

**Chapter: 24**

**State(s): Washington**

**Recovery Unit Name: Snake River Washington**

**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 assistance from recovery unit teams, contractors, 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 and the need to address other priorities. Recovery plans do not necessarily represent the views or official positions or indicate the approval of any individuals or agencies involved in the recovery 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 the Director or Regional Director signs them as *approved*. Approved recovery plans are subject to modification as dictated by new findings, changes in species status, and the completion of recovery tasks.

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# **SNAKE RIVER WASHINGTON 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 population of bull trout as a threatened species on June 10, 1998 (63 FR 31647). The Snake River Washington Recovery Unit forms part of the range of the Columbia River Distinct Population Segment. The Snake River Washington Recovery Unit encompasses selected tributaries of the mainstem Snake River from Lower Monumental Dam at river kilometer 68 (river mile 42) upstream to the mouth of the Grande Ronde River at river kilometer 272 (river mile 169). Lower Monumental Dam is operated by the U.S. Army Corps of Engineers. The Tucannon River and Asotin Creek watersheds contain the only known bull trout core populations in the Snake River Washington Recovery Unit.

In portions of the Snake River Washington Recovery Unit, bull trout have been extirpated from their former habitat. Other local populations may be fragmented and isolated in headwater locations because of natural or manmade barriers. Although current data and records that describe the historic distribution of bull trout throughout the Snake River Washington Recovery Unit are limited, observations indicate that mainstem reaches and many tributaries within the Tucannon River and Asotin Creek watershed were, or still are, occupied or utilized by bull trout at various life stages. Also, other information strongly suggests that bull trout from tributaries in the Tucannon River and Asotin Creek watersheds migrated into the mainstem Snake River, presumably to forage and overwinter. Because of credible anecdotal accounts, the Snake River Washington Recovery Unit Team believes that before habitat was significantly modified, fluvial bull trout used Asotin Creek just as they use the Tucannon River. In recent years, bull trout have not been found in some of the tributaries where they were earlier documented, and local populations of these fluvial forms have perhaps been lost.

The Snake River Washington Recovery Unit Team has identified the Tucannon River and Asotin Creek basins as separate core areas within the Snake River Washington Recovery Unit. Current knowledge indicates that local populations within the recovery unit consist of migratory and resident life history forms. Migratory forms include fluvial bull trout that overwinter in the mainstem Tucannon River and fish that may overwinter in and then migrate from locations in the mainstem Snake River at least as far downstream as the Lower Monumental Dam pool.

## **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 Snake River Washington Recovery Unit. Within the Snake River Washington Recovery Unit, historical and current land use activities have impacted bull trout local populations. Some of the historical activities, especially construction of low head dams in the early 1900's, may have significantly reduced important fluvial populations. A combination of human-induced factors have affected bull trout, including till crop production and irrigation withdrawals, livestock grazing, logging, hydropower production, introduction and management of nonnative species, urbanization, and transportation networks. Lasting effects from some, but not all, of these early land and water developments still limit bull trout production in both the Tucannon River and Asotin Creek Core Areas. Three flood events have occurred in the Tucannon River and Asotin Creek watersheds since 1964. The degraded conditions of the stream corridors prior to the floods, especially the conversion of floodplains into agricultural land and road networks, resulted in even greater damage from the floods than would have been expected and reduced the ability of the Tucannon River and Asotin Creek to recover natural fluvial function. After each flood, increasingly severe channel modifications were made to protect roads and agricultural land that is situated in the floodplain.

## **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 Snake River Washington Recovery Unit:

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

## **RECOVERY CRITERIA**

Recovery criteria for the Snake River Washington Recovery Unit are established to assess whether actions are resulting in the recovery of bull trout in the basin. The criteria developed for bull trout recovery address quantitative measurements of bull trout distribution and population characteristics on a recovery unit basis.

1. **Distribution criteria will be met when the total number of stable local populations has increased to 10 in the Tucannon River Core Area and to 7 in the Asotin Creek Core Area.** These local populations must occur in separate streams with broad distribution throughout each core area.
2. **Trend criteria will be met when the overall bull trout population in each core area of the Snake River Washington Recovery Unit is stable or increasing over a period of at least 10 years, as determined through contemporary and accepted analyses of abundance trend data.**

3. **Abundance criteria will be met when the Tucannon River Core Area supports an average of 1,000 spawners annually and when the Asotin Creek Core Area supports an average of 700 spawners annually.**
4. **Connectivity criteria will be met when migratory forms are present in all local populations and when intact migratory corridors among all local populations in both core areas provide opportunity for genetic exchange and diversity.**

### **ACTIONS NEEDED**

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

### **ESTIMATED COST OF RECOVERY**

The total cost for bull trout recovery in the Snake River Washington Recovery Unit is estimated at \$1.6 million. 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. A tremendous amount of work will be required to restore impaired habitat, reconnect habitat, and eliminate threats from nonnative species. For the Tucannon River Core Area, a minimum of four to five bull trout generations (20 to 25 years) will probably pass before high-priority recovery

actions can significantly reduce identified threats to bull trout and populations exhibit positive, recovery level responses. However, the recovery unit team expects local population trends (*i.e.*, redd counts) to increase concurrently, or with minimal time lag, following implementation of recovery activities. Recovery criteria should be met within four to five generations (20 to 25 years).

For the Asotin Creek Core Area, however, initiating a controlled propagation program will be necessary to accelerate recovery time. This propagation program would begin only after a suitable genetic source (preferably from bull trout within the basin) is identified and a stream inventory and analysis (feasibility study) is completed. This analysis would identify habitats that meet minimum criteria (*e.g.*, for stream size, gradient, flow, groundwater contributions, temperature, pools and spawning substrate, and riparian cover) to support local populations or that, with minimal improvements, could support local populations of bull trout. Because a stream analysis and development of a controlled propagation program could take up to five years, recovery within the Asotin Creek Core Area may take one to two additional generations (5 to 10 years) beyond the four to five generations needed to significantly reduce identified threats. Under this scenario, we expect that recovery criteria for the Asotin Creek Core Area could be achieved within five to seven bull trout generations (25 to 35 years).