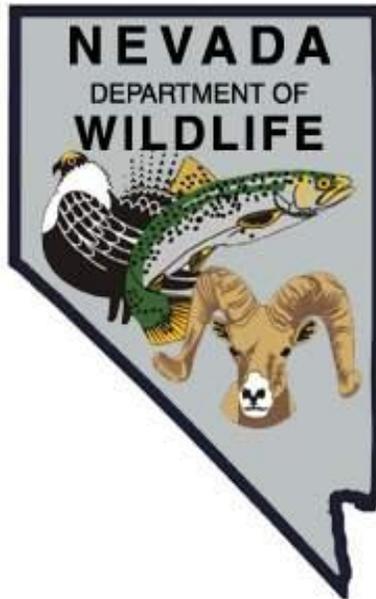


NEVADA DEPARTMENT OF WILDLIFE
STATEWIDE FISHERIES MANAGEMENT



FEDERAL AID JOB PROGRESS REPORTS

F-20-48
2012

WALL CANYON RESERVOIR
WESTERN REGION



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

Table of Contents

<u>Contents</u>	<u>Page</u>
SUMMARY	1
BACKGROUND	1
OBJECTIVES	2
PROCEDURES	2
FINDINGS	3
MANAGEMENT REVIEW	5
RECOMMENDATIONS	5

List of Figures

<u>Number</u>	<u>Title</u>	<u>Page</u>
1	2012 Wall Canyon Reservoir Angler Drop Survey – Length Frequency of Reported Fish	4

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

State: *Nevada*
Project Title: *Statewide Fisheries Program*
Job Title: *Wall Canyon Reservoir*
Period Covered: *January 1, 2012 through December 31, 2012*

SUMMARY

A total of 10 volunteer angler surveys from the drop-box were received from Wall Canyon Reservoir in 2012. During the months when surveys were received, 13 anglers had fished for 47.5 hrs and caught 43 fish consisting of 26 rainbow trout, 2 brown trout, 7 bowcutt trout, and 8 smallmouth bass. Resulting catch rates from all fish caught were 3.31 fish per angler and 0.91 fish per hour.

The Mail-in angler Questionnaire Survey estimated use at 474 anglers and 1,028 angler days in 2011. Total catch was 5,418 fish and the success rate was 5.31 fish per angler day.

A total of 2,000 catchable triploid rainbow trout were stocked into Wall Canyon Reservoir in April of 2012.

The reservoir was below 50% capacity during a visit in July and continued to drop throughout the remainder of the year. Given the regularity of dramatic drawdowns, current water management practices downstream are not beneficial to the Wall Canyon Reservoir fishery.

BACKGROUND

Wall Canyon Reservoir is located 60 mi north of Gerlach off Nevada State Route 447 in a sagebrush-steppe habitat type. The dam consists of earth-fill and has a crest length of 822 ft. The reservoir covers 133 SA, can store up to 2,200 acre-ft of water, and has a maximum depth of approximately 55 ft.

The dam was constructed in 1960 by Lewis Cockrell. As the reservoir filled, it was realized that a portion of the reservoir was on private land while the remaining was situated on land administered by the Bureau of Land Management (BLM). The storage on BLM land necessitated a storage permit and led to an agreement between Mr. Cockrell and the Nevada Department of Wildlife (NDOW). The agreement stated, in part, that NDOW would manage the fishery in the reservoir. In 1992, Wall Canyon Reservoir and the ranch downstream were purchased by R.C. Roberts. In 1998, Sam Jaksick purchased this property. Water stored in Wall Canyon Reservoir is used for agricultural irrigation downstream at Duck Lake Ranch which is also owned by the Jaksick family.

In 2008, the Bureau of Land Management acquired lands adjacent to Wall Canyon Reservoir and Wall Canyon Creek as part of the “Granites” SNPLMA (Southern Nevada Public Lands Management Act) Land Acquisition Proposal (Round 5). However, the associated water rights for a minimum pool were not included in the final proposal and are still held by Duck Lake Ranch. This acquisition may prove to be a positive change for the management of Wall Canyon Reservoir and its surrounding lands.

