NEVADA DEPARTMENT OF WILDLIFE
STATEWIDE FISHERIES MANAGEMENT

FEDERAL AID JOB PROGRESS REPORTS

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2017

NATIVE SPORT FISHERIES MANAGEMENT
MOUNTAIN WHITEFISH
EASTERN REGION

NEVADA DEPARTMENT OF WILDLIFE, FISHERIES DIVISION
ANNUAL JOB PROGRESS REPORT

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NEVADA DEPARTMENT OF WILDLIFE, FISHERIES DIVISION
ANNUAL PROJECT REPORT

State: *Nevada*
Project Title: *Statewide Fisheries Program*
Job Title: *mountain whitefish Management*
Period Covered: *January 1, 2017 through December 31, 2017*

SUMMARY

A total of 25 mountain whitefish were moved upstream of the permanent fish barrier constructed in 1972 on the Salmon Falls River. Mountain whitefish presence was confirmed downstream of the barrier in 2016. Further reintroduction efforts are warranted in future years to establish mountain whitefish to the remainder of the Salmon Falls drainage.

BACKGROUND

The Salmon Falls River originates in the northeastern portion of Elko County and encompasses a drainage area of approximately 1,000 square miles. The land ownership is a mixture of Unites States Forest Service (USFS), Bureau of Land Management (BLM) and privately owned land. The majority of the privately owned lands in Nevada, located in the lower reaches of the river, are active cattle ranches. The river flows in a northerly direction for 30 miles where it enters Idaho and forms the Salmon Falls Reservoir. The river is one of the largest in Nevada with a very large fish assemblage present. Native species to the drainage include redband trout (*Oncorhynchus mykiss gairdneri*), mountain whitefish (*Prosopium williamsoni*), redside shiner (*Richardsonius balteatus*), speckled dace (*Rhinichthys osculus*), chiselmouth (*Acrocheilus alutaceus*), longnose dace (*Rhinichthys cataractae*), mountain sucker (Catostomus platyrhynchus), largescale sucker (*Catostomus macrocheilus*), bridgelip sucker (*Catostomus columbianus*), northern pikeminnow (*Ptychocheilus oregonensis*), and Paiute sculpin (*Cottus beldingii*). Northern leatherside chub (*Lepidomeda copei*) are believed to be native to the drainage, but have not been documented recently. Chinook salmon (*Oncorhynchus tshawytscha*) is extinct from the drainage.

Introduced species include smallmouth bass (*Micropterus dolomieu*), Lahontan cutthroat trout (*Oncorhynchus clarkii henshawi*), brown trout (*Salmo trutta*), rainbow trout (*Oncorhynchus mykiss*), channel catfish (*Ictalurus punctatus*), brook trout (*Salvelinus fontinalis*), and yellow perch (*Perca flavescens*). The Salmon Falls River has an extensive history of stocking of nonnative trout, primarily brown trout, hatchery produced rainbow trout, and brook trout.

In August 1960, the Salmon Falls River system was treated with rotenone to reduce an abundant “coarse” fish population. The following year, large numbers of coarse fish were observed ascending the lower river system from Salmon Falls Reservoir. The first few years following the rotenone treatment the trout fishery was

noted to have improved but the deterioration of the fishery was soon evident in the lower river reaches within Nevada. A permanent fish barrier across the river near the Idaho state line was completed by the Bureau of Land Management in 1972. The river was retreated with Antimycin A in 1972 and it was noted that a complete kill did not occur. The river was restocked with hatchery rainbow trout and brown trout in the fall of 1972.

All of the native fishes are known to have survived the treatments with the exception of mountain whitefish and northern leatherside chub.

Eight 100 meter transects were sampled within the Burnt Meadow reach of the river in 2015. No mountain whitefish or northern leatherside chub were found. A very sizeable and healthy brown trout population was documented.

In 2016, five stations on the Salmon Falls River were sampled within the lower stream reaches in Nevada. A total of 16 mountain whitefish were sampled during the survey, all below the permanent barrier constructed in 1972 located directly upstream of Lower Salmon 3 (Map 1). No mountain whitefish were present upstream of the barrier. Approximately 2 to 3 age classes of mountain whitefish were sampled indicating that they successfully reproduced. During the survey, nine mountain whitefish were opportunistically moved upstream of the barrier during the survey.

OBJECTIVES and APPROACHES

Objective**:** Native Sport Fish Management

Approaches:

- Reintroduce mountain whitefish in the Salmon Falls River at select locations above the permanent fish barrier.

