

Western Native Trout Initiative
Transtrum Diversion Fish Passage Restoration for
Bonneville Cutthroat Trout in St. Charles Creek
Project Update, 09-24-10



Transtrum Irrigation Diversion before fish passage restoration (left), and during construction of new fish ladder (right).



Transtrum Irrigation Diversion during (left) and immediately after (right) installation. This configuration allows for upstream fish passage without significantly increasing the footprint of the existing structure.

Background

- Project was funded in 2007 through the Western Native Trout Initiative (Trout Unlimited received \$75,000 from the USFWS).
- St. Charles Creek has been identified by IDFG as “the most important natural spawning location for Bear Lake cutthroat trout,” but cutthroat spawning numbers have declined from the thousands of fish observed in the creek in the 1950’s, 60’s and 70’s to fewer than 100 fish in 2003 (IDFG).

- Researchers at Utah State University documented adfluvial Bonneville cutthroat trout from Bear Lake attempting (unsuccessfully) to move upstream past this diversion to spawn in St. Charles Creek.

Purpose

- Provide upstream fish passage for adfluvial Bear Lake Bonneville cutthroat trout at the Transtrum Irrigation Diversion (lowest diversion on St. Charles Creek). This project restores access to historic spawning and rearing habitats in upstream reaches of St. Charles Creek and helps to reestablish a self-sustaining spawning run of adfluvial BCT in Bear Lake.

Cooperators

- Bear Lake County Commission
- Bear Lake National Wildlife Refuge
- Bear Lake Regional Commission
- Idaho Dept. of Environmental Quality
- Idaho Dept. of Fish and Game
- Trout Unlimited
- Transtrum family
- St. Charles Creek Working Group
- Rhodia Mines
- National Fish and Wildlife Foundation

Project Status

- During 2007 project partners worked with engineers to design an innovative fish ladder that could be installed within the existing diversion footprint on St. Charles Creek.
- During 2007-2008 partners investigated alternative irrigation practices that could be implemented to improve migration corridors and instream habitat conditions in St. Charles Creek.
- In October 2008 project partners fabricated and installed a fish ladder in the existing diversion abutment at the Transtrum Irrigation Diversion
- The final phase of fish ladder installation (grating covers, final backfill) was completed in October 2009.
- Project partners investigated the feasibility of installing a piped irrigation delivery system to reduce water consumption and shorten the irrigation season in St. Charles Creek. However, land ownership and water rights complications prevented implementation of this alternative.
- During the spring/summer of 2010 we completed the final adjustments and evaluation of the new fish ladder and determined that it successfully passed adfluvial Bear Lake Bonneville cutthroat trout during the 2010 spawning migration.