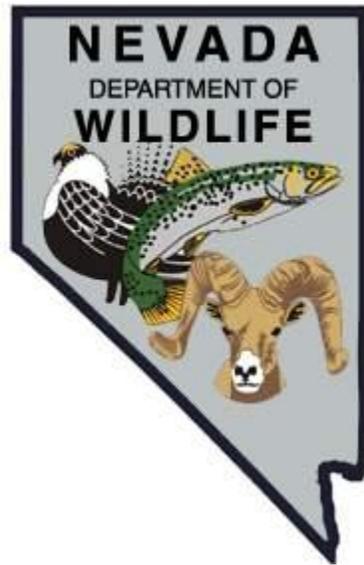


NEVADA DEPARTMENT OF WILDLIFE
STATEWIDE FISHERIES MANAGEMENT



FEDERAL AID JOB PROGRESS REPORTS
F-20-48
2012

EUREKA COUNTY
Small Lakes and Reservoirs



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

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

State: *Nevada*
Project Title: *Statewide Fisheries Program*
Job Title: *Eureka County Small Lakes and Reservoirs*
Period Covered: *January 1, 2012 through December 31, 2012*

SUMMARY

In May of 2012, Tonkin Reservoir was stocked with 1,022 Eagle Lake strain rainbow trout. On June 28 the reservoir was electroshocked to evaluate the carryover trout fishery that relies on both hatchery stocked rainbows and a naturally reproducing population of rainbow trout. A total of 57 fish were captured, resulting in a capture ratio of 10.5% hatchery trout, 28.1% hatchery carryover trout, and 61.4% wild trout. Objectives for JD Reservoir were not completed due to scheduling issues, but are expected to be completed in 2013.

BACKGROUND

JD Reservoir

JD Reservoir, constructed prior to 1955, is on a privately owned ranch, which was purchased by Barrick Goldstrike Mining Company in 2012. The reservoir is located forty miles north of Eureka and covers approximately 10 to 12 surface acres, with a maximum depth of 9 feet and an average depth of 3.7 feet. Historic surveys, prior to 1988, have documented northern pike, largemouth bass, rainbow trout, brown trout, speckled dace, redbreast shiner, sucker, and chub in the reservoir. On May 16, 1984 the dam structure failed, completely draining the reservoir. In March of 1985, the dam was reconstructed and the reservoir was presumed void of fish, as it was determined that all fish had washed downstream. Access for surveys and angling at the reservoir has been restricted for several years, with the last documented survey occurring in 1987, which found only northern pike.

Tonkin Reservoir

Tonkin Reservoir was constructed in the early 1960's, and repairs/upgrades to the dam have been done twice since then. The most recent improvement to the dam occurred in 2008 and increased the height of the dam and water level by several feet. The reservoir covers less than 10 surface acres and has a maximum depth of 18 ft. It sits at an elevation of 6,470 ft and is fed by Denay Creek, which originates from a spring approximately one mile above the reservoir. The reservoir receives 1,000 hatchery trout every spring and relies heavily on natural reproduction from the inflowing creek.

OBJECTIVES and APPROACHES

JD Reservoir

Objective: General Sport Fisheries Management

Approaches:

- Initiate a meeting with the new landowner (Barrick Goldstrike Mining Company) to discuss future management of the reservoir fishery.
- Conduct a single nighttime, electrofishing survey of three established transects during the summer.

Tonkin Reservoir

Objective: General Sport Fisheries Management

Approaches:

- Conduct a pre-stocking evaluation of road conditions and water quality/quantity.
- Conduct a single nighttime, electrofishing survey of the three established transects during the early summer.

PROCEDURES

Electroshocking surveys were conducted using the electroshocking barge with fixed probes as the anode and the barge serving as the cathode. A majority of the reservoir shoreline was shocked due to its small size and the need to evaluate the entirety of the reservoir. Electroshocking settings were set at 510 volts DC, pulse frequency of 60 Hz, a pulse width of 4-5 ms, and an output of 5-6 amps. Captured fish were measured, weighed, and released.

FINDINGS

JD Reservoir

The transfer of ownership did not occur until July. Scheduling did not allow for a meeting with the new landowners and, additionally, a below average water year did not provide reservoir conditions suitable for surveying.

Tonkin Reservoir

On May 21, a total of 1,022 Eagle Lake strain rainbow trout were stocked into the reservoir from Spring Creek Rearing Station.

On June 28, under relatively clear skies and calm to breezy wind conditions, two transects were completed, resulting in about 80% of the shoreline being sampled. A total of 12.6 electroshocking minutes were used to capture 57 trout, resulting in a capture rate of 252.5 trout per hour. Shocking and netting efficiency was considered fair to good, with approximately 60 to 70% of the fish being captured.

The captured fish were broken into three categories for evaluation; recently stocked hatchery trout, carryover hatchery trout, and wild trout. Carryover hatchery trout were identified through fin malformations and wear. Fish were considered wild when fins were in good condition with little to no wear. The ratio of the captured fish was 10.5% hatchery trout, 28.1% hatchery carryover trout, and 61.4% wild trout.

A total of 35 wild and carryover hatchery trout were measured and weighed for body condition evaluation, resulting in 9 trout in poor condition (25.7%), 10 trout in fair condition (28.6%), 12 trout in good condition (34.3%), and 4 trout in excellent condition (11.4%), with an average rating of good. Rainbow trout ranged in size from 7.4 to 17.2 in (189 to 438 mm) (TL), with an average length of 12.8 in (326 mm).

With this being only the second electroshocking survey for this reservoir, it is difficult to make many comparisons or trends. No population estimate was calculated due to the one month period between stocking of hatchery trout and the time of the survey.

Overall, it appears that the naturally reproducing rainbow trout make up the majority, over 60%, of trout in the reservoir and that approximately 75% of the contacted fish were in fair to excellent condition. Currently it appears that the fishery is healthy and there is a good balance of stocked fish to wild fish, with no current need to change stocking numbers. Future surveys will continue to follow the overall health of this reservoir and assess the need to make adjustments to the stocking regime. Additionally, with a proposal to put a mine-associated man-camp in the vicinity, the angling pressure at the reservoir could increase substantially, requiring an adjustment to stocking numbers. These and future surveys will be critical in monitoring any impacts to the fishery from an increase in angling pressure.

MANAGEMENT REVIEW

- The two approaches for JD Reservoir were not completed in 2012.
- The two approaches for Tonkin Reservoir were completed in 2012.

RECOMMENDATIONS

JD Reservoir

Management decisions and the future of the reservoir as a public fishery will be dependent on the level of involvement allowed by the new land owners.

Tonkin Reservoir

Resample the fish population in the reservoir in two years to evaluate carryover rainbow trout and monitor any changes in the fishery due to increased angler pressure.

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