PROCEDURES

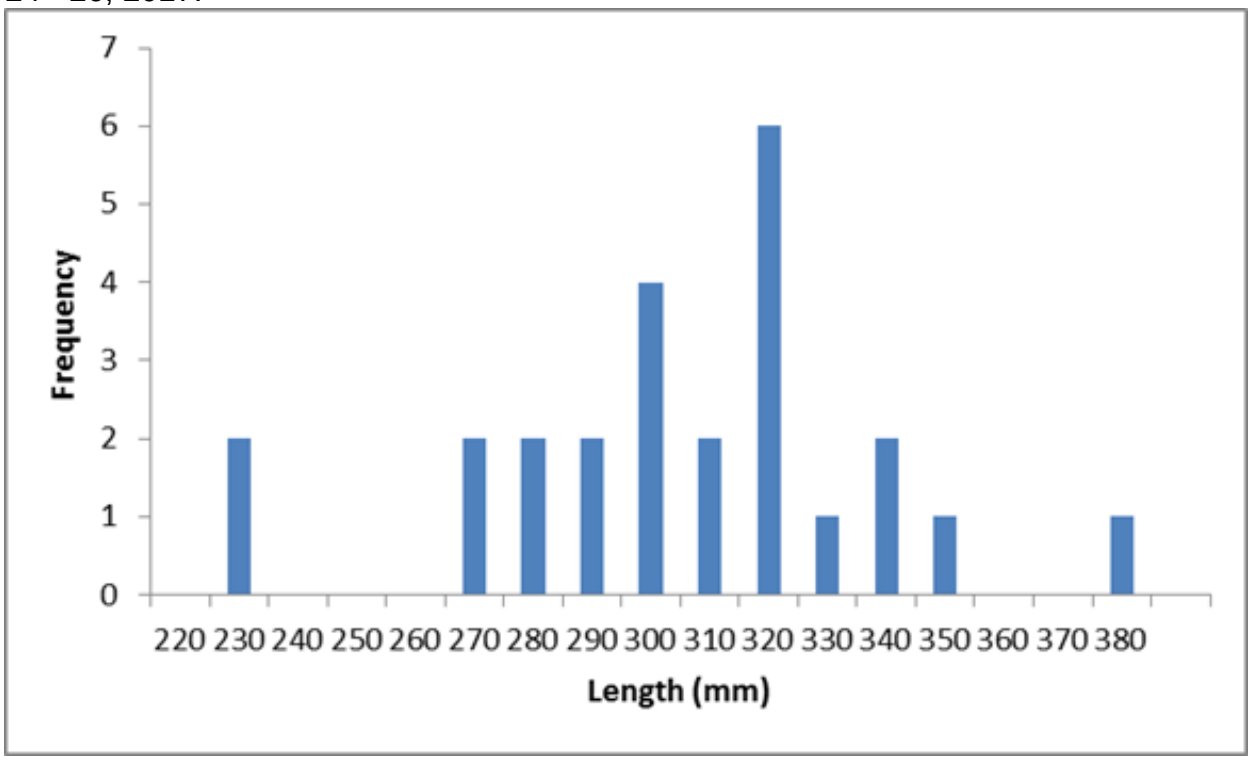
The project was designed to establish a mountain whitefish population upstream of the permanent barrier.

Selected sites directly below and up to a half-mile downstream of the permanent barrier were electroshocked with a Smith Root LR 20b. Due to the location being inaccessible to vehicular travel, all captured mountain whitefish were placed in live well buckets and carried upstream of the barrier where they were released. All mountain whitefish were measured and checked for body condition before release.

FINDINGS

A total of 25 mountain whitefish were moved upstream of the barrier. Figure 1 illustrates the length frequency of the mountain whitefish moved. Approximately 2 to 3 age classes of mountain whitefish were moved above the barrier.

Figure 1. Length frequency of mountain whitefish from the Salmon Falls River on July 24 - 26, 2017.



Eight additional fish species were sampled, all of them native with the exception of smallmouth bass, brown trout, and rainbow trout. Fish species captured included redside shiner, speckled dace, longnose dace, chiselmouth, northern pike minnow, and three species of suckers.

Additionally, a single dead walleye was located on the stream bank while sampling. Walleye are common and a popular recreational fishery exists for them in Salmon Falls Reservoir in Idaho. This is the first time they have been documented in the Salmon Falls River in Nevada.

