Chapter 9

State(s) Oregon

Recovery Unit Name: John Day 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. 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 Cited: U.S. Fish and Wildlife Service. 2002. Chapter 9, John Day River Recovery Unit, Oregon. 82 p. *In:* U.S. Fish and Wildlife Service, Bull Trout (*Salvelinus confluentus*) Draft Recovery Plan, Portland, Oregon.

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EXECUTIVE SUMMARY

CURRENT SPECIES STATUS

The U.S. Fish and Wildlife Service issued a final rule listing the Columbia River populations of bull trout (*Salvelinus confluentus*) as a threatened species under the Endangered Species Act on June 10, 1998 (63 FR 31647). The John Day River Recovery Unit encompasses the John Day River basin in Oregon. The John Day River is the fourth largest drainage basin in the State of Oregon, consisting of a mainstem, North, Middle, and South forks. The 20,979 square kilometer (8,100 square mile) river basin contains one of the longest free-flowing streams in the continental United States. The mainstem John Day River flows 457 kilometers (284 miles) from its source near the Strawberry Mountains to its mouth at River kilometer 351 (River Mile 218) of the Columbia River.

Little data exists on the historical or current use of the mainstem Columbia River by bull trout in this recovery unit. However, the John Day River Recovery Unit Team believes that defining the current and potential bull trout use of the Columbia River should be considered a primary research need. Following collection of additional information the John Day River Recovery Unit may be expanded to include portions of the mainstem Columbia River.

The John Day River Recovery Unit Team identified one core area (the John Day River Core Area). For the purposes of recovery, a core area represents the closest approximation of a biologically functioning unit. Core areas consist of both habitat that could supply all the necessary elements for every life stage of bull trout (*e.g.,* spawning, rearing, migratory, and adult) and have one or more groups of bull trout. Core areas are the basic units on which to gauge recovery within a recovery unit.

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 John Day River Recovery Unit. Two overriding factors have

influenced fish habitat in the John Day River basin. Past, recent, and current land use practices (primarily forestry, mining, agriculture, and livestock grazing) are responsible for altering, at the landscape level, the storage, movement and character of water resources over entire areas of the John Day River subbasin and its tributary system. These prevalent land uses, in combination with the resulting altered hydrologic responses, are translated into stream channel instability in many area streams. Degraded fish habitat conditions, due to a variety of causes, are identified as occurring in approximately 966 kilometers (600 miles) of stream. Erosion and sedimentation which reduce pool habitat, alter hydrographs, and cause loss of instream habitat elements are prevalent factors in the decline of bull trout and other salmonids. Key symptoms of this habitat degradation are stream dewatering, high summer water temperatures, substrate embeddedness, streambank instability, and high road densities throughout much of the basin.

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 across the species native range, so that the species can be delisted**. To accomplish this goal the following objectives have been identified for bull trout in the John Day River Recovery Unit.

- Maintain current distribution of bull trout and restore distribution in previously occupied areas within the John Day River Recovery Unit.
- Maintain stable or increasing trends in adult bull trout abundance.
- Restore and maintain suitable habitat conditions for all bull trout life history stages and forms.
- Conserve genetic diversity and provide opportunity for genetic exchange.

STRATEGY FOR RECOVERY

Recovery criteria for bull trout in the John Day River Recovery Unit reflect the stated evaluation of population status, and recovery actions necessary to achieve the overall goal.

1) **Bull Trout are distributed among 12 or more local populations in the John Day River Recovery Unit**. The team identified 12 current and 12 potential local bull trout populations in the John Day River Recovery Unit. This recovery criterion recognizes the uncertainty in clearly defining local populations and the possibility that some local populations isolated by human-caused barriers may, in a recovered state, become part of another local population (*e.g.,* Boulder Creek in the Granite Creek Watershed). In addition, there is potential to further refine the local populations within the several identified population complexes in the recovery unit, if additional information indicates the need to do so. Better understanding of bull trout movement patterns in the drainage is needed to more accurately define local populations in the recovery unit. There is also a potential need to expand into historic habitat and establish new local populations.

2) **Estimated abundance of adult bull trout is at least 5,000 individuals distributed within the John Day River Recovery Unit**. Recovered abundance range was derived using the professional judgement of the recovery unit team and estimated productive capacity of identified local populations in a recovered condition. The estimate includes resident fish where connectivity between populations exists or could be restored. Population estimates have not been made for local populations isolated above natural barriers, although partial (one-way) connectivity may exist. Population estimates may be refined as more information becomes available, through monitoring and research. Increased abundance in the recovery unit is expected to occur by securing and expanding seasonal distribution of current local populations and expanding or restoring local populations into historic habitat.

3) **Adult bull trout exhibit stable or increasing trends in abundance over a period of at least 10 years in the recovery unit, as determine through contemporary and accepted abundance trend data analyses**. Developing a standardized monitoring and evaluation program to 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 necessary to evaluate trends in bull trout populations.

4) **Specific barriers inhibiting recovery as listed in this recovery unit chapter must be addressed**. Functional migration corridors for bull trout between the North Fork John Day River and the mainstem John Day River, and between the North Fork John Day River and the Middle Fork John Day River must be established and the following priority one barriers must be addressed: restoring flow in Boulder Creek (tributary to Granite Creek - North Fork John Day River) and Indian Creek (mainstem John Day River, connected seasonally), assessing connectivity between West Fork, Clear, Salmon, Lightning, and the Mainstem of Clear Creek (North Fork John Day River), and addressing barriers associated with roads, *e.g.,* culverts barriers or roads without culverts.

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 and access to conditions that allow expression of various life history forms. Specific tasks falling within seven categories are discussed in Chapter 1. Tasks specific to this recovery unit are provided in this chapter.

ESTIMATED COST OF RECOVERY

Total cost of bull trout recovery in the John Day River Recovery Unit is estimated at $25 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 tasks. 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 for delisting.