

Connecting Teton Creek: Green Property Habitat and Stream flow restoration

State(s): Idaho

Managing Agency/Organization: Friends of the Teton River

Type of Organization: Nonprofit Organization

Project Status: Underway

Project type: WNTI Project

Project action(s): Riparian or Instream Habitat Restoration, Instream Flow Acquisition Planning, Watershed Connectivity, Monitoring, Outreach/Education

Trout species benefitted: Yellowstone Cutthroat Trout

Population: Teton Creek sub-watershed

Project summary:

This project will re-establish stream function and habitat connectivity through the Teton Regional Land Trust (TRLT)-owned ‘Green Property’ on Teton Creek by: 1) stabilizing 450 feet of eroding streambank and 2) restoring 2.16 cfs of water in-stream as part of a larger restoration effort on this important Yellowstone Cutthroat Trout (YCT) spawning tributary. Additionally, a new interrogation site (fisheries monitoring site) will be installed upstream of the project area to monitor the impact/efficacy of this and 1.2 miles of restoration work previously completed downstream along Teton Creek. This project is an integral part of a local and regional joint-effort to re-establish habitat connectivity (in-stream, riparian, and stream flows) from the National Forest headwaters to the main stem Teton River for the benefit of YCT.

Problem the Project Addresses:

The upper Teton River Watershed (Idaho) is one of the last remaining stronghold systems for YCT in the entire Greater Yellowstone Ecosystem (GYE). Historically, YCT occupied much of the GYE. Presently, non-hybridized YCT are limited to 27% of their historic range due to dewatered streams, habitat loss and non-native competition. Teton Creek is the largest and most ecologically significant riparian corridor in the upper Teton River Watershed. It is the most important spawning tributary for YCT in the upper river, and its proximity to the City of Driggs makes it highly visible to the public. It has also been the most impacted by human activity (e.g. alterations in the stream corridor and dewatering). The hydrologic and fisheries data that Friends of the Teton River (FTR) and its partners have collected over the past decade has elevated Teton Creek to a higher priority as one of the “last best” strongholds for the species and highlighted it as one of the best opportunities for restoring an intact system on a landscape scale. As a result, Teton Creek is a top restoration priority for FTR, TRLT, state and federal agencies, and the YCT Interstate Working Group.

Objectives:

- 1) Stabilize 450 feet of eroding streambank;
- 2) Negotiate terms with TRLT to restore 2.16 cfs of water in-stream; and
- 3) Install a new interrogation site (upstream of the project reach to monitor the migration of YCT from downstream spawning reaches, through the project area).

These objectives are part of a larger, collaborative watershed-scale restoration effort on Teton Creek that has spanned a decade. The Idaho Department of Fish and Game (IDFG) Fisheries Management Plan (2013-2018) supports these objectives, as its directive for the Teton Creek subbasin is to “work cooperatively to restore connectivity, habitat, and hydrologic regime.” In addition, the local community supports restoring Teton Creek, as evidenced by supporting language in the Teton County Comprehensive Plan (2012-2030) to “facilitate voluntary [stream flow restoration] strategies to improve stream connectivity in key stream reaches during critical periods for native trout (e.g. spawning, rearing,

and out-migration)." Additional plan linkages are detailed in the table on the previous page. TRLT is the newest joint-partner in this effort. TRLT's participation and their ability to acquire key properties like the Green Property opens up new opportunities for habitat and stream flow restoration.

Partners:

- Friends of the Teton River
- Teton Regional Land Trust
- Idaho Water Resource Board
- Idaho Department of Lands
- Teton Creek Flood Control District
- Teton Regional Land Trust
- Idaho Department of Environmental Quality
- U.S. Forest Service

Project Monitoring:

FTR has over a decade of fisheries and water quality/temperature data on Teton Creek. Existing data provide a baseline while we continue to gather additional data to close information gaps, measure the efficacy of our habitat and stream flow restoration efforts, and adaptively manage our restoration activities to achieve the best results. To evaluate project success, FTR will 1) monitor one PIT tag interrogation site downstream of the project reach and install one additional PIT tag interrogation site upstream of the project reach; 2) monitor three existing stream temperature loggers up and downstream of the project reach; 3) monitor stream flows and meet monitoring requirements associated with new water transactions; and 4) monitor established surface water quality sites up and downstream of the project reach. In 2015, anglers/residents reported over a dozen instances of catching fluvial YCT on upper Teton Creek, providing the first anecdotal evidence of successful YCT response to improved habitat conditions.

Long-term project monitoring related to fisheries, such as electro-fishing, PIT tagging, and spawning surveys will be overseen by the Idaho Department of Fish and Game (IDFG), with help from FTR.

Funding Source(s): National Fish Habitat Action Plan

Project cost: \$42,100.00

Start Date: 07/01/2016 **Completion Date:** 9/30/2018

Project Contact: Jody Brostrom, Fish Biologist, U.S. Fish and Wildlife Service, Idaho Fishery Resource Office, Salmon, ID, 208-756-5162.