

NEVADA DEPARTMENT OF WILDLIFE
STATEWIDE FISHERIES MANAGEMENT



FEDERAL AID JOB PROGRESS REPORTS

F-20-52
2016

SPOONER LAKE
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: *Spooner Lake*
Period Covered: *January 1, 2016 through December 31, 2016*

SUMMARY

There were 52 completed angler surveys from the drop-box in 2016. Anglers fished for 138.5 hrs and caught 199 fish consisting of 132 rainbow trout, 40 tui chub, one brown trout, and 26 tiger trout. Catch rates for all fish averaged 4.6 fish per angler and 1.4 fish per hour. The Angler Information Center and drop-box were updated and restocked throughout the year.

The Mail-In Angler Questionnaire Survey estimated use at 434.5 anglers and 929.6 angler days in 2015. Total catch was 2,033.9 fish and the success rate was 2.2 fish per angler day, both estimates of which were down slightly from 2014.

Spooner Lake was stocked on five occasions, receiving 8,569 catchable trout consisting of 5,546 rainbow trout, 2,019 cuttbow trout, and 1,004 tiger trout.

BACKGROUND

Spooner Lake is a shallow reservoir at an elevation of 6,980 feet that lies on the east side of the Tahoe Basin within the Lake Tahoe State Park. The reservoir covers approximately 100 surface acres and has a maximum depth of 22 ft. The original dam was built in 1927 in Spooner Meadow as a means for storing irrigation water. The reservoir is fed by a number of springs and seeps as well as snowmelt runoff from the surrounding hills. The Spooner Lake outflow drains into North Canyon Creek, which then discharges directly into Lake Tahoe. Because of extensive leakage, a new dam was constructed in 1982. Maximum reservoir capacity is never realized in order to preserve Native American artifacts, which become submerged when the reservoir reaches capacity.

Lahontan tui chub is presumably the only fish historically occurring in Spooner Lake. The fishery is currently comprised of hatchery maintained populations of rainbow, bowcutt, brown, and tiger trout, and a self-sustaining population of brook trout.

From 1982 to 2005, Spooner Lake was managed as a catch-and-release fishery with strict regulations (zero-harvest, single lure or fly with barbless hook) to manage for a trophy trout fishery. However, due to the reservoir's characteristics, there was potential for extensive winterkills of trout and coupled with an expanding tui chub population, the trophy trout fishery was never realized. In 2006, regulation changes were implemented to allow for management under the Coldwater, General Fishery

Management Concept, which established objectives for angler success rates of 0.30 to 1.25 fish per hour and 2.0 to 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.
- Maintain the angler information center and angler drop-box when on site.

PROCEDURES

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. Spooner Lake has one volunteer, angler drop-box located near the dam. Completed surveys were collected periodically and summarized at the end of the year.

Angler use and success at Spooner Lake was also assessed through the Department's Mail-In Angler Questionnaire Survey. Angler questionnaire data was derived from a survey mailed to 30,000 fishing license purchasers from the previous year (2015).

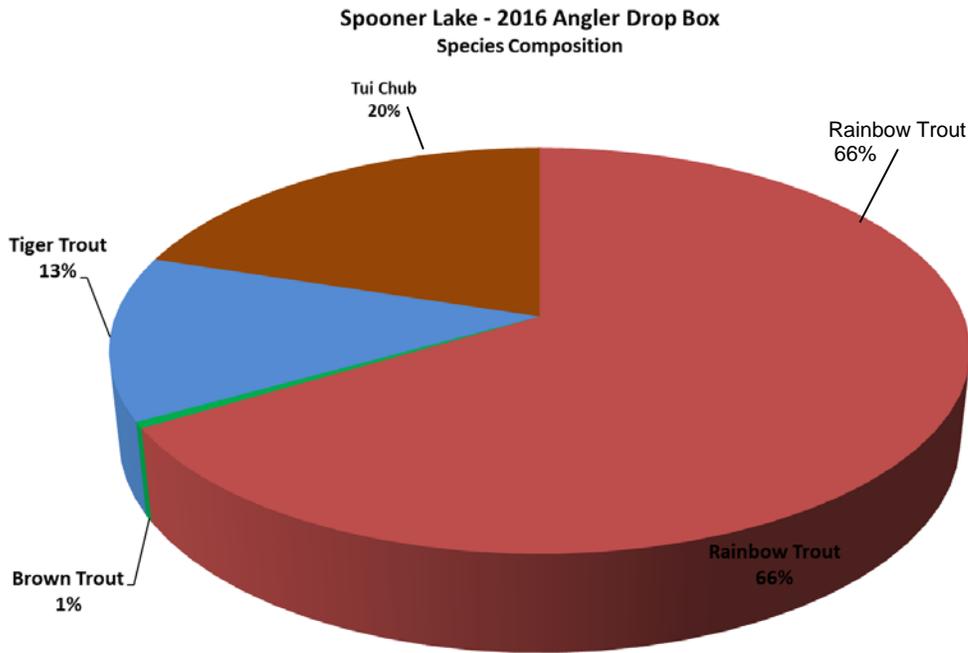
Maintain the angler information center and angler drop-box when on site. When on site, the drop-box was restocked with survey forms. The display on the angler information center was updated in early spring and repairs were made to the kiosk to improve its appearance.

