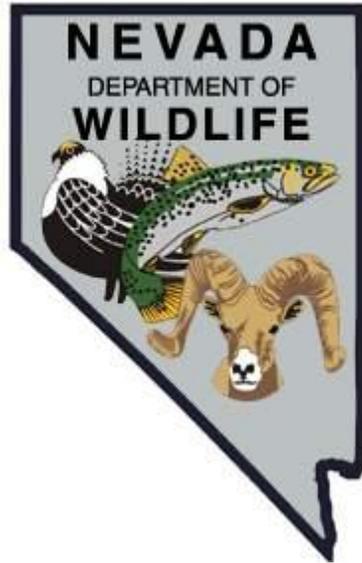


NEVADA DIVISION OF WILDLIFE
STATEWIDE FISHERIES MANAGEMENT



FEDERAL AID JOB PROGRESS REPORTS
F-20-48
2012

YELLOWSTONE CUTTHROAT TROUT
EASTERN REGION



**NEVADA DEPARTMENT OF WILDLIFE, FISHERIES DIVISION
ANNUAL JOB PROGRESS REPORT**

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**NEVADA DEPARTMENT OF WILDLIFE, FISHERIES DIVISION
ANNUAL JOB PROGRESS REPORT**

State: Nevada
Project Title: Statewide Fisheries Program
Job Title: Yellowstone Cutthroat Trout
Period Covered: January 1, 2012 through December 31, 2012

SUMMARY

The battery life of the radio tags of several tagged Yellowstone cutthroat trout exceeded the warranty by the manufacturer, thus allowing an extended follow-up of some trout. The tagged trout were detected in the spring of 2012 in the same areas as when they were detected in fall of 2011. Beaver ponds were their preferred habitat.

A sample of fin clips from 23 angled trout from Goose Creek will provide clarity on their genetic purity. Updates on the Yellowstone cutthroat trout telemetry project were given to the Yellowstone Cutthroat Trout Interstate Working Group, and the annual meeting was attended in Bozeman Montana.

BACKGROUND

The native range of the Yellowstone cutthroat trout (*Oncorhynchus clarki bouvieri*) in Nevada includes the Goose Creek drainage in Northeast Nevada, which is its southernmost distribution. Distribution also extends to river and lake accessible drainages upstream of Shoshone Falls located on the Snake River including Yellowstone Lake and Upper Yellowstone River flowing east of the Continental Divide. Progeny of eggs taken from Yellowstone Lake spawners were extensively stocked into other Nevada waters during the first half of the 20th Century. In Nevada, pure genetic populations of introduced Yellowstone cutthroat trout (YCT) do not persist outside their Goose Creek drainage native range.

Both the Upper and Lower Goose Creek drainages are in south-central Idaho. Upper Goose Creek drains from the Sawtooth National Forest south about 10.7 mi into Nevada where it makes a 27.3 mi U-shaped path before coursing 2.1 mi through northwest Utah. Goose Creek then flows 11 mi south, back into Idaho where it terminates into Lower Goose Creek Reservoir. Goose Creek does not join the Snake River, as it once did, due to diversion of water below the reservoir. In Nevada, the Goose Creek drainage is on public land managed by the Bureau of Land Management; however, about 91% of the stream runs through private, irrigated ranch land. Both Piney Creek and Trout Creek are trout bearing streams with headwaters in Idaho and then join Goose Creek in Nevada. Other streams known to have contained YCT include both Coon Creek and Little Goose Creek, which are wholly in Nevada and flow easterly to join Goose Creek. Private land (both fenced and unfenced) encompasses the majority of all tributary streams.

The YCT within the drainage face a number of threats including displacement by competing brook trout; unscreened ditches and dewatering; unsuitable summer thermal conditions; and rainbow trout hybridization. From 1980 to 2002, YCT in Nevada showed an 83% decline in presence at surveyed sites. Improvements in the status of the YCT in Nevada will be dependent on coordinating projects with Idaho Fish and Game and the respective land management agencies. Yellowstone cutthroat trout represent a unique subspecies of cutthroat trout and, because of its limited native range, is the rarest of the three subspecies of cutthroat trout that inhabit Nevada.

