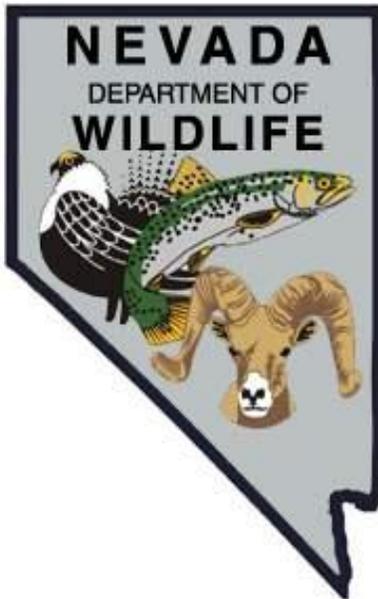


NEVADA DEPARTMENT OF WILDLIFE
STATEWIDE FISHERIES MANAGEMENT



FEDERAL AID JOB PROGRESS REPORTS

F-20-50
2014

HOBART 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: *Hobart Reservoir*
Period Covered: *January 1, 2014 through December 31, 2014*

SUMMARY

The mail-in angler questionnaire data estimated use at 181 anglers and 388 angler days in 2013. Total catch was 3,562 fish and the success rate was 9.19 fish per angler day. Estimates for number of anglers and angler days were well below the 527 anglers and 1,702 angler days found the previous year and are also well below the 33 year average for the water. Estimates for fish per angler and fish per angler day, however, were similar to the 33-year average (21.86 and 9.11, respectively).

A total of 140 volunteer angler surveys from the drop-box were received in 2014. During the months when surveys were received, 131 anglers fished for 521.5 hrs and caught 2,088 fish consisting of 594 rainbow trout, 689 brook trout, 89 bowcutt trout, and 716 tiger trout. Hobart Reservoir was stocked on four occasions with a total of 5,514 catchable rainbow trout and 961 catchable tiger trout.

A gill net survey was conducted on the night of October 8th. A total of 91 fish were captured in the 2 gill nets consisting of 41 brook trout, 31 rainbow trout, and 19 tiger trout. Total catch rate for the gill netting effort was 2.32 fish per net-hour.

BACKGROUND

Hobart Reservoir is located in the Toiyabe National Forest at an elevation of 7,650 ft in the Carson Range and is owned by the state of Nevada. It is surrounded by conifer and aspen dominated forest. Hobart Creek, fed by snowmelt runoff as well as spring sources, is the main tributary to the reservoir. The initial dam was completed in 1877 and was rebuilt in 1956 after it washout the previous year. The present reservoir covers approximately 10 SA, stores 110 acre-ft of water, and has a maximum depth of 15 ft.

Hobart Reservoir supports hatchery maintained populations of rainbow trout, bowcutt trout, and tiger trout and the fishery was opened to the public in 1981. Brook trout are abundant and self-sustaining. It is managed under the coldwater General Fishery Management Concept, which establishes an objective for angler success rates of 0.25 to 0.75 fish per hour and 1.0 to 2.0 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.
- Set gill nets for 2 net-nights in the fall.

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. One attempt at opportunistic angler contacts was made during the 2014 season at Hobart Reservoir. No anglers were contacted during this trip, therefore, angler use and success was assessed through the return of angler drop-box surveys and the Department's Mail-In Angler Questionnaire Survey. Angler questionnaire data was derived from a survey that is mailed to 30,000 of license purchasers.

Maintain the Angler Information Center and angler drop-box. One scheduled visit was made in the spring prior to the season opening to maintain the angler information center and angler drop-box. The information center was updated with current information and the drop-box was fully stocked in preparation for the 2014 season. Subsequent trips were made throughout the season to ensure the drop-box remained stocked with questionnaires.

Set gill nets for 2 net nights in the fall. Two 150 ft x 6 ft experimental gill nets were set at 1415 and 1430 hrs on October 8. Nets consisted of 1/2, 3/4, 1, 1 1/2, and 2 in mesh panels. One net (Set 1) was set along the west shoreline at the south end of the reservoir at a depth of approximately 10 ft (3.0 m). Another net (Set 2) was set in the pelagic zone in the middle of the reservoir at an approximate depth of 12 ft (3.7 m). The nets were pulled at 0930 and 1030 hrs, respectively, on October 9. All fish captured were identified, measured to fork length, and weighed with a certified battery powered scale. Live fish were returned to the reservoir after processing.

