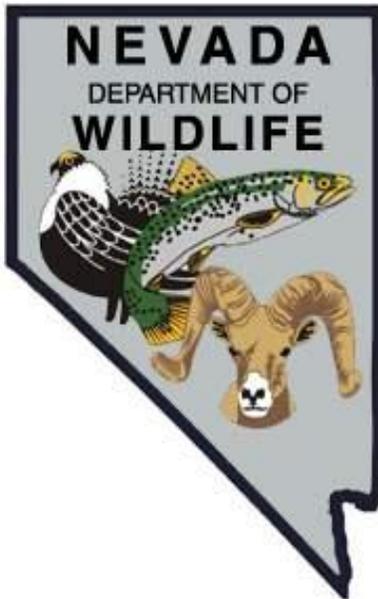


NEVADA DEPARTMENT OF WILDLIFE
STATEWIDE FISHERIES MANAGEMENT



FEDERAL AID JOB PROGRESS REPORTS

F-20-50
2014

WASHOE LAKE
WESTERN REGION



**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: *Washoe Lake*
Period Covered: *January 1, 2014 through December 31, 2014*

SUMMARY

The Department of Wildlife's expanded mail-in angler questionnaire data for 2013 estimated use at Washoe Lake at 243 anglers. Anglers fished for 729 days and caught 265 fish. Resulting angler success was 0.36 fish per angler-day, which was the lowest on record.

A third consecutive year of below average precipitation caused Big Washoe Lake and the marsh connecting to Little Washoe Lake to become drawn down to the point that many of the fish perished throughout the summer. It is unknown the cumulative effects of this drought on the sport fish population in Washoe Lake. Little Washoe Lake held suitable habitat for fish throughout the year.

BACKGROUND

Washoe Lake is a eutrophic, shallow body of water located in western Nevada between Reno and Carson City. Washoe Lake covers an area of 5,800 acres at spillway stage and consists of Big Washoe Lake, Little Washoe Lake, and the marsh area connecting the two. The shallow depth of the big lake (maximum 12 ft) coupled with nearly daily winds in Washoe Valley account for its high turbidity.

Drought cycles and resulting low water conditions continue to negatively impact this fishery. Recent droughts have occurred during 1976-77, 1987-1994, 2000-2004, and 2012-present. The fishery at Washoe Lake does not fare well during these periods and many of these droughts have either dramatically reduced or nearly eliminated fish populations. Two fish eradication projects at Washoe Lake (1960 and 1991) targeted nongame fish species including yellow perch, bullhead catfish, common carp, and tui chub. Neither of these projects was successful and, with the exception of yellow perch, all species still occur in both lakes.

The fishery at Washoe Lake is typically comprised of common carp, bullhead catfish, tui chub, Sacramento perch, white bass, and channel catfish. These species reproduce in the lake and populations are self-sustaining under favorable environmental conditions. Due to fluctuating water levels and subsequent declines in fish populations, white bass and channel catfish are supplemented with either hatchery-produced fish or wild fish collected from other local waters as needed to boost the fishery.

OBJECTIVES

General Management Objectives:

- Conduct a general assessment of angler use, success, and harvest through mail-in angler questionnaire data.
- Conduct a general habitat assessment through visual observations of water quantity (lake level) when onsite.

PROCEDURES

Conduct a general assessment of angler use, success, and harvest through opportunistic angler contacts and mail-in angler questionnaire data. Angler use and success was assessed through the statewide Mail-in Angler Questionnaire Survey. Angler questionnaire data is derived from a survey that is mailed to 30,000 license purchasers.

Conduct a general habitat assessment through visual observations of water quantity (lake level) when onsite and using USGS gage data. General assessments of habitat conditions were completed during the year through visual observations of Big and Little Washoe Lakes.

FINDINGS

Conduct a general assessment of angler use, success, and harvest through mail-in angler questionnaire data. The Department of Wildlife's expanded mail-in angler questionnaire data for 2013 estimated use at Washoe Lake at 243 anglers. Anglers fished for 729 days and caught 265 fish. Resulting angler success was 0.36 fish per day, which was the lowest on record. All estimates from 2013 were below estimates from the previous year and far below the 33-year average (1980 – 2013) for Washoe Lake. As evidenced by these estimates, the Washoe Lake fishery is highly susceptible to the negative effects of drought.

Conduct a general habitat assessment through visual observations of water quantity (lake level) when onsite and using USGS gage data. Visual assessments at Washoe Lake indicated the water level in the big lake was extremely low throughout most of the summer, while the water level in the little lake remained suitable. This was attributed to the on-going drought that has produced below average precipitation since 2012. A fish kill was reported in late September on Big Washoe Lake and while no site visits were made, photographic evidence showed a substantial portion of the deceased fish were common carp.

MANAGEMENT REVIEW

The angler use and success rates estimated from the Mail-in Angler Questionnaire Survey were not fulfilling the Warmwater General Fishery Management Concept objectives. The extended drought from which the region is suffering is having a negative effect on the Washoe Lake fishery. Until relief from the drought is experienced, this fishery will continue to decline.

Between 2005 and 2008, water levels were sufficient to allow restocking of game fish and maintaining of the fishery. However, the third year of below average precipitation and snowpack in 2009 likely resulted in a near loss of Sacramento perch, white bass, and catfish populations. Although water conditions improved in 2010 and 2011, they began to decline once again in 2012. The fish composition of Washoe Lake is unknown at this point and future surveys will be necessary to determine the cumulative effects of several years of drought. It will likely take several years of good water conditions to allow the fishery to recover. As conditions improve, a stocking program will be revived at Washoe Lake to include species such as white bass and channel catfish.

RECOMMENDATIONS

General Management Objectives:

- Conduct a general assessment of angler use, success, and harvest through mail-in, angler questionnaire data.
- Conduct a general habitat assessment through visual observations of water quantity (lake level) when onsite.
- Conduct gill-net surveys for two net nights in the fall.

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Date: January 28, 2015