

Jarbidge River Bull Trout Recovery Team Update — December 2006

A survey designed to provide the Jarbidge River Bull Trout Recovery Team (Recovery Team) with information on bull trout abundance, distribution and movements, growth, genetics, and habitat conditions began this summer. The Recovery Team contracted with the U.S. Geological Survey's (USGS) Western Fisheries Research Center based in Cook, Washington, to conduct an extensive survey of bull trout and their habitat in the Jarbidge River watershed in 2006-2007.

This year's survey began with a USGS field crew using backpack-style electrofishing units to temporarily immobilize and capture fish in selected streams. Captured bull trout were then measured (length, weight) and implanted with tiny internal Passive Integrated Transponder (PIT) tags. Each PIT tag has a unique number on a microchip, which allows biologists to identify an individual fish.



Electrofishing for bull trout on Slide Creek

The PIT tag numbers are read automatically whenever a tagged fish swims by stationary instream antennas placed at strategic locations on several streams within the watershed. Tag data are recorded by an antenna receiver unit on shore and used to monitor individual fish movement patterns and habitat use.

Three PIT tag antenna stations were established in the Jarbidge River watershed during 2006. Antennas are located on the West Fork Jarbidge River near Deer Creek and on lower Jack Creek in Nevada, and the East Fork Jarbidge River at Murphy Hot Springs, Idaho.



**West Fork Jarbidge River
PIT tag antenna station**

USGS also collected a small piece of the tail fin (fin clip) from each bull trout captured during the survey. These tissue samples contain DNA material which will be analyzed in a laboratory. The results of this genetic analysis and the PIT tagging portion of the survey will help the Recovery Team determine which streams contain bull trout that migrate elsewhere to spawn and identify streams containing closely-related fish.



Small bull trout with fin clip removed

Recovery Team Member Agencies:

Nevada Department of Wildlife and U.S. Fish and Wildlife Service (co-leads), Bureau of Land Management, Idaho Department of Environmental Quality, Idaho Department of Fish and Game, and U.S. Forest Service

2006 Survey Results

Fish sampling in 2006 started on July 19 and ended on October 4. Over 27 miles of stream were surveyed including portions of the East and West Forks of the Jarbidge River, Pine Creek, Jack Creek, Fall Creek, Slide Creek, and Dave Creek. Yellow shading on the map (page 2) identifies surveyed areas of streams and green boxes indicate antenna stations for 2006.

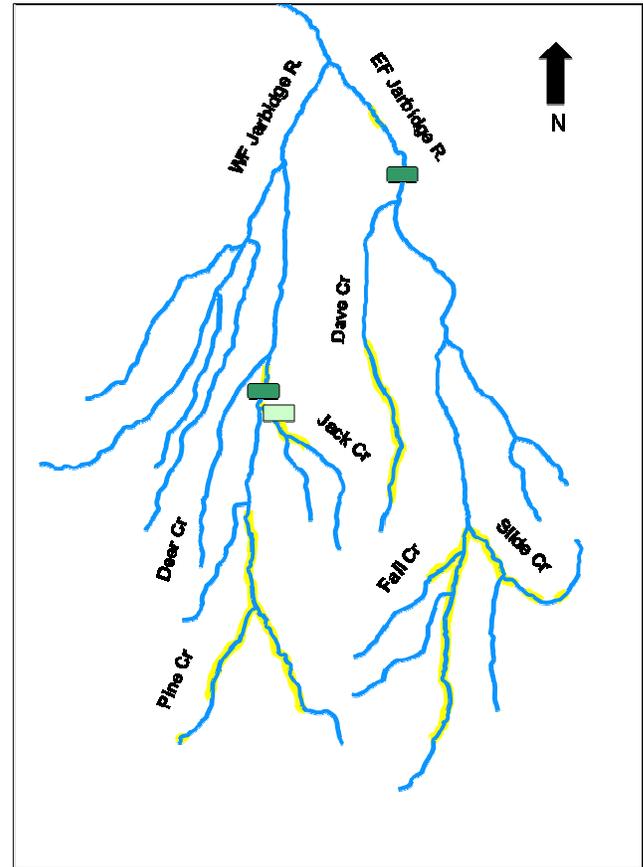
A total of 333 bull trout were captured within the seven streams. Of these fish, 324 were large enough to receive PIT tags and 240 were fin clipped to provide tissue for genetic analysis. They ranged in size from 1.5 inches to over 14 inches long. Spawning activity by bull trout was observed in Dave Creek, Slide Creek, and Jack Creek during August and early September.

Stream Name	Bull Trout
West Fork Jarbidge River	100
Pine Creek	27
Jack Creek	68
East Fork Jarbidge River	13
Dave Creek	112
Fall Creek	9
Slide Creek	4
Total Number Captured	333

Further surveys and monitoring are needed for biologists to determine if seasonal bull trout movements represent local or long-distance migrations. To date, one 12-inch bull trout tagged on August 7 in Jack Creek migrated downstream past the Jack Creek and West Fork Jarbidge River antenna stations on October 7 and 8, respectively. A 6-inch bull trout from the West Fork Jarbidge River, tagged just upstream of Pine Creek on September 8, migrated downstream past the West Fork Jarbidge River antenna on November 17.

What's Next?

Planning is underway for additional work in 2007. Weather permitting, USGS will restart the three existing antenna stations as early as March 2007 to continue monitoring the movements of bull trout tagged in 2006. New antenna stations and equipment upgrades are planned for the upper West Fork Jarbidge River, Pine Creek, East Fork Jarbidge River, and Dave Creek.



In late June or early July 2007, USGS will begin electrofishing surveys to tag more bull trout. Recaptures of fish tagged in 2006 will be used to determine average growth rates and monitor fish movements within and between streams. Before the bull trout spawning season starts, biologists will also complete a more intensive electrofishing survey of Jack Creek to estimate the actual number of bull trout in this stream. These data will help the Recovery Team develop a long-term population monitoring strategy for the entire Jarbidge River watershed.

The Recovery Team thanks the local land owners and agencies hosting antenna stations on their property, assisting with station maintenance, and keeping watch over equipment during this successful first year.

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