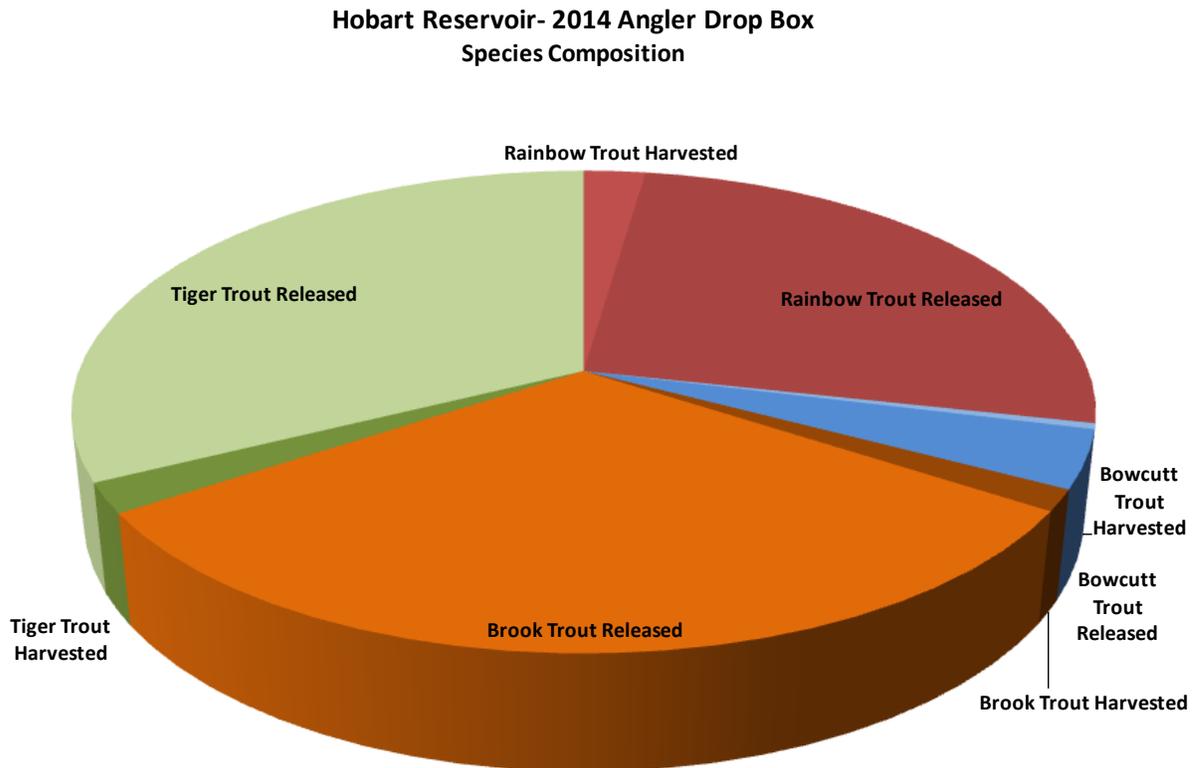
FINDINGS

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. One opportunistic visit was made to Hobart Reservoir during the 2014 season in an attempt to contact anglers and collect creel survey data. No anglers were present on this day.

A total of 140 volunteer angler surveys from the drop-box was received in 2014 and nine surveys were incomplete and discarded. During the months when surveys

