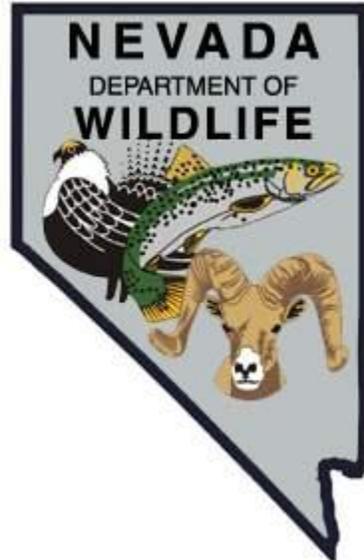


**NEVADA DEPARTMENT OF WILDLIFE
STATEWIDE FISHERIES MANAGEMENT**



**FEDERAL AID JOB PROGRESS REPORT
F-20-50
2014**

**STREAM FISHERIES MANAGEMENT
WESTERN REGION**



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

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NEVADA DEPARTMENT OF WILDLIFE, FISHERIES DIVISION ANNUAL PROJECT REPORT

State: Nevada
Project Title: Statewide Fisheries Program
Job Title: Stream Fishery Management
Period Covered: January 1, 2014 through December 31, 2014

SUMMARY

During the 2014 field season, the Stream Survey/Lahontan Cutthroat Trout Recovery Team surveyed two streams that are currently managed as sport fisheries. Bilk Creek is located in the Bilk Creek Mountains and included 15 survey stations. Singas Creek is located in the Santa Rosas and included nine survey stations.

BACKGROUND

Aquatic habitat management on public lands is primarily the responsibility of the appropriate federal agency mandated by laws to administer those lands. The management of fish is the responsibility of the state fish and game agency. In order for aquatic habitats, riparian zones, and fish to be managed properly, federal agencies and state agencies work together to monitor, survey, and carry out management objectives.

During the 1950s, Nevada Department of Wildlife (NDOW) conducted stream surveys on known fishable streams throughout the State. In 1983, a three-way interagency agreement between NDOW, the Bureau of Land Management (BLM), and the U.S. Forest Service (USFS) was signed outlining a program with guidelines for determining the status of aquatic resources and associated habitats. Since 1986, with a cooperative agreement in effect, approximately 1,282 mi of streams in Humboldt County, 15.8 mi in Pershing County, and 104 mi in Washoe County have been surveyed. In addition, some 15.3 mi of stream in Churchill County, 6.4 mi in Lander County, 236.5 mi in Nye County, 11.7 mi in Lyon County, and 7.8 mi in Esmeralda County have been surveyed.

OBJECTIVES

- Coordinate and perform stream habitat (GAWS Level III) and fish population surveys (electroshocking surveys) on Bilk Creek (15 stations) and Singas Creek (nine stations).
- Conduct electroshocking surveys at established transects on Dog Valley Creek (two stations) and Hunter Creek (three stations), both of which are Truckee River tributaries, to determine species composition and age class distributions. Concurrent to survey, collect genetic samples from trout to submit to the University of Nevada Genetics Lab for hybrid analysis.
- Collect five Lahontan cutthroat trout from Catnip Creek with clinical signs of *Flavobacterium psychrophilum* (Coldwater disease) and preserve in formalin.

Samples will be sent to the Washington Animal Disease Diagnostic Laboratory for disease diagnosis.

PROCEDURES

Coordinate and perform stream habitat (GAWS Level III) and fish population surveys (electroshocking surveys) on Bilk Creek (15 stations) and Singas Creek (nine stations). General Aquatic Wildlife System (GAWS) Level III transect surveys were completed on Bilk Creek June 2-4, 2014 and Singas Creek on May 28 and 29, 2014 using methodologies outlined in the USFS Fisheries Habitat Surveys Handbook. In conjunction with GAWS habitat surveys, single pass electroshocking surveys were performed on both streams at each survey station. Sampling sites occurred approximately every half mile along the surveyed portion of the stream, electroshocking 100 feet at each site using ETS model AbP-3 backpack electroshockers.

