

NEVADA DEPARTMENT OF WILDLIFE
STATEWIDE FISHERIES MANAGEMENT



FEDERAL AID JOB PROGRESS REPORTS

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2016

SQUAW CREEK 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: *Squaw Creek Reservoir*
Period Covered: *January 1, 2016 through December 31, 2016*

SUMMARY

The mail-in angler questionnaire estimated use at 513 anglers and 1,256 angler days in 2015. Total catch was estimated to be 3,423 fish and the success rate was 2.7 fish per angler day. The estimated number of anglers and angler days are higher than reported in 2014 and are closer to the 25-year average for the water. Squaw Creek Reservoir is meeting both Coldwater and Warmwater General Fishery Management Concepts.

Water conditions (quantity and quality) were documented throughout the summer and fall and the reservoir remained at or near capacity throughout 2016.

The reservoir received 8,007 hatchery-reared trout in 2016. This included 4,017 catchable Eagle Lake and triploid strain rainbow trout, 3,015 catchable cuttbow trout, and 975 Sheep Creek strain brown trout. The reservoir also received 5,169 five-inch channel catfish in May of 2016.

BACKGROUND

Squaw Creek Reservoir is located in northern Washoe County, approximately 20 mi north of Gerlach. At maximum capacity, the reservoir is 47.5 SA, stores 1,200 acre-ft, and is 45 ft deep (spillway elevation). Of the two tributaries to the reservoir, the east tributary flows from a warmwater spring.

The reservoir was constructed in 1952 as a private reservoir for water storage. The Nevada Department of Wildlife negotiated with the Holland Land and Livestock Company and agreed to manage the fishery as long as the reservoir would remain open to public fishing. Mr. Jaksick is the present owner of the land and water rights for the reservoir. A history of public abuse at the reservoir has prompted the landowner to post signs that notify the public of a set of 'regulations' for the reservoir.

The fishery consists of hatchery maintained rainbow, bowcutt, and brown trout. Tiger trout have also been stocked in recent years, although carryover of the species is somewhat questionable. It also supports wild, self-sustaining populations of largemouth bass, spotted bass, bullhead catfish, channel catfish, and green sunfish. The reservoir is managed under Coldwater and Warmwater General Fishery Management Concepts, with established objectives for angler success rates of 0.25 to 0.75 fish per hour and 1.0 to 2.0 fish per angler day.

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) when onsite.
- Augment the reservoir with 2,500 channel catfish.

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 at Squaw Creek Reservoir was also assessed through the Department's Mail-in Angler Questionnaire Survey. Angler questionnaire data was derived from a survey that was mailed to 30,000 license purchasers from the previous year.

Opportunistic visits were made to Squaw Creek Reservoir during the 2016 field season in an effort to contact anglers and obtain catch data.

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 several site visits throughout the summer and during visits to other northern Washoe County reservoirs. Habitat assessment was based on visual observations of lake level and clarity.

Augment the reservoir with 2,500 channel catfish. Channel catfish were purchased from Colorado Catch in 2016 and delivered to Squaw Creek Reservoir, along with other regional waters on May 26.

FINDINGS

Conduct a general assessment of angler use, success, and harvest through opportunistic angler contacts and mail-in angler questionnaire data. Angler contacts were attempted on four occasions at Squaw Creek Reservoir in 2016. No anglers were encountered during these visits.

The mail-in angler questionnaire estimated use at 513 anglers and 1,256 angler days in 2015. Total catch was estimated to be 3,423 fish and the success rate was 2.7 fish per angler day. The estimated number of anglers and angler days are higher than those reported in 2014 and are closer to the 25-year average for the water. The estimated fish per angler day is lower than the 25-year average. Squaw Creek Reservoir is one of the few regional waters that was not affected by the long-term drought affecting the area. For this reason, angler use and success remained relatively high in 2015.

Conduct a general habitat assessment through visual observations of water quantity (lake level) and water quality (clarity) when onsite. Water conditions at Squaw Creek Reservoir typically remain stable from one year to the next and are not subject to the usual annual drawdowns of other western reservoirs. The reservoir remained at or near capacity in 2016.

There were no observed or reported fish die-offs at Squaw Creek Reservoir during 2016 as there had been during previous years. In past years, the heaviest stocking was done during the spring. After reports of late summer die-offs in 2012, 2013, and 2014 the decision was made to stock the majority of the fish in 2015 during early fall. This could have helped to avoid seasonal algal blooms and low oxygen conditions that can influence fish survival. Continued monitoring will be necessary.

Augment the reservoir with 2,500 channel catfish. For the first time since 2013, channel catfish were purchased and stocked into Squaw Creek Reservoir. A total of 5,169 five-inch catfish were delivered to the reservoir on May 26, 2016.

Squaw Creek Reservoir received 8,007 hatchery-reared trout in 2016 (Table 1). This included 4,017 catchable Eagle Lake and triploid strain rainbow trout, 3,015 catchable cuttbow trout, and 975 Sheep Creek strain brown trout.

Table 1. Stocking Summary – 2016.

Species	Strain	Number	Avg. Size	Date
Rainbow	EAGLE LAKE	3,002	9.5	3/4/2016
Rainbow	TRIPLOID	1,015	8.9	9/19/2016
Total RB			4,017	
Cuttbow	CUTTBOW	3,015	9.2	9/19/2016
Brown	SHEEP CREEK	975	9.2	11/18/2016
Total Trout			8,007	
Catfish	CHANNEL CATFISH	5,169	5	5/26/2016

MANAGEMENT REVIEW

Angler use and success rates documented in the Mail-in Angler Questionnaire Survey met the guidelines of a General Fishery Management Concept, which calls for 2.0 to 3.5 fish per angler day. This fishery is popular with anglers for producing high catch rates and an opportunity to fish in a semi-remote setting. For the second consecutive year, there has been no reported die-off of trout during the warm summer months. The strategy of stocking fish in late summer and early fall that was adopted in 2014 appears to be having a positive effect on the persistence of trout within the reservoir. Electrofishing and gillnet surveys in the future will provide further insight into the longevity of the coldwater species in the reservoir.

The constant water supply that feeds Squaw Creek Reservoir along with its almost constant water level is providing an excellent fishery for warm water species. It

appears that these conditions are extremely conducive for the reproduction and growth of several species of warmwater fish. If the fish kill events of coldwater species can continue to be avoided by stocking during the late season, Squaw Creek Reservoir will continue to be a popular and productive multi-tiered fishery.

RECOMMENDATIONS

- 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) when onsite.
- Electroshock two established transects during one night in the fall.
- Augment the reservoir with 2,500 channel catfish.

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