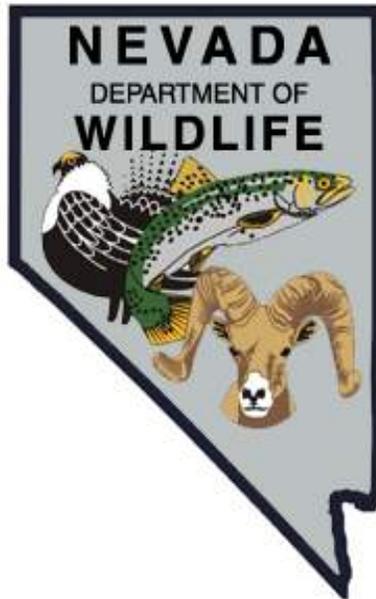


NEVADA DEPARTMENT OF WILDLIFE
STATEWIDE FISHERIES MANAGEMENT



FEDERAL AID JOB PROGRESS REPORTS

F-20-52
2016

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	2
MANAGEMENT REVIEW	4
RECOMMENDATIONS	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, 2016 through December 31, 2016*

SUMMARY

Eight volunteer drop-box surveys were completed during 2016 at Wall Canyon Reservoir. Eight anglers reported to have fished for 58.3 hours and caught 53 total fish. The catch rate was 5.9 fish per angler and 0.9 fish per hour. The Mail-in Angler Questionnaire Survey estimated use at 91 anglers that fished 267 days and caught 673 fish in 2015. The average catch rate was estimated at 2.9 fish per angler and the success rate was 2.5 fish per angler-day.

Wall Canyon Reservoir was stocked on two separate occasions in 2016. The reservoir received 6,062 catchable cuttbow and rainbow trout.

BACKGROUND

Wall Canyon Reservoir is located 60 mi north of Gerlach off Nevada State Route 447 in sagebrush-steppe habitat. The earthen dam has a crest length of 822 ft and the reservoir covers 133 SA, stores 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) stating, 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 and then in 1998, Sam Jaksick purchased this property. Water stored in Wall Canyon Reservoir is used to irrigate agricultural land downstream at Duck Lake Ranch, which is 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 needed for a minimum pool were not included in the final proposal and were 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 reservoir fishery is comprised of hatchery-maintained rainbow and bowcutt trout and wild, self-sustaining 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 Wall Canyon sucker and speckled dace. The sport fisheries are managed under Coldwater and Warmwater General Fishery Management Concepts, which establishes objectives for angler success rates at 0.30-1.25 fish per hour and 2.0-3.5 fish per angler day.

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. One opportunistic visit was made to Wall Canyon Reservoir during the 2016 field season to collect creel survey data.

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

Angler use and success for Wall Canyon 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 30,000 fishing 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 during one trip to Wall Canyon Reservoir in September.

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. One trip was made to Wall Canyon Reservoir in 2016. No anglers were contacted during the duration of this trip (2 days).

Eight volunteer drop-box surveys were completed during 2016 at Wall Canyon Reservoir. Eight anglers reported to have fished for 58.3 hours and caught 53 total fish. The catch rate was 5.9 fish per angler and 0.9 fish per hour.

The Mail-in Angler Questionnaire Survey estimated use at 91 anglers that fished 267 days and caught 673 fish in 2015. The average catch rate was estimated at 2.9

fish per angler and the success rate was 2.5 fish per angler day. All estimates were higher than the record lows reported in 2014 but still lower than the 25 year averages for the water.

Stocking Program

Wall Canyon Reservoir was stocked on two separate occasions in 2016. The reservoir received 6,062 catchable cuttbow and rainbow trout (Table 1).

Table 1. Wall Canyon Reservoir Stocking Summary – 2016.

Species	Strain	Number	Size (in.)	Date
Cuttbow	Marlette	2,000	9	10/6/2016
Rainbow	Triploid	2,061	9.2	3/3/2016
Rainbow	Triploid	2,001	9	10/6/2016
Total (All Fish)			6,062	

Table 2. Wall Canyon Reservoir Stocking History 2010 – 2015.

Year	Species	Number	Size Range (in.)
2010	Rainbow	1,999	9.4
	Bowcutt	2,001	9.7
2010 Total		4,000	
2011	Rainbow	2,495	9.5 – 10.3
	Bowcutt	2,000	9.6
2011 Total		4,495	
2012	Rainbow	2,000	9.2
2012 Total		2,000	
2013	Rainbow	1,000	9.8
	Rainbow	999	10.2
	Rainbow	2,015	9.9
2013 Total		4,014	
2014	Rainbow	4,136	9.8
2014 Total		4,136	
2015	Cuttbow	2,019	9.2
	Rainbow	2,005	9.4
2015 Total		4,024	
Total (All Fish)		22,669	

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, agricultural operations at Duck Lake Ranch have expanded and water management strategies have changed. Even during years with above average precipitation such as 2011, the reservoir was still at 50% capacity by the end of the year. This situation has been exacerbated during the ongoing drought the region has

experienced. The winter of 2015-2016 brought some much need moisture to the region and the reservoir benefitted greatly. On the only visit to the reservoir during 2016 (September), the reservoir appeared to be at more than 50% of capacity for the first time since 2012.

MANAGEMENT REVIEW

The success rate of 2.5 fish per angler day for the mail-in questionnaire falls within the guidelines of 2.0–3.5 fish per angler day prescribed in the Coldwater, General Fishery Management Concept.

It is difficult to determine the overall angling trend for the fishery in Wall Canyon Reservoir due to the lack of angler data since the 2012 season. Anglers that make the effort to fill out the surveys appear to be having success but the data is very limited. Low use of the volunteer drop-box station for the fifth consecutive year suggests that the location of the station may need to be moved to a more accessible area. The current location sits away from the main entrance to the reservoir and moving the station to a more visible spot may increase the use and provide data that will enable more effective management decisions.

Water conditions at the reservoir over the last few years have made angling extremely difficult; however, gill net surveys and limited angler data have shown healthy, self-sustaining populations of both brown trout and smallmouth bass along with limited carryover of stocked rainbow and cuttbow trout.

During the 2016 field season, a number of composite habitat structures were acquired using Habitat Conservation Fee funding. A total of five of these structures were placed in Wall Canyon Reservoir in an effort improve the reproduction and survival of warmwater species (smallmouth bass). The structures will provide escape cover for juvenile bass where they will be able to avoid the predatory brown trout in the reservoir.

The winter of 2015-2016 brought much needed moisture to the region and the fishery appeared to benefit. If the weather pattern returns to a more normal state the fishery should respond in a positive manner.

RECOMMENDATIONS

- 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.
- Explore the possibility of relocating the volunteer angler drop-box to a location more visible.

Prepared By: Travis Hawks
Biologist III
Western Region

Date: January 24, 2017