Conduct electroshocking surveys at established transects on Dog Valley Creek (two stations) and Hunter Creek (three stations), both of which are Truckee River tributaries, to determine species composition and age class distribution. Concurrent to survey, collect genetic samples from trout to submit to the University of Nevada Genetics Lab for hybrid analysis. This objective was not accomplished due to fisheries management efforts being focused on other waters.

Collect five Lahontan cutthroat trout from Catnip Creek with clinical signs of *Flavobacterium psychrophilum* (Coldwater disease) and preserve in formalin. Samples will be sent to the Washington Animal Disease Diagnostic Laboratory for disease diagnosis. On May 28 and 29, 2014, staff electroshocked Catnip Creek in an effort to capture fish for Coldwater disease testing. Catnip Creek from the mouth at Catnip Reservoir upstream for 0.6 miles was sampled.

FINDINGS

Coordinate and perform stream habitat (GAWS Level III) and fish population surveys (electroshocking surveys) on Bilk Creek (15 stations) and Singas Creek (9 stations). The mean Habitat Condition Index (HCI) score for Bilk Creek was 44.8% for the 15 stations surveyed. There was no sport fish captured during electroshocking surveys.

The mean HCI score for Singas Creek was 47.4% for the nine stations surveyed. There was one rainbow trout *Oncorhynchus mykiss* and three brook trout *Salvelinus fontinalis* captured during electroshocking surveys. Rainbow trout averaged 120 mm (4.7 in) and brook trout averaged 143 mm (5.6 in). Rainbow trout densities were estimated at six fish per mile for an estimated total population of 23 fish. Brook trout densities were estimated at 18 fish per mile for an estimated total population of 68 fish.

Stream survey reports summarizing the riparian habitat and fish population data were completed and shared the appropriate land management agencies.

Conduct electroshocking surveys at established transects on Dog Valley Creek (2 stations) and Hunter Creek (3 stations), both of which are Truckee River tributaries, to determine species composition and age class distribution. Concurrent to survey, collect genetic samples from trout to submit to the University of Nevada Genetics Lab for hybrid analysis. This objective was not accomplished due to fisheries management efforts being focused on other waters.

Collect five Lahontan cutthroat trout from Catnip Creek with clinical signs of *Flavobacterium psychrophilum* (Coldwater disease) and preserve in formalin. Samples will be sent to the Washington Animal Disease Diagnostic Laboratory for disease diagnosis. On May 28 and 29, 2014, an attempt was made to collect fish for disease testing, however, no juvenile trout were found in the stream due to the extreme low water flows resulting from the ongoing drought conditions.

MANAGEMENT REVIEW

The HCI score for Bilk Creek has declined from 57.4% in 2007 to 44.8% in 2014. The rainbow trout density and population estimate has also declined. In 2007, the estimated density was 479 fish per mile for an estimated population of 3,829 fish. In 2014, no rainbow trout were found.

In August 2012, the majority of Singas Creek drainage burned in the Hansen Fire, which negatively altered riparian habitat and fish populations. The HCI score for Singas Creek has declined from 71.2% in 2012 to 47.4% in 2014. In July 2012, brook trout averaged 448.8 fish per mile for an estimated population of 1,705 fish. Rainbow trout averaged 92.4 fish per mile, with an estimated population of 351.1 fish. During the 2014 survey period, the estimated population of rainbow trout was only 23 fish and estimated population of brook trout had declined to 68 fish.

RECOMMENDATIONS

- Perform GAWS level III stream survey and fish population surveys (electroshocking surveys) on Big Creek in the Pine Forest Range.
- Coordinate and perform stream habitat (GAWS Level III) and fish population surveys (electroshocking surveys) on any other western region streams as necessary to provide input on land use activities or actions.

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Date: February 5, 2015