

NEVADA DEPARTMENT OF WILDLIFE
STATEWIDE FISHERIES MANAGEMENT



FEDERAL AID JOB PROGRESS REPORTS

F-20-50
2014

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: *Spoooner Lake*
Period Covered: *January 1, 2014 through December 31, 2014*

SUMMARY

A total of 56 volunteer angler, drop-box surveys were received from Spooner Lake in 2014. During the months when surveys were received, 54 anglers fished for 217.8 hrs and caught 866 fish consisting of 575 rainbow trout, 250 tui chub, 7 brown trout, 29 tiger trout, and 5 brook trout. Catch rates (all fish) were 16.0 fish per angler and 4.0 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 470 anglers and 1,809 angler days in 2013. Total catch was 12,802 fish and the success rate was 7.07 fish per angler day, both of which were up from the 2012 estimates. All estimates from the angler survey are similar to the 31-year (1982 – 2013) average for the reservoir.

Spoooner Lake was stocked on four occasions in 2014. The reservoir received a total of 9,274 catchable rainbow trout and 1,074 catchable tiger trout.

BACKGROUND

Spoooner 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 trout winterkill. This, coupled with an expanding tui chub population, a 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. Scheduled and opportunistic visits were made to Spooner Lake throughout the year for the purpose of collecting creel survey data. No anglers were contacted on any of these visits.

During the course of other duties throughout the year, a volunteer angler survey drop-box at Spooner Lake was periodically maintained and restocked. At the end of the calendar year, data was summarized.

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.

Maintain the angler information center and angler drop-box when on site. When on site, the drop-box was restocked with survey forms while information at the angler information center was updated.

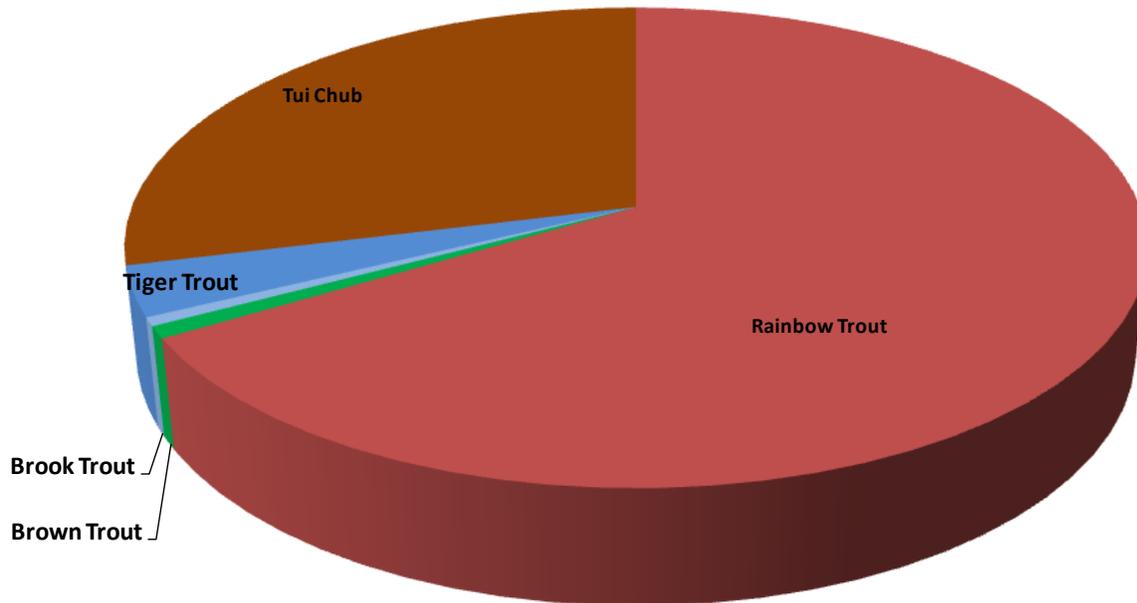
FINDINGS

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 contacts were made at Spooner Lake in 2014.

A total of 56 volunteer angler surveys from the drop-box were received from Spooner Lake in 2014. During the months when surveys were received, 54 anglers fished for 217.8 hrs and caught 866 fish consisting of 575 rainbow trout, 250 tui chub, seven brown trout, 29 tiger trout, and 5 brook trout. Catch rates (all fish) were 16.0 fish per angler and 4.0 fish per hour. Of the 866 fish reported, seven percent were harvested, while the remaining 93.0 percent were reported as released. Species composition for 2014 was 66.4 percent rainbow trout, 28.9 percent tui chub, 0.8 percent brown trout, 3.3 percent tiger trout, and 0.6 percent brook trout (Figure 1).

