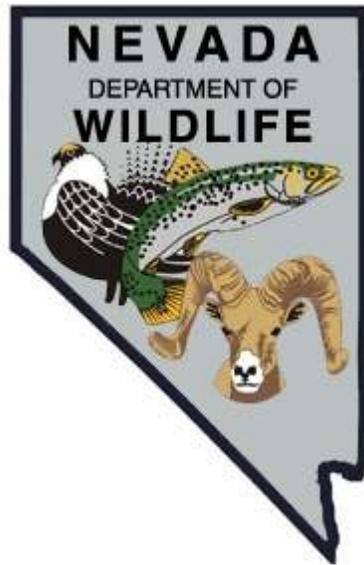


NEVADA DEPARTMENT OF WILDLIFE
STATEWIDE FISHERIES MANAGEMENT



FEDERAL AID JOB PROGRESS REPORTS

F-20-54
2018

LANDER COUNTY
SMALL LAKES AND RESERVOIRS
EASTERN 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: *Lander County Small Lakes and Reservoirs*
Period Covered: *January 1, 2018 through December 31, 2018*

SUMMARY

In 2018, Groves Lake received 2,000 rainbow trout in the spring, while Willow Creek Pond received 4,010 rainbow trout between the spring and fall stockings. The leak in Groves Lake still had an impact on the fishery as only a small pool was maintained in the reservoir by fall. The work history of the leak was investigated to assess the potential for it to be repaired.

BACKGROUND

Groves Lake

Groves Lake is located on the east side of the Toiyabe Mountain Range, three miles west of the town of Kingston. At maximum capacity, the lake covers 16 surface acres and has a maximum depth of 22 feet. Although the dam was resealed in 2000, a leaky bottom has hampered the water level from reaching its maximum capacity. As one of the few lakes in the area, it is heavily fished by locals, with annual angler use averaging around 3,000 days per year. Beginning in 2012, the water level at Groves Lake has been very low, attributed to a new leak in the dam. The fishery is managed under a General Fishery Management Concept.

Willow Creek Pond

Willow Creek Pond is located 13 miles southwest of Battle Mountain and includes the main reservoir and a lower pond. The lower pond was built in 1960 and it covers one surface acre, with a maximum depth of about eight feet. The main reservoir was built in 1988-89 by Battle Mountain Gold Corporation to supply water for local mining operations. It has a maximum surface area of 11 acres at a maximum dam height of 47 feet. Even with their small sizes, the ponds average just over 2,000 angler days per year. The ponds are managed with seasonal put-and-take fisheries, having limited stocked rainbow trout carryover while wild brown trout drift down from the inflowing creek. Since the rainbow trout body condition continued to show poor ratings, the allocation of stocked trout has been reduced by 2,000 since 2014.

In 2003, yellow perch were illegally stocked in Willow Creek Pond and the population quickly expanded to levels where management action was needed. Largemouth bass were stocked in September of 2007 in an attempt to control the

population growth. Both species are managed under a Warmwater Panfish Fishery Management Concept.

OBJECTIVES and APPROACHES

Groves Lake

Objective: General Sport Fisheries Management

Approaches:

- Conduct a pre-stocking evaluation of road conditions and water quality/quantity.
- Conduct a dye-test to evaluate the leak in the dam structure.

Willow Creek Pond

Objectives: Evaluate the health of the trout fishery.
Examine success of largemouth bass on controlling yellow perch.

Approaches:

- Conduct a pre-stocking evaluation of road conditions and water quality/quantity.
- Conduct a general fisheries assessment through opportunistic angler contacts.
- Maintain and check for returns of volunteer, angler drop-box surveys.

PROCEDURES

Coordinating trout stocking with the hatcheries required checking the reservoir and evaluating the water level and water temperature prior to stocking.

Angler creel was collected by means of personal contact and monitoring angler drop-boxes. Information gathered included number of anglers, hours fished, fish caught, fish released, and fishing method.

FINDINGS

Groves Lake

A total of 2,000 Eagle Lake strain rainbow trout were stocked in Groves Lake on May 30. Even though the leak in the reservoir persisted, the water level, although low, was maintained at a suitable level to support stocking. Water conditions (level or quality) were not monitored prior to stocking.

A dye-test was not completed in 2018 due to the busy and conflicting schedule of the engineering staff. Historic documents were located and reviewed to understand the

long history of leaking in the reservoir since the dam was completed in 1970. Multiple attempts have been made to repair these leaks, with the most successful approach involving subsurface backfill and application of shotcrete near the rock face of the dam.

This small reservoir is a popular fishery for central Nevada and its repair should be more focused. The Mail-in Angler Questionnaire Survey data shows that between 1980 and 2011, angler use averaged 4,159 days per year, while from 2012 to 2017, it average 1,308 angler days per year. The year 2011 delineates when the area received high spring run-off, which appeared to have been the catalyst for the current leaking issues. Mending the leak is still a priority for 2019.

Willow Creek Pond

One week prior to stocking, water levels were near capacity and water temperatures were in the low 60's. On June 5, 2,001 Eagle Lake strain rainbow trout were stocked, with an additional 2,009 Erwin and Arlee strains of rainbow trout stocked in October.

In 2018, no anglers were observed during several visits to the reservoir; however, the angler drop-box received 18 usable questionnaires. Twenty-eight anglers fished for 113.5 hrs to capture 375 fish, resulting in success rates of 13.4 fish per angler and 3.3 fish per hour. These high success rates were partly due to 1/3 of the anglers fishing from a boat/tube with reported success rates three times higher than shore anglers (Table 1). Catch composition included 294 trout (78.4%), 64 largemouth bass (17.1%), and 17 yellow perch (4.5%).

Table 1. Willow Creek Pond Angler Success Rates.

	Anglers	Hours	# Fish	F/H	F/A
Shore Anglers	18	77	156	2.0	8.7
Boat/Tube Anglers	9	32.75	220	6.7	24.4

MANAGEMENT REVIEW

Groves Lake was not evaluated prior to stocking, but the normal number of fish was stocked in 2018. Efforts were also made to discern where to monitor for leaks in the reservoir.

Approaches were completed at Willow Creek Pond. However, with the health of the Willow Creek Pond fishery still in question, an electroshocking survey is scheduled for 2019 to examine species composition and body condition, at which point the reservoir will be put on a three-year monitoring schedule.

RECOMMENDATIONS

Groves Lake

- Continue to assess water conditions prior to trout stocking in the spring.
- Continue to look into the options available to make repairs to the reservoir.
- Resample the fish population in the reservoir to evaluate survival and species composition following drought years.

Willow Creek Pond

- Continue to assess water conditions prior to trout stocking in the spring and fall.
- Evaluate the population structure of the different species in 2019 through electroshocking.
- Assess angler use through opportunistic angler contacts and the angler drop-box.
- Collect otoliths and scales of yellow perch and largemouth bass for aging and for examining length/age relationships.

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