The Wall Canyon Reservoir fishery is comprised of hatchery-maintained populations of rainbow and bowcutt trout and wild, self-sustaining populations of brown trout, smallmouth bass, and green sunfish. Wall Canyon Creek, the only tributary to Wall Canyon Reservoir, supports a wild population of introduced brown trout and wild, endemic population of Wall Canyon suckers and speckled dace. The reservoir is managed under coldwater and warmwater General Fishery Management Concepts, 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, return of angler drop box surveys, and mail-in angler questionnaire data.
- Conduct a general habitat assessment through visual observations of water quantity (lake level) and water quality (clarity) when onsite.

PROCEDURES

Conduct a general assessment of angler use, success and harvest through opportunistic angler contacts, the angler drop box and mail-in angler questionnaire data. Scheduled and opportunistic visits were made to Wall Canyon Reservoir throughout the year for the purpose of collecting creel survey data during an expected time to contact the greatest number of anglers as possible. Information on angler harvest, effort, and origin were recorded. Harvested fish were measured to fork length in millimeters.

During the course of other duties throughout the year, a volunteer angler survey box at Wall Canyon Reservoir was periodically maintained and restocked.

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

Conduct a general habitat assessment through visual observations of water quantity (lake level) and water quality (clarity) when onsite. General habitat conditions were documented in July during an initial site visit and again throughout mid-

to late-summer during crayfish trapping operations at Wall Canyon Creek. Habitat assessment was based strictly on visual observations of lake level and clarity.

FINDINGS

Conduct a general assessment of angler use, success and harvest through opportunistic angler contacts, an angler drop box and mail-in angler questionnaire data. Opportunistic angler contacts were made during one day at Wall Canyon Reservoir in 2012. On this occasion, one angler had fished for 4.0 hrs and caught and released a single rainbow trout. Resulting catch rates for angler checks made in 2012 were 1.00 fish per angler and 0.25 fish per hour.

A total of 10 volunteer angler surveys from the drop-box were received from Wall Canyon Reservoir in 2012. During the months when surveys were received, 13 anglers had fished for 47.5 hrs and caught 43 fish consisting of 26 rainbow trout, 2 brown trout, 7 bowcutt trout, and 8 smallmouth bass. Resulting catch rates for all fish caught were 3.31 fish per angler and 0.91 fish per hour. Of the 43 fish reported, 29 were harvested, while the remaining 14 (12 rainbow trout and 2 bowcutt trout) were released. All 10 anglers fished from shore with bait. Angler satisfaction in 2012 was rated on a scale of -2 to +2 with -2 being unsatisfied and +2 representing satisfaction. Ratings were all positive at 1.47 for total fishing experience, 0.63 for size of fish, and 0.73 for number of fish. A correlation between angler success and satisfaction was not evident.

The majority of rainbow trout caught (42.3%) were reported in the <10.0 in size bracket, likely representing recently stocked fish (Figure 1). Brown trout were split evenly between the 14.0-15.9 in and 18.0-19.9 in brackets. Bowcutt trout were dominated by the 18.0-19.9 in bracket at 60%, while all 8 smallmouth bass reported occurred in the 10.0-11.9 in size bracket. Although many rainbow trout reported were fish stocked this year, the presence of larger-sized bowcutts provided evidence of carryover from previous years.

The Mail-in Angler Questionnaire Survey estimated use at 474 anglers that fished 1,028 days in 2011. Total catch was 5,418 fish and the success rate was 5.31 fish per angler day. Although number of anglers and angler days were similar to the 511 anglers and 1,438 days found in 2010, the number of fish caught was less than half of the 11,827 fish estimated in 2010. This can likely be attributed to the fact that Wall Canyon Reservoir spent most of the year at half capacity or lower. Many anglers voiced frustration over difficulty in catching fish.