Figure 1.

**Spooner Lake - 2014 Angler Drop Box
Species Composition**



A length frequency analysis of fish reported through the drop-box survey shows that over 99.6% of tui chub were less than 10.0 in (Figure 2). Over 98.1% of rainbow trout were represented in the three smallest size brackets (<10.0 in, 10.0-11.9 in, and 12.0-13.9 in). This is not surprising as stocked rainbow trout have never shown the ability to grow at exceptional rates in the reservoir. Tiger trout, brown trout, and brook trout were all sporadically represented throughout the size brackets with brown trout being the most heavily represented in the largest size bracket (16.0–17.9 in).

A majority of anglers at Spooner Lake (53.7%) reported fly fishing, while the next most popular means of angling was using lures (35.2%) and a limited amount of anglers reported using bait (11.1%). Angler satisfaction in 2014 was rated on a scale of -2 to +2 with -2 being unsatisfied and +2 representing satisfaction. Average ratings were very similar to those in 2013 at 1.18 for total fishing experience, 0.57 for size of fish, and 0.97 for number of fish (1.27, 0.51, and 1.01, respectively, in 2013). Angler success peaked in October when anglers reported an average of almost 40.0 fish per angler (Figure 3).

The Mail-In Angler Questionnaire Survey estimated use at 470 anglers and 1,809 angler days in 2013. Total catch was 12,802 fish and the success rate was 7.07 fish per angler day, both of which are up from the 2012 estimates. All estimates from the angler survey are similar to the 31-year (1982 – 2013) average for the reservoir.

Figure 2.

