

**WISCONSIN DEPARTMENT OF NATURAL RESOURCES
CREEL SURVEY REPORT**

TROUT LAKE

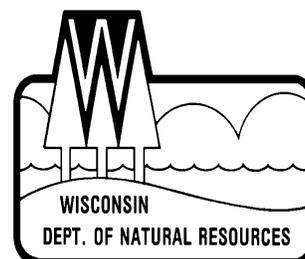
VILAS COUNTY

2013-14



Treaty Fisheries Publication

**Compiled by Jason Halverson &
Jeff Blonski
Treaty Fisheries Technicians**



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Cover Art: Steve Hilt, Minocqua, WI

Fish Graphics: Virgil Beck, Stevens Point, WI

INTRODUCTION

Fish populations can fluctuate due to natural forces (weather, predation, competition), management actions (stocking, regulations, habitat improvement), inappropriate development (habitat degradation), and harvest impacts. Wisconsin Department of Natural Resources fisheries crews regularly conduct fishery surveys on area lakes and reservoirs to gather the information needed to monitor changes, identify concerns, evaluate past management actions, and to prescribe good fishery management strategies. Netting and electrofishing surveys are used to gather data on the status of fish populations and communities (species composition, population size, reproductive success, size/age distribution, and growth rates). But the other key component of the fishery that we often need to measure is the harvest.

On many lakes in the Ceded Territory of northern Wisconsin, harvest of fish is divided between sport anglers and the six Chippewa tribes who harvest fish under rights granted by federal treaties. The tribes harvest fish mostly using a highly efficient method, spearing, during a relatively short time period in the spring. Every fish in the spear harvest is counted – a complete “census” of the harvest.

We also measure the sport harvest to assess its impact on the fishery. But because it would be highly impractical and very costly to conduct a complete census of every angler who fishes on a lake, we conduct creel surveys.

A creel survey is an assessment tool used to sample the fishing activities of anglers on a body of water and make projections of harvest and other fishery parameters. Creel survey clerks work on randomly-selected days and shifts, forty hours per week during the open season for gamefish from the first Saturday in May through the first Sunday in

March, except during the month of November when fishing effort is low and ice conditions are often unsafe. The survey is run during daylight hours, and shift times change from month to month as day length changes.

Creel survey clerks travel their lakes using a boat or snowmobile to count numbers of anglers on a lake at predetermined times, and to interview anglers who have completed their fishing trip to collect data on what species they fished for, catch, harvest, lengths of fish harvested, marks (finclips or tags), and hours of fishing effort. Collecting completed-trip data provides the most accurate assessment of angling activities, and it avoids the need to disturb anglers while they are fishing.

A computer program is used to make projections of total catch and harvest of each species, catch and harvest rates, and total fishing effort, by month and for the year in total. Keep in mind that these are only projections based on the best information available, and not a complete accounting of effort, catch, and harvest. Accurate projections require that we sample a sufficient and representative portion of the angling activity on a lake. The accuracy of creel survey results, therefore, depends on good cooperation and truthful responses by anglers when a creel clerk interviews them.

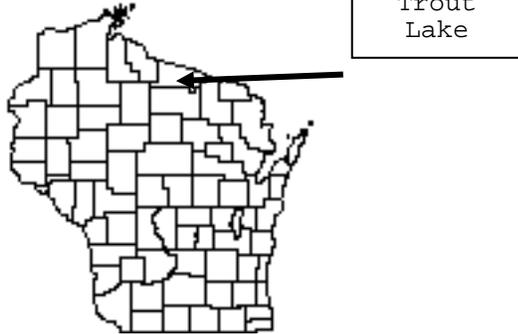
You may have encountered a DNR creel survey clerk on a recent fishing trip. We appreciate your cooperation during an interview. The survey only takes a moment of your time and it gives the Department valuable information needed for management of the fishery.

This report provides projections of:

1. Overall fishing effort (pressure)
2. Fishing effort directed at each species
3. Catch and harvest rates
4. Numbers of fish caught and harvested

Also included are a physical description of Trout Lake; discussion of results of the survey; and detailed summaries, by species of fishing effort, catch and harvest.

GENERAL LAKE INFORMATION



Location

Trout Lake is located in Vilas County south of the town of Boulder Junction.

Physical Characteristics

Trout Lake is a 3,816-acre drainage lake with a maximum depth of 117 feet and a mean depth of 49 feet making it the largest and deepest lake in Vilas County. Littoral substrate consists primarily of sand, gravel, and rubble, with lesser amounts of boulder and muck. Trout Lake is moderately fertile, with slightly alkaline water of high clarity.