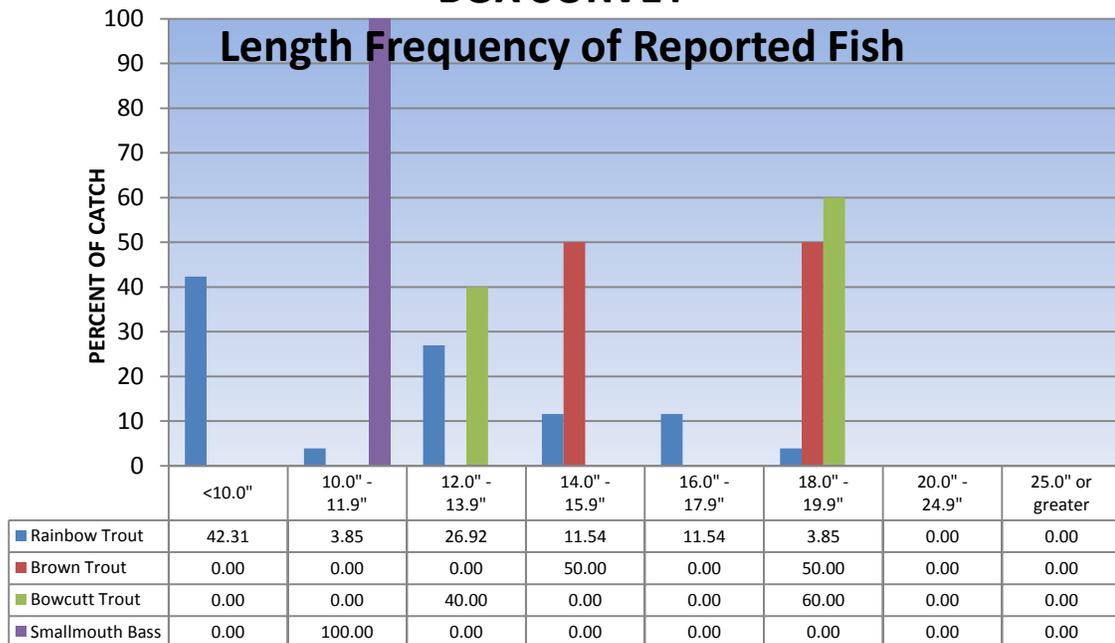
A total of 2,000 catchable triploid rainbow trout were stocked into Wall Canyon Reservoir in April of 2012.

Conduct a general habitat assessment through visual observations of water quantity (lake level) and water quality (clarity) when onsite. Water conditions at Wall Canyon Reservoir have declined in recent history due to a combination of factors. Primarily, the agricultural operations at Duck Lake Ranch have expanded and water

management strategies appeared to have changed. Even during the above average precipitation year such as 2011, the reservoir was still left at 50% capacity by year's end. This situation was exacerbated in years of below average precipitation such as in 2012. Given the regularity of dramatic drawdowns, current water management practices downstream are not beneficial to the Wall Canyon Reservoir fishery. The reservoir was below 50% capacity during a visit in July and continued to drop throughout the remainder of the year.

Figure 1

2012 WALL CANYON RESERVOIR ANGLER DROP BOX SURVEY



MANAGEMENT REVIEW

The angler use and success rates documented in the 2011 Mail-in Angler Questionnaire Survey exceed the guidelines in the General Fishery Management Concept. An adequate representation of catch rates in 2012 cannot be determined from a solitary angler contact. This fishery is generally popular with anglers since it produces high catch rates and is in a semi-remote setting.

RECOMMENDATIONS

General Management Objectives:

- Conduct a general assessment of angler use, success and harvest through opportunistic angler contacts, return of angler drop-box surveys, and mail-in angler questionnaire data.

- Conduct a general habitat assessment through visual observations of water quantity (lake level) and water quality (clarity) when onsite.
- Set gill nets for 2 to 4 net-nights in the fall.

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Date: February 14, 2013