

Chapter: 8

State(s): Oregon

Recovery Unit Name: Odell Lake

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 Citation: U.S. Fish and Wildlife Service. 2002. Chapter 8, Odell Lake Recovery Unit, Oregon. 53 p. *In:* U.S. Fish and Wildlife Service. Bull Trout (*Salvelinus confluentus*) Draft Recovery Plan. Portland, Oregon.

ACKNOWLEDGMENTS

The Odell Lake bull trout working group was established in the early 1990's for the purpose of determining the status of bull trout in Odell Lake. The formation of the working group originally consisted almost totally of area biologists from ODFW and the USFS. It was expanded to include other affected interests in 1996 and to develop a conservation strategy for Odell Lake bull trout. The Odell Lake bull trout working group became the Recovery Unit Team when bull trout were listed in 1998.

Current and former members of the Odell Lake Recovery Unit who have assisted in the preparation of this chapter include:

Chris Ashenfelter, Oregon State Police
Lucas Bergerson, Shelter Cove Resort
Wayne Branum, Crescent Ranger District
Greg Cazemier, Oregon State Police
Nate Dachtler, Deschutes National Forest
Jeff Dillon, U.S. Fish and Wildlife Service
Bob Griffin, Central Oregon Flyfishers
Brad Houslett, Deschutes National Forest
Vince Jesse, Shelter Cove Resort
Doug MacMillan, Shelter Cove Resort
Steve Marx, Bend District Oregon Department of Fish and Wildlife
Tom Merritt, Deschutes National Forest
Rhine Messmer, Klamath District Oregon Department of Fish and Wildlife
Beth Sanchez, Crescent Ranger District
Terry Shrader, Oregon Department of Fish and Wildlife
Roger Smith, Oregon Department of Fish and Wildlife
Ray Stephens, Oregon Department of Fish and Wildlife
Doug Young, U.S. Fish and Wildlife Service
John Ward, Klamath Watershed Council
Ted Wise, Bend District Oregon Department of Fish and Wildlife
Stella Wright, Gilchrist, Oregon

Additional review and comments were provided by:

Kathryn Kostow, Oregon Department of Fish and Wildlife
Marc Wilcox, Deschutes National Forest

ODELL LAKE 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 populations of bull trout (*Salvelinus confluentus*) as a threatened species under the Endangered Species Act on June 10, 1998 (63 FR 31647). The Odell Lake Recovery Unit encompasses an area of approximately 302 square kilometers. It is located within the Deschutes National Forest in Deschutes and Klamath Counties, Oregon. The Odell Lake Recovery Unit consists of Odell and Davis Lakes, and their tributaries, and Odell Creek, that flows downstream from Odell Lake to Davis Lake. The lakes were isolated from the Deschutes River by a lava flow about 5,500 years ago that impounded Odell Creek and formed Davis Lake. The lava flow isolated bull trout in Odell Lake from bull trout in the rest of the upper Deschutes Basin.

HABITAT REQUIREMENTS AND LIMITING FACTORS

A detailed discussion of bull trout biology and habitat requirements are provided in Chapter 1 of this recovery plan. The limiting factors discussed here are specific to the Odell Lake Recovery Unit chapter. Within the recovery unit, historical and current land use activities have impacted bull trout local populations. Limiting factors include competition with other fish species for resources, hybridization with brook trout, limited spawning and rearing habitat in the tributaries of Odell Lake, partial barriers created at railroad crossings of the spawning tributaries, and habitat degradation due to large woody debris removal, intentional channelization of streams, and loss of riparian cover.

RECOVERY GOALS AND OBJECTIVES

The goal for bull trout recovery 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 four objectives were identified for bull trout in the Odell Lake Recovery Unit.

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

RECOVERY CRITERIA

Recovery criteria for the Odell Lake Recovery Unit reflect the stated objectives, evaluation of population status, and recovery actions necessary to achieve the overall goal. Recovery criteria identified for the Odell Lake Recovery Unit are as follows.

1. **Bull trout are distributed among one or more local populations in the recovery unit, depending on whether fish are found to exhibit homing fidelity to individual streams.** In a recovered condition the Odell Lake Recovery Unit would include Trapper Creek and at least one additional local population. 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. Addition of at least one more local population would demonstrate that suitable habitat is being restored and maintained.

2. **Estimated abundance of adult bull trout is 200 or more adults distributed in one core area.** Recovered abundance was derived using the professional judgement of the Team and estimation of productive capacity of identified local populations. Increased abundance will reduce the risk of genetic complications in the Odell Lake population due to extremely small population size.
3. **Adult bull trout exhibit stable or increasing trends in abundance in the recovery unit, based on a minimum of 10 years of monitoring data.**
4. **Connectivity criteria will be met when migratory forms are present in all local populations, with intact migratory corridors among all local populations in recovery unit providing opportunity for genetic exchange and diversity.** Barriers to connectivity within the Odell Lake Recovery Unit will be addressed by eliminating entrainment in diversions (for example, the Willamette Pass ski area) and providing passage at dams (for example, in Crystal Creek and Odell Creek). Maintaining access to Odell Lake for recovered local populations will ensure opportunities for genetic exchange (see tasks # 1.2.1 and 1.2.2).

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 for the expression of various life-history forms. Seven categories of actions are discussed in Chapter 1; tasks specific to this recovery unit are provided in this chapter.

ESTIMATED COST OF RECOVERY

Total estimated cost of bull trout recovery in the Odell Lake Recovery Unit is estimated at about \$1.6 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. These costs are attributed to bull trout conservation but other aquatic species will also benefit.

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, may be necessary before significant reductions can be made in the identified threats to the species and bull trout can be considered eligible for delisting.