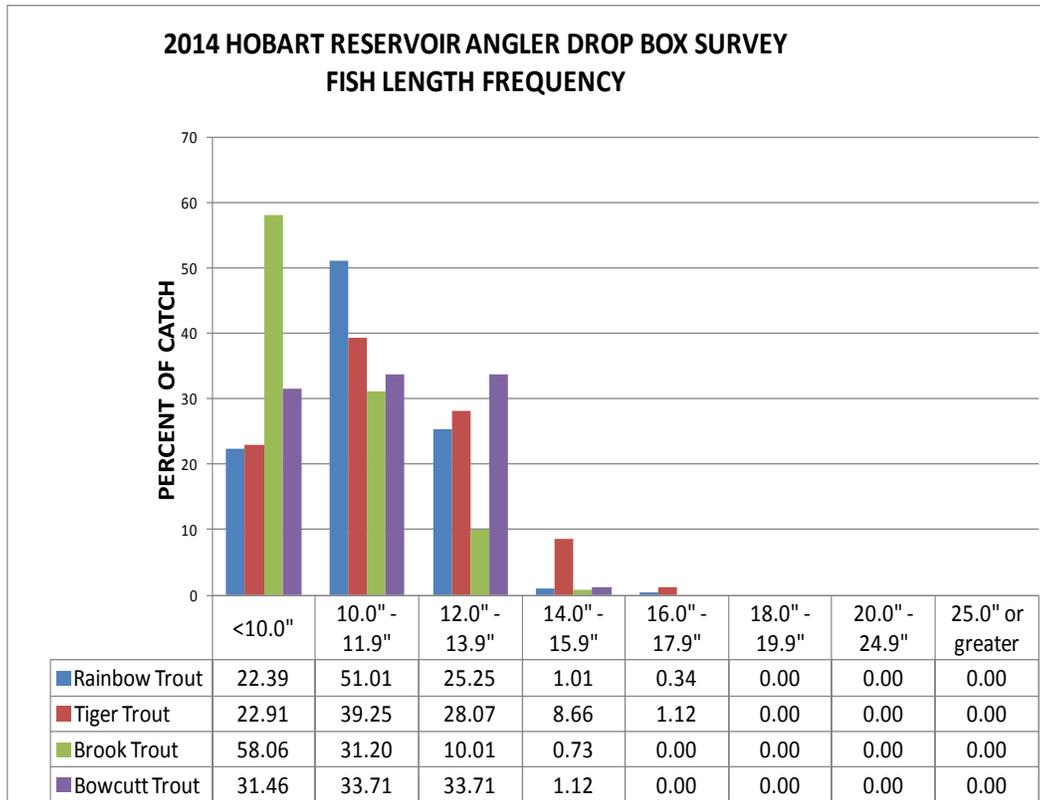
were received, 131 anglers fished for 521.5 hrs and caught 2,088 fish consisting of 594 rainbow trout, 689 brook trout, 89 bowcutt trout, and 716 tiger trout (see Figure 1). Resulting catch rates (all fish) were 15.9 fish per angler and 4.0 fish per hour. All but 128 (48 rainbow, 8 bowcutt, 30 brook, and 42 tiger) were reported as released.

Figure 1.



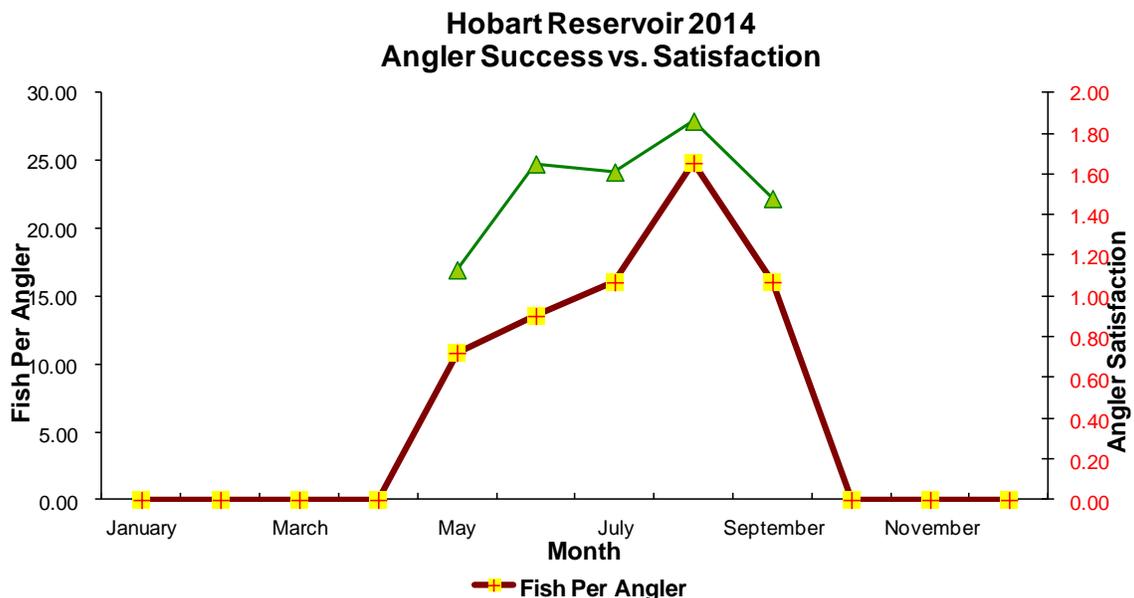
Length frequency analysis of fish reported through the drop-box survey showed tiger trout made up the majority of the larger (12-18 in) fish caught (Figure 2). The proportion of larger tiger trout can partly be attributed to its piscivorous nature and the availability of young of the year brook trout as forage in the reservoir. Late fall stocking and survival of overwintering tiger trout, as well as larger initial stocking sizes, may also contribute to the proportion of larger fish being caught. The majority of bowcutt trout (98.9%) and rainbow trout (98.7%) were best represented in the smallest size brackets (<10 in, 10-11.9 in, and 12-13.9 in). The smallest two size brackets (<10.0 in and 10.0-11.9 in) accounted for 89.3% of these species.

