

Sun Creek historic channel reconnection to improve Bull trout and Redband trout habitat

State(s): Oregon

Managing Agency/Organization: U.S. Fish and Wildlife Service

Type of Organization: Other

Project Status: Underway

Project type: WNTI Project

Project action(s): Watershed, In-stream and riparian habitat

Trout species benefitted: Bull Trout, Redband Trout

Population: Redband trout, Sun Creek Bull Trout population

Sun Creek originates on the southern slopes of Crater Lake National Park (CLNP) and was historically a tributary to the Wood River in the Upper Klamath Basin. Due to agricultural land use there have been extensive channel alterations over the last century and Sun Creek is no longer connected to the Wood River. A population of federally threatened Bull trout inhabits Sun Creek and with aggressive management from CLNP, increased in abundance ten-fold in the last two decades. The project will reconnect Sun Creek to the Wood River, creating a migratory corridor for the isolated Bull trout population and expanding available habitat for Redband trout already present in the Wood River. To accomplish this objective, a new Sun Creek stream corridor will be established, flow in the new channel will be increased by permanently transferring water instream, and diversions will be screened to prevent fish entrainment in irrigation ditches. The new channel will be fenced and planted with native trees and shrubs to decrease nutrient loading, increase stream shading, and provide a natural source for instream wood. Post-project monitoring will include fish movement and spawning surveys, geomorphic assessments, and multiple photopoints.

Objectives:

- The primary objective of this project is to expand (in range and abundance) viable Bull trout and Redband trout populations. The project includes three main actions to achieve the desired objective:
- (1) Reestablish a stream corridor (~2.5 mi) that will allow bull trout and redband trout to migrate freely between Sun Creek and the Wood River,
- (2) Increase the amount of year-round flow in Sun Creek below water diversions to ensure adequate habitat and passage in the restored channel for bull trout and redband trout, and
- (3) Protect fish. WNTI funding will be used primarily for the first activity of reestablishing the stream corridor. Specifically, funding will be used for channel construction. populations from entrainment in irrigation ditches.

Partners:

- Crater Lake National Park
- Oregon Watershed Enhancement Board
- Oregon Department of Fish and Wildlife
- Oregon Department of Forestry
- U.S. Fish and Wildlife Service
- Klamath Tribes
- Klamath Basin Rangeland Trust
- two landowners

Measures:

- After project completion, CLNP will continue to monitor bull trout recovery within Sun Creek and the Wood River system, adding to data collected over the past twenty years. ODFW will be responsible for monitoring movement of redband trout throughout Sun Creek and the Wood River. Building on existing fisheries research programs, a PIT tag array will be installed in the restored Sun Creek channel to examine movement and estimate abundance and survival of native fish. Fish presence and spawning surveys will be conducted annually. KBRT will establish photopoints on the newly constructed channel and elsewhere on the property to qualitatively monitor riparian condition and vegetative response. KBRT and The Klamath Tribes will collect quantitative geomorphic parameter data (e.g. longitudinal profiles, cross-sectional geometry, and sediment samples) before and after project construction (annually) to document conditions, assess geomorphic function, and assess adjustment to the "naturalized" configuration and flow regime. Monitoring will be funded by the Oregon Watershed Enhancement Board (OWEB) and also by in-kind match from CLNP and ODFW.

Funding Source(s): National Fish Habitat Action Plan

Project cost: \$30,000.00

Start Date: 07/01/2014 **Completion Date:** 10/30/2015

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