FINDINGS

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. No angler contact surveys were made at Spooner Lake in 2016.

There were 52 completed angler surveys from the drop-box in 2016. Anglers fished for 138.5 hrs and caught 199 fish consisting of 132 rainbow trout, 40 tui chub, one brown trout, and 26 tiger trout. Catch rates for all fish averaged 4.6 fish per angler and 1.4 fish per hour. Anglers harvested 24 percent of the fish caught, while they released 76 percent back to the lake; of the harvested fish, the majority was rainbow trout. Species composition was 66 percent rainbow trout, 20 percent tui chub, less than one percent brown trout, and 13 percent tiger trout (Figure 1). The composition of rainbows reported caught doubled from 2015 when it was 33 percent of the total catch.

Figure 1.



Of the anglers fishing Spooner Lake in 2016, 37.2% reported using lures, while 48.8% fly fished, and a limited amount (14%) reported using bait. Angler satisfaction in 2016 was rated on a scale of -2 to +2, with -2 being unsatisfied and +2 representing satisfaction. Average ratings were 0.80 for total fishing experience, 0.28 for size of fish, and 0.47 for number of fish. All ratings are slightly lower than the five-year average, but still rate positive. Anglers reported that 66% fished from the shore while the remaining 34% used a boat or float tube. Increased water levels in 2016 helped limit the growth of near shore vegetation and provided more area to fish from the shoreline, something that was very difficult in 2014 and 2015.

The Mail-In Angler Questionnaire Survey estimated use at 434.5 anglers and 929.6 angler days in 2015. Total catch was 2,033.9 fish and the success rate was 2.2 fish per angler day, both estimates of which were down slightly from 2014. All estimates from the angler survey fell well below the 33-year (1982 to 2015) average for the reservoir.

Stocking Program

Spooner Lake was stocked on five occasions, receiving 8,569 catchable trout consisting of 5,546 rainbow trout, 2,019 cuttbow trout, and 1,004 tiger trout (Table 1). These stocking rates fall within the range of fish stocked annually since 2009 (see Table 2).

Table 1. Spooner Lake Stocking Summary – 2016

Date	Species	Number	Size (in.)	Strain
5/3/2016	Rainbow	2,003	9.2	Eagle Lake
6/21/2016	Rainbow	1,540	9.6	Triploid
7/19/2016	Rainbow	2,003	8.1	Incline
Rainbow Total		5,546		
8/30/2016	Cuttbow	2,019	9.2	Cuttbow
Cuttbow Total		2,019		
6/10/2016	Tiger	1,004	10	Tiger
Tiger Total		1,004		
Total (All Fish)		8,569		

Table 2. Spooner Lake Stocking History 2009 – 2015

Year	Species	Number	Size Range (in.)
2009	Rainbow	999	10.1
	Tiger	527	7.1
2009 Total		1,526	
2010	Rainbow	999	10.2
	Tiger	1,522	11.4
2010 Total		2,521	
2011	N/A	0	N/A
2011 Total		0	
2012	Rainbow	1,097	10.2 – 10.3
	Tiger	1,050	11.3
2012 Total		2,147	
2013	Rainbow	9,815	10.2
	Tiger	8,038	10.1
	Bowcutt	2,000	7.1
2013 Total		19,853	
2014	Rainbow	9,274	9.7 - 9.8
	Tiger	1,074	10.3
2014 Total		10,348	
2015	Rainbow	5,144	7.8 - 8.5
	Tiger	1,001	9.3
	Cuttbow	2,018	9.5
2015 Total		8,163	
Total		44,558	

Maintain the angler information center and angler drop-box when on site. When on site, both the angler drop-box and angler information center at Spooner Lake were checked. The drop-box was restocked with survey forms while information at the angler information center was updated with current year information in May.

MANAGEMENT REVIEW

Angler success rates documented from both the angler drop-box survey and Mail-in Angler Questionnaire Survey exceed the guidelines prescribed in the Coldwater, General Fishery Management Concept. This fishery is generally popular with anglers for producing high catch rates and an opportunity to fish in a picturesque setting. The size of trout is generally small due to very limited carryover from one year to the next, however, certain species appear to grow and survive better than others. Fishing opportunities remain good in the early spring and late fall when water temperatures are cooler and aquatic vegetation is less abundant. Continued stocking of both tiger and cuttbow trout is recommended as they both have shown decent growth rates in the lake. The piscivorous nature of tiger trout also functions to help in controlling the large tui chub population in the lake.

For the second consecutive year, use declined at Spooner Lake based off the Mail-in Angler Questionnaire Survey. The increased number of drop-box forms suggests that angler use picked up in 2016, likely due to a more normal water year.

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.
- Maintain the angler information center and angler drop-box when on site.

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Date: January 30, 2017