OBJECTIVES and APPROACHES

Objective: Yellowstone Cutthroat Trout Management

Approaches:

- Continue to follow-up radio tagged Yellowstone cutthroat trout until batteries fail.
- Collect a maximum of 30 fin clips from angler captured Yellowstone cutthroat trout in Goose Creek for genetic analysis.
- Continue to coordinate with the Yellowstone Cutthroat Trout Interstate Working Group.

PROCEDURES

Radio tagged trout have been followed-up on the ground using a Communications Specialist® R-1000 hand receiver and either the receiver's own flexible antenna or a handheld Telonics® H model RA-14 antenna. A Garmin® eTrix® Legend Cx personal navigator® was used to document tagged trout locations. Waypoints were used to locate tagged trout locations on USGS 7½' topographic maps of the stream area. A hand thermometer was used to measure air and water temperature.

Spin fishing was used to angle Yellowstone cutthroat trout from an approximate one mile reach of Goose Creek located above the upper Rancho Grande Ranch meadow and water diversion structure. Caught trout were measured (TL, mm) and weighed (g) using Pesola® spring scales after which a 1/4 inch snip of the caudal fin was removed and placed between cellophane, and then slipped into a labeled scale envelope. The envelopes were mailed to Idaho Fish and Game's Eagle Fish Genetics Lab for analysis of species purity.

Updates of the Yellowstone cutthroat trout telemetry project were provided to the Yellowstone Cutthroat Trout Working Group's Upper Snake GMU Leader prior to the December 2012 meeting in Bozeman, Montana.

FINDINGS

Three follow-up surveys for radio tagged trout in Goose Creek were conducted twice in March and once in April of 2012. On 3/8/12, two tags in a beaver pond below the bridge were detected, although they were known to have been from trout that had died early on in the study. Another signal (164.132) was detected from an undercut pool located where Goose Creek drainage narrows above Piney Creek confluence about 0.3 mi. This trout was first detected in the same pool on 07/13/12. Prior to the aforementioned date, that same tagged trout had not been detected since 05/12/12, where it had been documented moving upstream in April from its wintering area, presumably prior to spawning. About 2.7 miles upstream of the aforementioned trout were two other signals emanating from beaver ponds. The signal of 164.061 had been detected in the same general area since 7/5/12. Prior to that location it had been found on 6/14/11 upstream in Idaho in a tributary named Little Goose Creek, where it most likely had spawned. The second of the two tagged trout was 164.093 which had been detected in a small beaver pond high up Goose Creek in Idaho on 6/14/11. The aforementioned tagged trout returned to Nevada and was first detected there on 10/11/11.

On 3/29/12 no detections were made from the bridge of the two tagged but dead trout. The only detection made was that of 164.013 located in a beaver pond above the Rancho Grande diversion. This trout had been detected in the same area since 10/03/11. On 05/25/11, the tagged trout had been detected in a beaver pond located about 2.5 mi. upstream of the Nevada Stateline in Idaho, presumably on its way upstream to spawn. The last day of tracking tagged trout was on 04/20/12, when only 164.031 was detected in the same beaver pond located above the Rancho Grande water diversion. An extended search for tagged trout to just above Stratton Creek confluence did not yield any more detections; hence, the telemetry project was officially over.

A total of 23 adult sized Yellowstone cutthroat trout were caught on 09/25/12 and the largest trout caught was 17.3 in. (440 mm) long. All trout were processed and released unharmed.

The Yellowstone Cutthroat Trout Interagency Working Group was attended on 12/11/12.

MANAGEMENT REVIEW

All Yellowstone cutthroat trout objectives were completed.

RECOMMENDATION

The Goose Creek drainage trout population should be resurveyed in 2013 per recommendations put forth in the Species Management Plan.

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Date: February 28, 2012