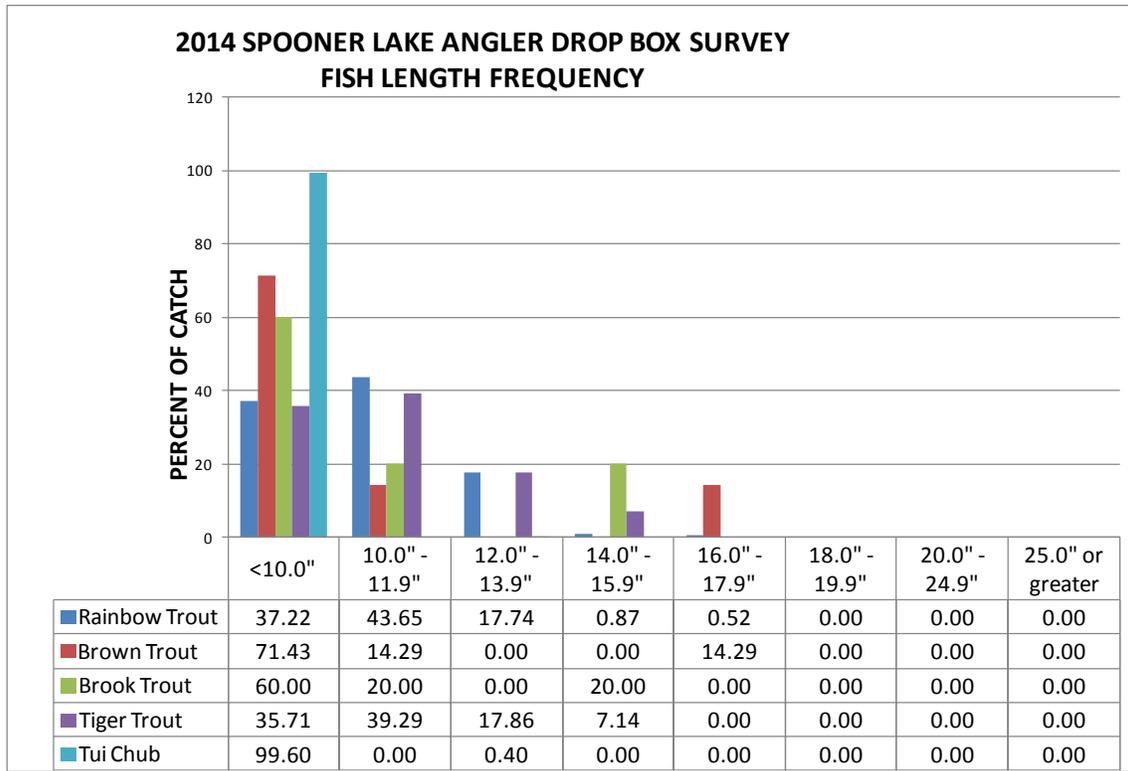
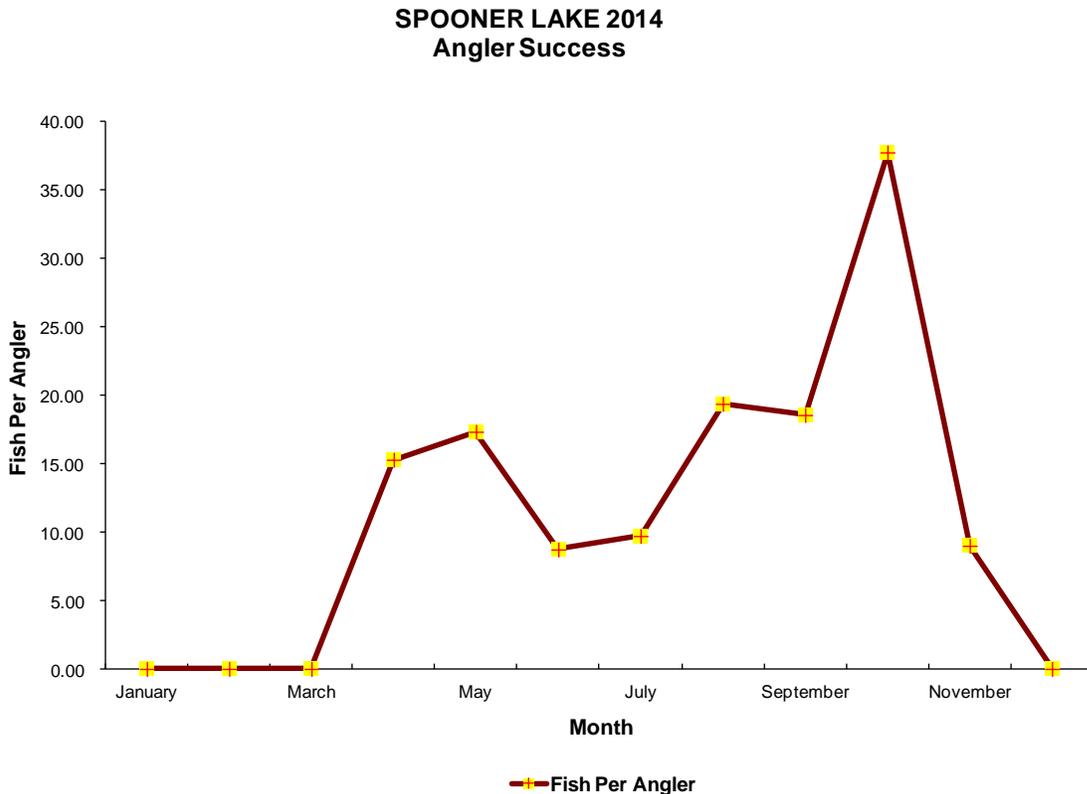


Figure 3.



Stocking Program

Spoooner Lake was stocked on four occasions in 2014 (Table 1). The reservoir received a total of 9,274 catchable rainbow trout and 1,074 catchable tiger trout.

Table 1. Spooner Lake Stocking Summary – 2014

Date	Species	Number	Size (in.)	Strain
4/22/2014	Rainbow	4,716	9.8	Eagle Lake
5/28/2014	Rainbow	2,252	9.7	Eagle Lake
6/6/2014	Rainbow	2,306	9.8	Eagle Lake
Rainbow Total		9,274	9.8	
5/28/2014	Tiger	1,074	10.3	Tiger
Tiger Total		1,074	3.0 – 6.6	
Total (All Fish)		10,348		

Table 2. Spooner Lake Stocking History 2009 – 2013

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
2009 Total		19,853	
Total		26,047	

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 of 2014.

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. Fish size is generally small due to very limited carryover of trout species from one year to the next.

Habitat conditions at Spooner Lake remain stable from year to year due to the dependable spring sources that supply water. Fishing opportunities remain good in the early spring and late fall when water temperatures are cooler and aquatic vegetation is less abundant.

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.
- Gillnet for two net nights in the fall.

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Date: January 21, 2015