Seasons Surveyed

The period referred to in this report as the 2013-14 fishing season ran from May 4, 2013 through March 2, 2014. The open water creel survey ran from May 4 through October 31, 2013 and the ice fishing creel survey ran from December 1, 2013 through March 2, 2014.

Weather

Ice-out on Trout Lake was around May 15, 2013, which was about a week and a half after the fishing opener. Fishable-ice formed on Trout Lake in middle of December.

Fishing Regulations

The following seasons, daily bag limits, and length limits were in place on Trout Lake during the 2013-14 fishing season:

Species	Season	Bag Limit	Min. Size
Largemouth Bass & Smallmouth Bass	5/4-6/14	Catch & Release	
	6/15-3/2	1	18"
Musky	5/25-11/30	1	45"
Northern Pike	5/4-3/2	5	none
Walleye	5/4-3/2	2*	15"
Panfish	year round	25	none
Rock Bass	year round	none	none
Lake Trout	5/4-9/30	1	30"

* Due to tribal harvest declarations, walleye bag limits were set at 2 for Trout Lake.

SPECIES CATCH AND HARVEST INFORMATION

Angling effort, catch, and harvest information is summarized for each species in Table 2 and Figures 1-10. Table 2 also includes a comparison of these statistics with the previous creel survey. Information presented about species whose fishing season extends beyond March 2 should be considered minimum estimates. Each species page has up to five graphs depicting the following:

- 1. PROJECTED FISHING EFFORT**
Total calculated number of hours during each month that anglers spent fishing for a species.
- 2. PROJECTED SPECIFIC CATCH AND HARVEST RATES**
Calculated number of hours it takes an angler to catch or harvest a fish of the indicated species. Only information from anglers who were specifically targeting that species is reported.
- 3. PROJECTED CATCH AND HARVEST**
Calculated number of fish of the indicated species caught or harvested by all anglers, regardless of targeted species.

4. LENGTH DISTRIBUTION OF HARVESTED FISH

All fish of a species that were measured by the clerk during the entire creel survey season.

5. LARGEST AND AVERAGE LENGTH OF HARVESTED FISH

Monthly largest and average length of harvested fish of a species. Only those fish measured by the creel survey clerk are reported.

CREEL SURVEY RESULTS AND DISCUSSION

Survey Logistics

The creel survey went well. We encountered no unusual problems conducting the survey or calculating the projections contained in the report. Trout Lake is one of the DNRs “trend lakes,” which is surveyed every 3 years. This was the seventh time the department conducted a creel survey on Trout Lake since 1988.

General Angler Information

Anglers spent 21,563 hours or 5.7 hours per acre fishing Trout Lake during the 2013-14 season (Table 1). That was much lower than the Vilas County average of 34.5 hours per acre. June was the most heavily fished month (1.4 hours per acre). Fishing effort was lightest in February (0.1 hours per acre) for those months when the entire month was creeled. Deep snow and slush on the lakes made winter access difficult for anglers. Overall winter fishing effort may have been negatively impacted by the unusually cold weather of the 2013-14 winter.

RESULTS BY SPECIES

Walleye (Table 2, Figure 1)

Walleyes received the most fishing effort in Trout Lake during the 2013-14 season. Anglers spent 14,080 hours targeting walleyes. The greatest fishing effort for walleyes was in May (4981 hours). There was no fishing effort directed walleyes in the month of January.

Total catch of walleyes was 4,289 fish with a harvest of 2,084 fish. Highest catch (1,547 fish) and harvest (1,119 fish) occurred in May. Anglers fished 3.3 hours to catch and 6.8 hours to harvest a walleye during the 2013-14 fishing season.

The mean length of harvested walleyes was 18.4 inches and the largest walleye measured was a 27.0 inch fish.

Northern Pike (Table 2, Figure 2)

Fishing effort directed at northern pike was 445 hours during the 2013-14 season. Northern pike fishing effort was greatest in June (183 hours).

Total catch of northern pike was estimated at 59 fish on Trout Lake. Northern pike are currently a minor part of the Trout Lake fishery with only an estimated 6 fish harvested during this survey.

Muskellunge (Table 2, Figure 3)

Anglers spent 1,714 hours targeting muskellunge during the 2013-14 season on Trout Lake. Muskellunge fishing effort was greatest in September (546 hours).

Total catch of muskellunge was only 6 fish with no known harvest. Highest estimated catch (5 fish) occurred in June. Anglers fished 286 hours to catch a muskellunge during 2013-14.