MANAGEMENT REVIEW

Mountain whitefish were present in the Salmon Falls River downstream of the permanent fish barrier in Nevada near the Idaho border. Reintroduction of the species will continue to occur in the remainder of the drainage in suitable habitat, with the first transplant occurring in the lower canyon reach upstream of the fish barrier. Additional reintroduction sites include the Burnt Meadows reach and private lands downstream of the upper canyon.

RECOMMENDATIONS

Mountain whitefish should continue to be reintroduced to the remainder of the Salmon Falls River where habitat is suitable. In addition to the river reach directly

above the permanent barrier, another reach includes the Burnt Meadows reach of the river.

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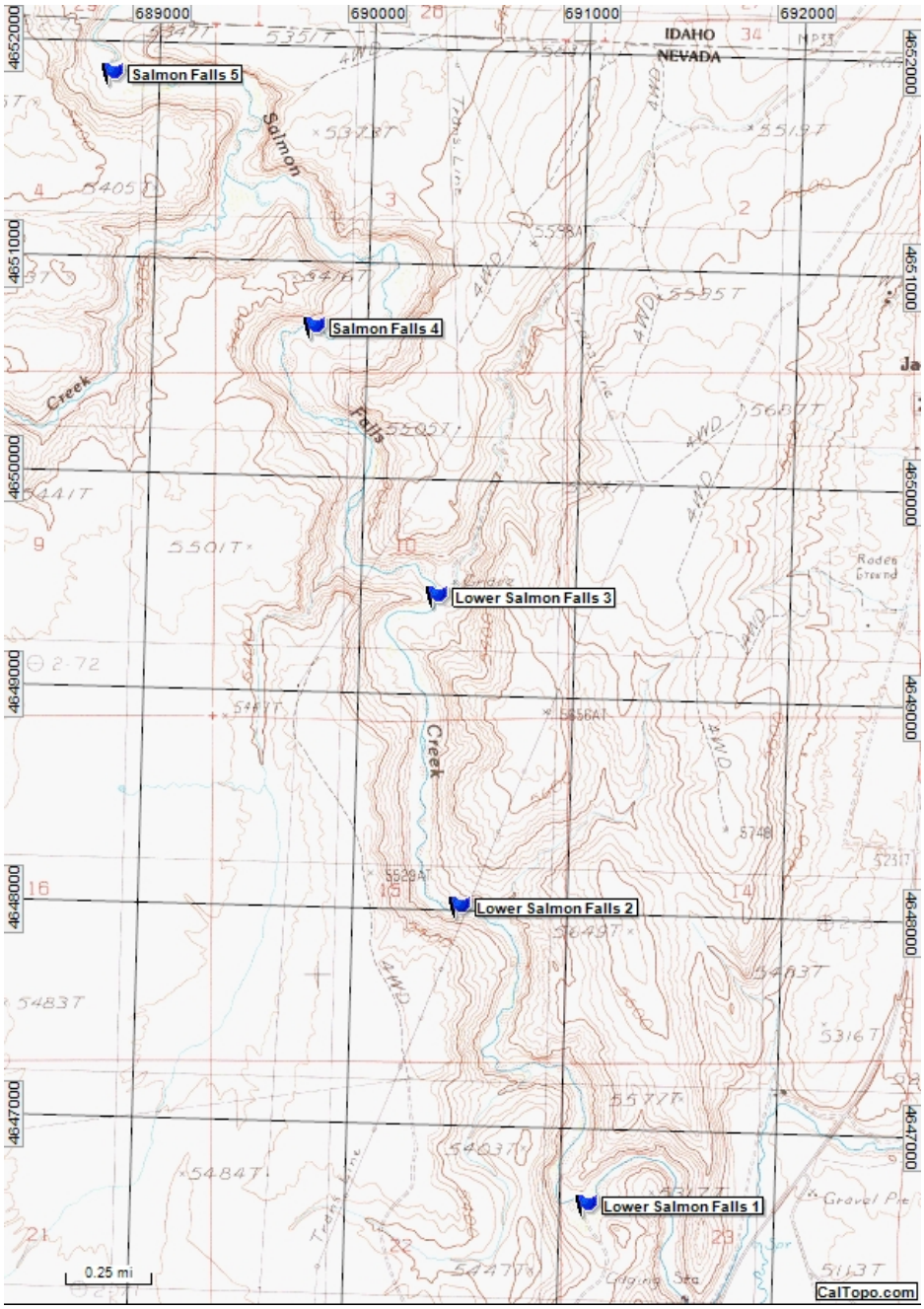
March 6, 2018



Map 1. Station locations on Salmon Falls River on October 17-18, 2016.