

NEVADA DEPARTMENT OF WILDLIFE
STATEWIDE FISHERIES MANAGEMENT



FEDERAL AID JOB PROGRESS REPORTS

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2016

BIG SPRINGS RESERVOIR
WESTERN REGION



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

Table of Contents

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

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

State: *Nevada*
Project Title: *Statewide Fisheries Program*
Job Title: *Big Springs Reservoir*
Period Covered: *January 1, 2016 through December 31, 2016*

SUMMARY

Water conditions were poor throughout 2016 creating no potential to reestablish the sport fishery at Big Springs Reservoir. Stocking has been suspended since 2010 due to inadequate water levels. The U.S. Fish and Wildlife Service (USFWS) Comprehensive Conservation Plan (CCP) that will guide management actions on the Sheldon National Wildlife Refuge recommends that the Big Springs Reservoir fishery be managed as a native trout fishery by stocking Lahontan cutthroat trout (LCT) or redband trout.

BACKGROUND

Big Springs Reservoir is located near the northern boundary of the Sheldon National Wildlife Refuge approximately 130 miles northwest of Winnemucca, NV. The reservoir covers 212 acres with an average depth of seven feet and maximum depth of 10 ft. The reservoir was originally constructed as an irrigation impoundment for Lower Virgin Valley and Dufurrena Ponds. The water rights and administrative authority are held by the USFWS. Water is supplied to Big Springs Reservoir through several natural springs, but in recent years, the fishery has been lost due to extremely low water levels. Until 2001, female rainbow trout from Big Springs Reservoir were spawned with male Lahontan cutthroat trout from Catnip Reservoir to produce hybrid cuttbow trout for hatchery production and recreational angling. This operation was discontinued in 2002 due to low water levels and lack of rainbow trout. Big Springs Reservoir is managed under a Quality, Coldwater Fishery Management Concept.

OBJECTIVES

- Conduct a general fisheries assessment through opportunistic angler contacts and mail-in angler questionnaire data.
- Monitor reservoir level and water quality to determine if reservoir conditions are suitable to sustain trout.
- If sufficient water fills the reservoir, fisheries management activities will be coordinated with the USFWS to reestablish the trout fishery.

PROCEDURES

Conduct a general fisheries assessment through opportunistic angler contacts and mail-in angler questionnaire data. No angler contacts were made during 2016 at Big Springs Reservoir. Angler use and success data is supplemented with the Mail-In Angler Questionnaire Survey. Angler questionnaire data was derived from the 2015 survey that was mailed to 30,000 license purchasers.

Monitor reservoir level and water quality conditions to determine if reservoir conditions are suitable to sustain trout. Water level in the reservoir was monitored through visual observation in 2016. No water quality measurements were collected at Big Springs Reservoir.

Coordinate fisheries management activities with the USFWS to reestablish a coldwater trout fishery in Big Springs Reservoir. Coordination with the USFWS related to fisheries management at Big Springs Reservoir was accomplished.

FINDINGS

Conduct a general fisheries assessment through opportunistic angler contacts and mail-in angler questionnaire data. No water was observed in the reservoir in 2016, which eliminated the possibility of reestablishing a fishery. No angler contacts were made at Big Springs Reservoir, no anglers reported fishing and catching fish in the Mail-in, Angler Questionnaire Survey during 2015. The last time Big Springs was stocked with trout was in May 2010.

Monitor reservoir level and water quality conditions to determine if reservoir conditions are suitable to sustain trout. No water was observed in Big Springs Reservoir in 2016. The reservoir was checked in March, May, June, September, and December 2016.

Coordinate fisheries management activities with the USFWS to reestablish a coldwater trout fishery if sufficient water is available. Throughout 2016, coordination occurred between NDOW and USFWS refuge staff to discuss water levels at Big Springs Reservoir and whether the level was sufficient to support trout. Both NDOW and the USFWS concurred that water levels were not sufficient to support trout in 2016. NDOW staff attended the annual coordination meeting with Sheldon National Wildlife Refuge staff in February to discuss fisheries activities including Big Springs Reservoir.

MANAGEMENT REVIEW

No fishery management activities occurred at Big Springs Reservoir during 2016 due to the lack of water. The Sheldon CCP identifies only LCT or redband trout for recreational fishing in Big Springs Reservoir in order to move the reservoir to a native fishery.

Stocking has been suspended in recent years due to low water levels and resulted in the collapse of the quality, coldwater fishery. The reservoir will continue to be monitored to determine if conditions become suitable for stocking. The angler drop-box was removed from Big Springs Reservoir in 2014 and relocated to a different water body.

RECOMMENDATIONS

- Conduct a general assessment of angler use, success, and harvest through opportunistic angler contacts and mail-in angler questionnaire data if enough water is available in the reservoir to support a fishery.
- Monitor the reservoir suitability to support a trout fishery by collecting water quality parameters, monitoring reservoir level, annual spring runoff, and flow from shoreline springs.
- Coordinate fisheries management activities with the Sheldon National Wildlife Refuge staff in order to be consistent with the CCP.

Prepared by: Brad Bauman
Fisheries Biologist III
Western Region

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