

NEVADA DEPARTMENT OF WILDLIFE  
STATEWIDE FISHERIES MANAGEMENT



FEDERAL AID JOB PROGRESS REPORTS

F-20-48  
2012

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, 2012 through December 31, 2012*

**SUMMARY**

A total of 67 volunteer angler surveys from the drop-box were received from Spooner Lake in 2012. During the months when surveys were received, 69 anglers fished for 240.0 hrs and caught 1,073 fish consisting of 671 rainbow trout, 249 tui chub, 136 tiger trout, 12 brown trout, and 5 brook trout. Catch rates (all fish) were 15.6 fish per angler and 4.47 fish per hour.

The Mail-In Angler Questionnaire Survey estimated use at 670 anglers and 3,162 angler days in 2011. Total catch was 11,630 fish and the success rate was 3.68 fish per angler day. All estimates from the angler survey are on par with results found in 2010 except for fish per angler day, which dropped to 17.92 in 2010.

Spooner Lake was stocked on four occasions in 2012. The reservoir received a total of 2,225 catchable tiger trout and 4,000 catchable Eagle Lake-strain rainbow trout in May, as well as an additional 2,002 catchable Jumper-strain rainbow trout in October.

The Angler Information Center and drop-box were updated and restocked throughout the year as needed.

Assistance and coordination in matters related to fisheries management at Spooner Lake was accomplished with the Nevada Division of State Parks as needs arose.

**BACKGROUND**

Spooner Lake is a shallow reservoir at an elevation of 6,980 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. When available, brook trout are stocked.

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

General Management 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.
- Coordinate fisheries management activities with the Nevada Division of State Parks.

## 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 are made to Spooner Lake throughout the year for the purpose of collecting creel survey data during an expected time to contact the greatest number of anglers as possible. Information on angler harvest, effort, and origin were recorded. Harvested fish are measured to fork length in millimeters.

During the course of other duties throughout the year, a volunteer angler survey 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 data. Angler questionnaire data is derived from a survey mailed to about 10 percent of license purchasers from the previous year.

**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.

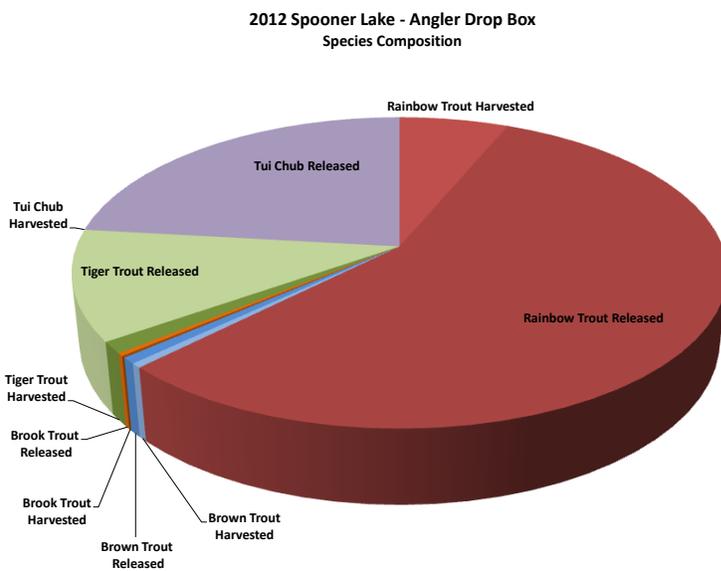
**Coordinate fisheries management activities with the Nevada Division of State Parks.** Assistance and coordination in matters related to fisheries management at Spooner Lake was accomplished with the Nevada Division of State Parks as needs arose.

## 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 opportunistic angler contacts were made at Spooner Lake in 2012.

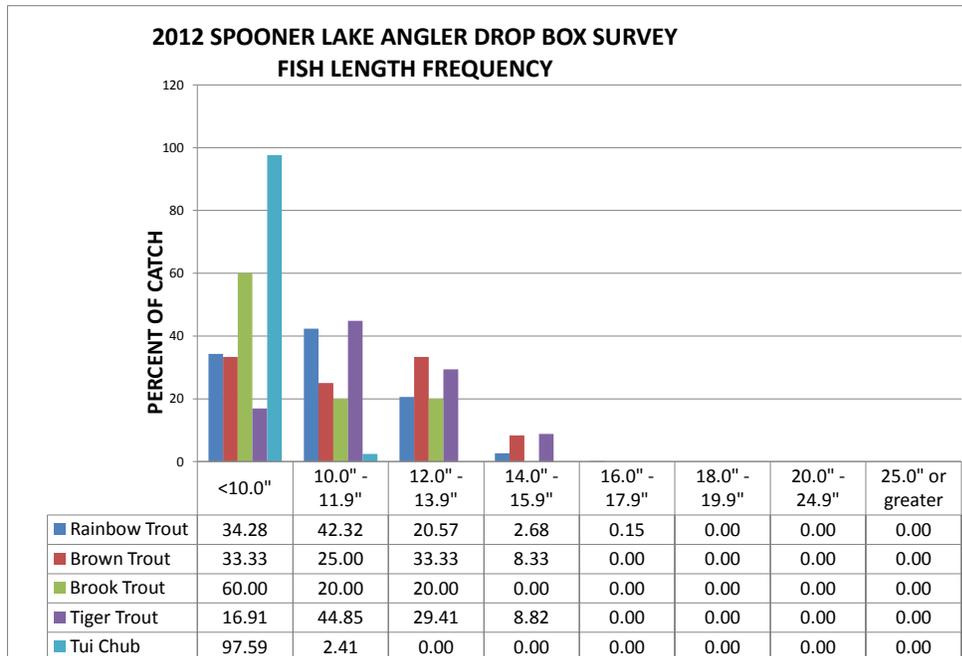
A total of 67 volunteer angler surveys from the drop-box were received from Spooner Lake in 2012. During the months when surveys were received, 69 anglers fished for 240 hrs and caught 1,073 fish consisting of 671 rainbow trout, 249 tui chub, 136 tiger trout, 12 brown trout, and 5 brook trout. Catch rates (all fish) were 15.55 fish per angler and 4.47 fish per hour. Of the 1,073 fish reported, all but 88 (68 rainbow trout, 13 tiger trout, 5 brown trout, and 2 brook trout) were reported as released. Species composition for 2012 was 62.5 percent rainbow trout, 23.2 percent tui chub, 12.7 percent tiger trout, 1.1 percent brown trout, and 0.5 percent brook trout (Figure 1).

