the stated objectives, evaluation of population status, and recovery actions necessary to achieve the overall goal.

1. **Distribution criteria will be met when bull trout are distributed among three or more local populations, including the existing Clear Branch and Hood River local populations in the Hood River Core Area.** In a recovered condition the Hood River Core Area will include up to four local populations. In addition to the two existing local populations (Clear Branch and Hood River), recovery actions may lead to defined spawning and rearing areas in the West Fork and possibly in the East Fork of Hood River. Additional population studies and a better understanding of bull trout fidelity to their natal streams is needed to better define local populations in the recovery unit. The extent of bull trout use of the Sandy River and mainstem Columbia River is a primary research need.

2. **Abundance criteria will be met when the estimated abundance of adult bull trout is at least 500 individuals distributed within the Hood River Recovery Unit.** Recovered abundance was derived using the professional judgement of the Recovery Unit Team and estimation of productive capacity of identified local populations. This abundance level would represent an intermediate level of threat. These goals may be refined as more information becomes available, through monitoring and research, including identified distribution and population criteria for the Sandy River.

3. **Trend criteria will be met when adult bull trout exhibit a stable or increasing trend for at least 2 generations at or above the recovered abundance level within the recovery unit.** Achievement of this recovery criterion will be based on a minimum of 10 years of monitoring data, or approximately two bull trout generations. The development of a standardized monitoring and evaluation program that would accurately describe trends in bull trout abundance is identified as a priority research

need. As part of the overall recovery effort, the U.S. Fish and Wildlife Service will take the lead in addressing this research need by forming a multi-agency technical team to develop protocols to evaluate trends in bull trout populations.

4. **Connectivity criteria will be met when passage barriers to bull trout have been addressed at Powerdale Dam, Clear Branch Dam, Coe Diversion, Eliot Diversion, Farmers Diversion and Tony Creek Diversion, and seasonal water quality barriers have been addressed in the East and West Forks of Hood River.** Passage barriers must be addressed in the Hood River Core Area to ensure opportunities for connectivity within and among local populations. This also includes providing adequate diversion screening.

ACTIONS NEEDED

Recovery for bull trout will entail reducing threats to the long-term persistence of populations and their habitats, ensuring the security of multiple interacting groups of bull trout, and providing habitat conditions and access that allows for the expression of various life-history forms. Seven categories of actions needed are discussed in Chapter 1; tasks specific to this recovery unit are provided in this chapter.

ESTIMATED COST OF RECOVERY

Total estimated cost for bull trout recovery in the Hood River Recovery Unit is estimated at about $16 million spread over a 25-year recovery period. Total costs include estimates of expenditures by local, Tribal, State, and Federal governments and by private business and individuals. These costs are attributed to bull trout conservation but other aquatic species will also benefit. Cost estimates are not provided for tasks which are normal agency responsibilities under existing authorities.

ESTIMATED DATE OF RECOVERY

Time required to achieve recovery depends on bull trout status, factors affecting bull trout, implementation and effectiveness of recovery tasks, and responses to recovery actions. It may be 3 to 5 bull trout generations (15 to 25 years), or possibly longer, before significant reductions can be made in the identified threats to the species and bull trout can be considered eligible for delisting.