

NEVADA DEPARTMENT OF WILDLIFE
STATEWIDE FISHERIES MANAGEMENT



FEDERAL AID JOB PROGRESS REPORTS

F-20-48
2012

BOULDER RESERVOIR
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: *Boulder Reservoir*
Period Covered: *January 1, 2012 through December 31, 2012*

SUMMARY

The Mail-in Angler Questionnaire Survey estimated use at 72 anglers and 77 angler days in 2011. Total catch was 739 fish with a success rate was 9.60 fish per angler day. With the exception of the catch rate, all other estimates were far below estimates of 138 anglers, 350 angler days, and 2,199 fish caught found in the 2010 survey.

A total of 1,199 Eagle Lake-strain catchable rainbow trout were stocked in April of 2012.

One visit was made in October to assess habitat conditions at Boulder Reservoir. At the time, the reservoir was at capacity and habitat appeared conducive to the reservoir's trout population.

A considerable amount of time was spent by the agency's Habitat Division in 2012 in planning and designing of the recreational improvement project at Boulder Reservoir. Funding for the project has been secured and implementation is scheduled for 2014. The SNPLMA acquisition of the reservoir, surrounding property, and associated water rights along with the pending recreation enhancement project will undoubtedly be a tremendous benefit to sportsmen of Nevada.

BACKGROUND

Boulder Reservoir is located 190 miles north of Reno in Washoe County. It is situated at an elevation of 5,755 ft and is predominantly surrounded by sagebrush-steppe habitat. The reservoir covers approximately 4 acres with a maximum depth of 10 ft. The reservoir is fed by spring snowmelt runoff and a perennial spring located in the reservoir's southwest corner.

Boulder Reservoir was constructed as an irrigation storage reservoir in 1950. It has been owned or managed by the Harris, Groves, Cockrell, and Jaksick families in the past. The reservoir has had a long history with riser structures and spillways washing out during periods of high water. Throughout much of the past, verbal agreements between NDOW and landowners have allowed public access in exchange for routine hatchery stocking.

In 2009, Boulder Reservoir, surrounding acreage, and associated water rights were acquired by BLM through Southern Nevada Public Lands Management Act

(SNPLMA) funding. A comprehensive recreation enhancement project has been planned, funded, and construction is scheduled to begin in 2014. Among others, components of the project include dam repair, dredging, riparian fencing, as well as construction of picnic facilities, restrooms, boat launching facilities, and a campground.

Boulder Reservoir supports hatchery maintained populations of rainbow and bowcutt trout. On occasion, low water coupled with siltation and an abundance of aquatic vegetation has led to late summer/early fall fish kills. Boulder Reservoir is managed under the coldwater Quality Fishery Management Concept which establishes an objective for angler success rates of 0.30-1.25 fish per hour and 2.0-3.5 fish per angler day.

OBJECTIVES

General Management Objectives:

- Conduct a general assessment of angler use, success and harvest through opportunistic angler contacts and mail-in angler questionnaire data.
- Conduct a general habitat assessment through visual observations of water quantity (lake level) and water quality (clarity), aquatic vegetation, and upland vegetation (cattle use) when on site.
- Work with BLM to coordinate a habitat and recreation improvement project for Boulder Reservoir.

PROCEDURES

Conduct a general assessment of angler use, success, and harvest through opportunistic angler contacts and mail-in angler questionnaire data. Scheduled and opportunistic visits were made to Boulder Reservoir throughout the year to collect creel survey data during an expected time that contacts the greatest number of anglers as possible. Information on angler harvest, effort, and origin were recorded and harvested fish were measured to fork length in millimeters.

Angler use and success at Boulder Reservoir was also assessed through the Department's Mail-in Angler Questionnaire Survey. Angler questionnaire data is derived from a survey that is mailed to 10 percent of license purchasers from the previous year.

Conduct a general habitat assessment through visual observations of water quantity (lake level) and water quality (clarity), aquatic vegetation, and upland vegetation (cattle use) when on site. General habitat conditions were documented during a single site visit in October. Habitat assessment was based on visual observations of lake level and clarity during a walk around the reservoir.

Work with BLM to coordinate a habitat and recreation improvement project for Boulder Reservoir. The Habitat Division spent a considerable amount of time in 2012 planning and designing the recreational improvement project at Boulder Reservoir.

FINDINGS

Conduct a general assessment of angler use, success and harvest through opportunistic angler contacts and mail-in angler questionnaire data. Opportunistic angler contacts were made on one day at Boulder Reservoir in 2012. On this occasion, no anglers were contacted.

The Mail-in Angler Questionnaire Survey estimated use at 72 anglers and 77 angler days in 2011. Total catch was 739 fish with a success rate was 9.60 fish per angler day. With the exception of the catch rate, all other estimates were far below the estimates of 138 anglers, 350 angler days, and 2,199 fish found in the 2010 survey.

A total of 1,199 catchable Eagle Lake strain rainbow trout was stocked in April of 2012.

Conduct a general habitat assessment through visual observations of water quantity (lake level) and water quality (clarity), aquatic vegetation, and upland vegetation (cattle use) when on site. One visit was made in October to assess habitat conditions at Boulder Reservoir. At the time, the reservoir was at capacity and habitat appeared conducive to the reservoir's trout population.

Work with BLM to coordinate a habitat and recreation improvement project for Boulder Reservoir. A considerable amount of time was spent in 2012 by the Habitat Division in planning and designing of a recreational improvement project at Boulder Reservoir. Funding for the project has been secured and implementation is scheduled for 2014.

MANAGEMENT REVIEW

Due to its remote nature, Boulder Reservoir does not receive a high level of angler use. It does, however, remain a popular fishery for those anglers willing to make the trip. This fishery is generally popular with anglers for producing high catch rates and an opportunity to fish in a semi-remote setting. Additionally, the area provides opportunities for dispersed camping, hunting, and wildlife viewing. The angler questionnaire data suggests the reservoir is currently meeting the requirements prescribed for the coldwater Quality Fishery Management Concept.

The SNPLMA acquisition of the reservoir, surrounding property, and associated water rights and along with the recreation enhancement project will undoubtedly prove to be a tremendous benefit to sportsmen of Nevada.

RECOMMENDATIONS

General Management Objectives:

- Conduct a general assessment of angler use, success, and harvest through opportunistic angler contacts and mail-in angler questionnaire data.
- Conduct a general habitat assessment through visual observations of water quantity (lake level), water quality (clarity), aquatic vegetation, and upland vegetation (cattle use) when on site.
- Work with BLM to implement the habitat and recreation improvement project for Boulder Reservoir using Habitat Conservation Fee funds.

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