Figure 1.



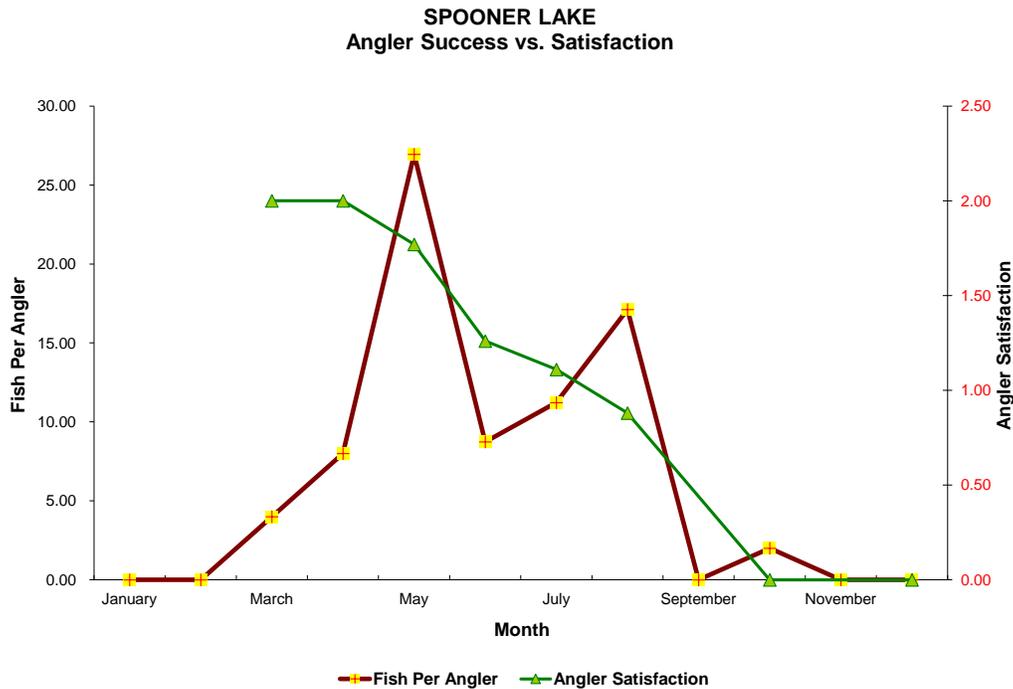
In examining a length frequency analysis of fish reported through the drop-box survey, it comes as no surprise that nearly 98% of tui chub were less than 10.0 in (Figure 2). Because growth by stocked trout has never been substantial in the reservoir, it is also not surprising that a vast majority of trout reported occupy the smallest three length brackets (<10.0 in, 10.0-11.9 in, and 12.0-13.9 in). With the exception of brook trout, a fairly equal representation of all trout species is evident in the largest two size brackets (12.0 to 13.9 in and 14.0 to 15.9 in) where fish were reported.

Figure 2



A majority of anglers at Spooner Lake (58.0%) reported fly-fishing while 37.7% used lures, and the remaining 4.3% used bait. Angler satisfaction in 2012 was rated on a scale of -2 to +2 with -2 being unsatisfied and +2 representing satisfaction. Average ratings were positive at 1.13 for total fishing experience, 0.73 for size of fish, and 0.96 for number of fish. Angler satisfaction appeared to correspond to the number of fish an angler caught (Figure 3). This means that an increase in angling success generally leads to an increase in angler satisfaction. Ranging from a high of 2.00 in March and April, angler satisfaction steadily decreased throughout the year. This comes at no surprise as aquatic vegetation that begins growing in late spring reaches nuisance levels by mid-summer, rendering the reservoir almost unfishable.

Figure 3.



The Main-In Angler Questionnaire Survey estimated use at 670 anglers and 3,162 angler days in 2011. Total catch was 11,630 fish and the success rate was 3.68 fish per angler day. Most estimates from the angler survey were on par with results found in 2010 except for fish per angler day, which was much higher in 2010 at 17.92.

Spooner Lake was stocked on four occasions in 2012. The reservoir received a total of 2,225 catchable tiger trout and 4,000 catchable Eagle Lake-strain rainbow trout in May as well as an additional 2,002 catchable Jumper-strain rainbow trout in October.

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

The angler information center and drop box were updated and restocked throughout the year as needed.

**Coordinate fisheries management activities with the Nevada Division of State Parks.** Assistance and coordination in matters related to fisheries management at Spooner Lake was accomplished with the Nevada Division of State Parks as needs arose.

## **MANAGEMENT REVIEW**

Angler success rates documented from both the angler drop-box survey and Main-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 the water. Fishing opportunities remain good in the early spring and late fall when water temperatures are cooler and aquatic vegetation is less abundant.

## **RECOMMENDATIONS**

### General Management 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.

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