Figure 2.



Angler success rates were shown to correspond with angler satisfaction. Not surprisingly, as anglers caught more fish, they were more satisfied with their fishing experience (Figure 3).

Figure 3.



The mail-in angler questionnaire data estimated use at 181 anglers and 388 angler days in 2013. Total catch was 3,562 fish and the success rate was 9.19 fish per angler day. Estimated number of anglers and angler days were well below the 527 anglers and 1,702 angler days found the previous year and are also well below the 33 year average. Estimates for fish per angler and fish per angler day, however, were both very similar to the 33-year average (21.86 and 9.11, respectively).

Stocking Program

Hobart Reservoir was stocked on four occasions in 2014. The reservoir received a total of 5,514 catchable rainbow trout and 961 catchable tiger trout.

Table 1. Hobart Reservoir Stocking Summary – 2014.

Date	Species	Strain	Size (in.)		Number
5/28/2014	Rainbow	Lake	9.7		1112
7/2/2014	Rainbow	Lake	9.2		2616
7/10/2014	Rainbow	Lake	9.5		1786
Average			9.47	Total	5514
5/28/2014	Tiger	Tiger	10.3		961
Average			10.3	Total	961
Total					6475

Table 2. Hobart Reservoir Stocking History 2008 – 2013.

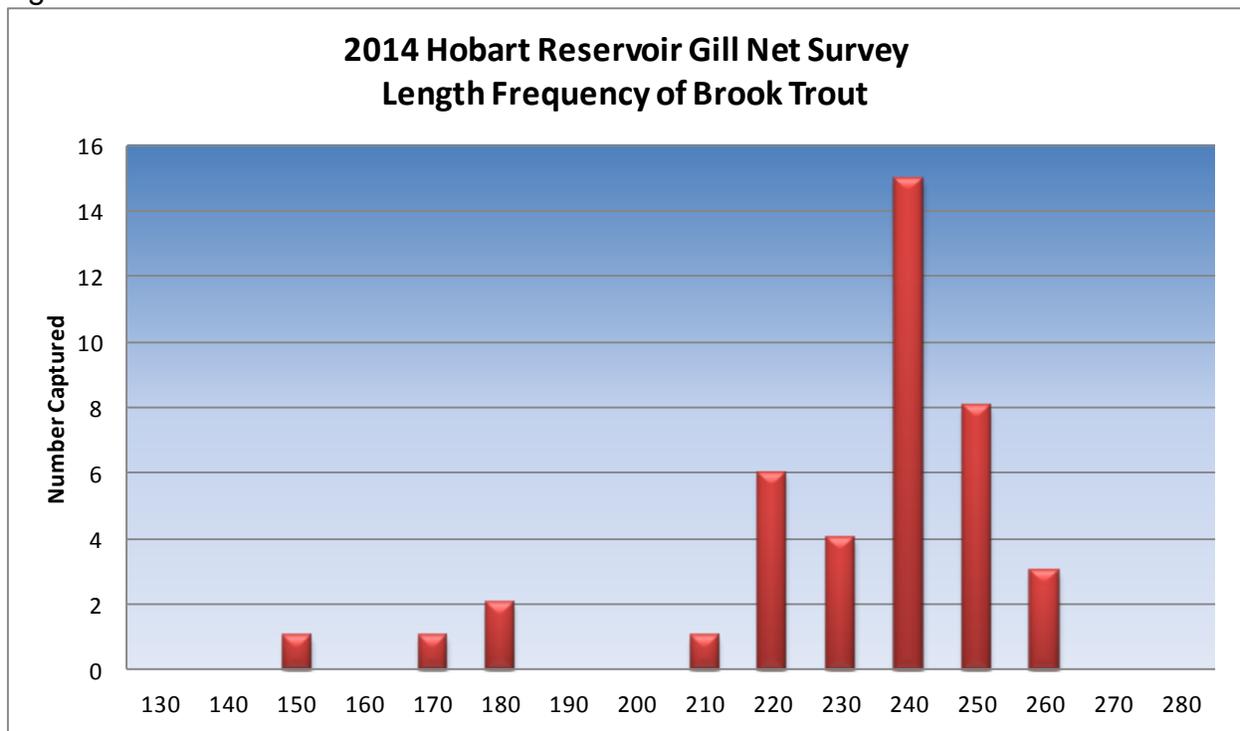
Year	Species	Strain	Size (in.)	Number
2008	TT	Tiger	7.9	1010
Total				1010
2009	RB	Tasmanian	10.1	999
2009	TT	Tiger	7.1	527
Total				1526
2010	TT	Tiger	11.39	1099
2010	RB	Eagle Lake	10.2	999
2010	TT	Tiger	11.4	423
Total				2521
2012	TT	Tiger	11.3	1050
2012	RB	Eagle Lake	10.2	598
2012	RB	Eagle Lake	10.3	499
Total				2147
2013	RB	Triploid	9.9	722
2013	TT	Tiger	4.2	1028
2013	RB	Tahoe	9.4	1001
2013	TT	Tiger	7.1	1006
Total				3757
Total				10961

Set gill nets for 2 net-nights in the fall. A gill net survey was conducted the night of October 8. A total of 91 fish was captured consisting of 41 brook trout, 31 rainbow trout, and 19 tiger trout for a total catch rate of 2.32 fish per net-hr.

Brook trout were captured at a rate of 1.04 fish per net-hour and accounted for 45.1% of the total catch. They ranged in length from 5.61 in (141 mm) to 10.24 in (258 mm) with an average fork length of 9.01 in (229 mm). Weight averaged 0.37 lbs (170 g) and ranged from 0.22 lbs (100 g) to 0.42 lbs (190 g). Note that only fish with a fork length of longer than 200 mm were weighed. The average K-value for brook trout was 1.07, suggesting a poor to fair body condition.

Length frequency analysis of the brook trout revealed three distinct age classes (Figure 4). Length breakpoints at 150 mm and 180 mm were used to separate three age classes. The limited number of fish represented these small age classes is explained by their small size and that they are less likely to be caught in the smallest mesh of the nets used.

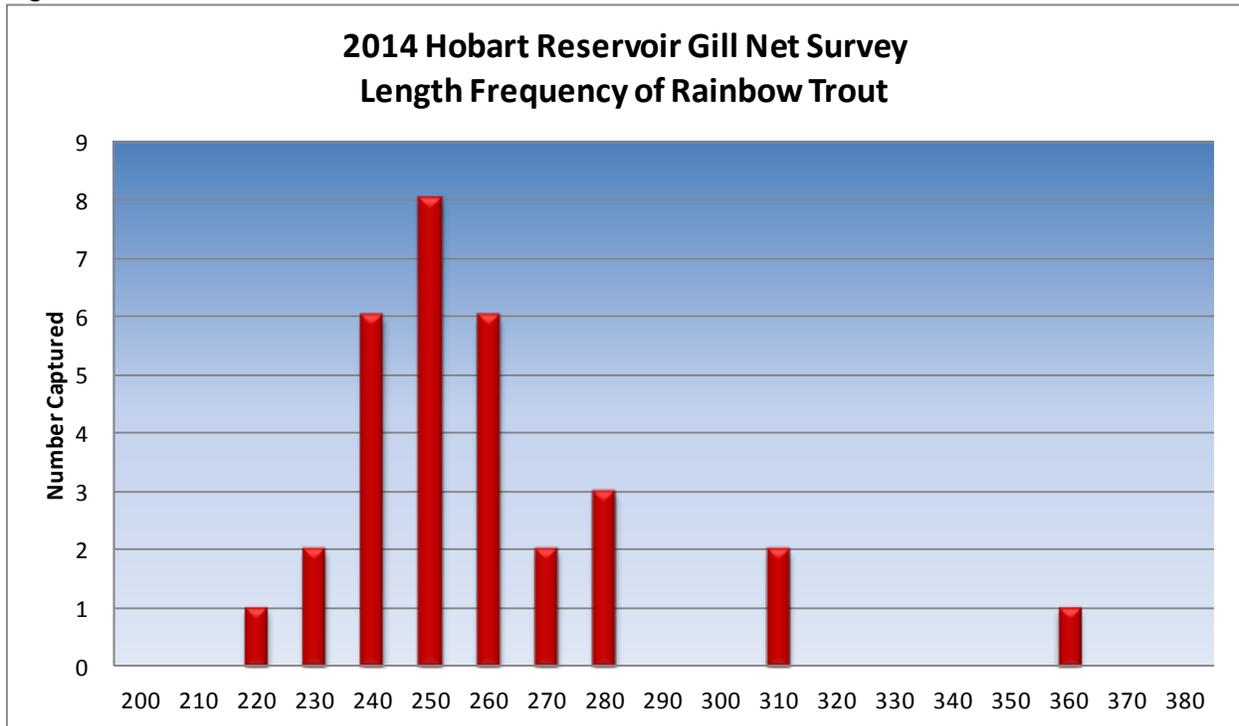
Figure 4.



Rainbow trout were captured at a rate of 0.79 fish per net-hour and accounted for 20.9% of the total catch. They ranged in size from 8.50 in (216 mm) to 13.86 in (352 mm) FL with an average fork length of 9.92 in (252 mm). The average weight of rainbow trout caught was 0.37 lbs (170 g) with a maximum and minimum of 1.01 lbs (460 g) and 0.24 lbs (110 g), respectively. The average K-value was 1.04, and is in the range of poor to fair.

A length frequency analysis of the rainbow trout revealed three distinct age classes. A length breakpoint at 280 mm was used to separate the fish stocked during the spring/summer of 2014 from older age classes of fish that have over-wintered in the reservoir. A breakpoint of 310 mm was used to separate the fish stocked in July of 2013 from the fish stocked in June of 2013, which were stocked at a slightly larger size.

Figure 5.



Tiger trout were captured at a rate of 0.48 fish per net-hour and accounted for 34.1% of the total catch. Of the 31 tiger trout captured, the average fork length was 11.06 in (281 mm) with a maximum and minimum of 14.17 in (360 mm) and 9.09 in (231 mm), respectively. Their weight ranged from a low of 0.29 lbs (130 g) to a high of 0.95 lbs (430 g) and the average was 0.50 lbs (228 g). The average K value for captured tiger trout was 0.99 and was considered poor.

MANAGEMENT REVIEW

Angler success rates documented from the Mail-in Angler Questionnaire Survey and the voluntary angler drop-box surveys far exceeded 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 semi-remote setting that has relatively easy access. The reason for the decline in the number of people fishing Hobart Reservoir in 2013 is unknown as productivity remained high.

An analysis of the gillnetting data revealed the typical stable population of self-sustaining brook trout along with hatchery maintained populations of rainbow and tiger

trout. These hatchery maintained populations show some evidence of a limited number of over-wintering fish, which is expected in a reservoir of this size. The K-value for all species captured during gillnetting was at the low end of what is generally considered a healthy salmonid. This is most likely a function of limited resources caused from an overpopulation of brook trout along with the stocking of rainbow and tiger trout. A reduction in the stocking rate of all trout species, along with continued stocking of catchable tiger trout may help control the number of brook trout and result in higher K-values for all species.

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.

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Date: January 28, 2015