Smallmouth Bass (Table 2, Figure 4)

Fishing effort targeted at smallmouth bass was 2,566 hours during the 2013-14 season. Smallmouth bass fishing effort was greatest in June (1,318 hours).

Total catch of smallmouth bass was 1,183 fish with 4 harvested. Highest catch (734 fish) occurred in June. Anglers fished 3.2 hours to catch a smallmouth bass during 2013-14. The largest smallmouth harvested was 19.9 inch fish.

Largemouth Bass (Table 2, Figure 5)

Fishing effort directed at largemouth bass was 571 hours during the 2013-14 season. Largemouth bass fishing effort was greatest in August (187 hours).

Total catch of largemouth bass was 41 fish with a harvest of no fish. Highest catch (30 fish) occurred in July. Anglers fished 28.7 hours to catch a largemouth bass during the 2013-14 fishing season.

Lake Trout (Table 2; Figure 6)

There were 1,422 hours of lake trout fishing effort during 2013-14 fishing season. The greatest effort was in the month of July (543 hours).

Total catch was 514 fish with a projected harvest of 6 fish. Anglers fished 4.4 hours to catch a lake trout during the 2013-14 fishing season.

Cisco (Lake Herring) (Table 2; Figure 7)

Fishing effort directed at ciscoes was 145 hours. Total catch of ciscoes on Trout Lake during this survey was 170 fish with 24 harvested. The mean length of ciscoes harvested was 8.9 inches with the largest being one measured at 12.1 inches.

Lake Whitefish (Table 2; Figure 8)

Anglers fished 2,986 hours for Lake Whitefish during the 2013-14 fishing season. Whitefish fishing effort was the greatest in January (1,285 hours).

Total catch was 1,060 fish with 1,001 being harvested. The highest catch (549 fish) and harvest (499 fish) occurred in January. Anglers fished 2.9 hours to catch and 3.0 hours to harvest a lake whitefish during the 2013-14 season.

The mean length of harvested lake whitefish was 16.7 inches and the largest measured was a 20.4 inch fish harvested in July.

There is a fall recreational seining fishery for both whitefish and ciscoes on Trout Lake. This fishery was not monitored as part of the creel survey and harvest data is not projected in this publication.

Panfish (Table 2, Figures 9-13)

Yellow Perch were the most sought after panfish species during the survey. Fishing effort directed at yellow perch was

632 hours. Total catch of yellow perch was 826 fish with 235 harvested. The mean length of yellow perch harvested was 8.9 inches and the largest harvested was 10.8 inches.

Bluegills were the second most sought after panfish species during the survey. Fishing effort directed at bluegills was 307 hours. Anglers caught 130 bluegills and harvested 34 fish.

Pumpkinseeds, black crappies and rock bass were also caught during the 2013-14 season.

ACKNOWLEDGMENTS

Completion of this survey was possible because of the efforts of the following Fisheries Management and Treaty Fisheries staff: Jonathan Pyatskowit, Jeff Blonski, Joelle Underwood, Marty Kiepke, Jason Halverson, Tim Tobias, Steve Gilbert, and Dennis Scholl. Jason Halverson, John Davis and Jeff Gize were the creel clerks on Trout Lake during the survey period.

We also thank all the anglers who took the time to offer information about their fishing trip to the survey clerk. Without their cooperation the survey would not have been possible.

The department thanks the cooperators, lake residents Jim & Kim Wallner and Dan Jacoby of the Wisconsin DNR Trout Lake Station who generously allowed the Department to keep a boat and snowmobile on their property during this survey.

This creel report was reviewed by Steve Gilbert, Jonathan Pyatskowit and Dennis Scholl of the Wisconsin Department of Natural Resources, Woodruff, Wisconsin.

Additional copies of this report and those covering other local lakes can be obtained from the Woodruff DNR or online at:

<http://dnr.wi.gov/topic/Fishing/north/trtycrclsrvys.html>

Table 1. Sportfishing effort summary, Trout Lake, 2013-14 season.

Month	Total Angler Hours	Total Angler Hours/Acre	Vilas County Average Hours/Acre	Ceded Territory Average Hours/Acre
May	5025	1.3	5.4	5.1
June	5343	1.4	7.0	6.4
July	3501	0.9	7.5	6.9
August	2377	0.6	6.6	5.4
September	1888	0.5	4.3	3.3
October	841	0.2	2.0	1.5
December	837	0.2	0.5	1.1
January	1285	0.3	0.8	1.6
February	414	0.1	1.0	1.5
March	52	0.0	0.2	0.2
*Summer Total	18976	5.0	32.1	28.6
*Winter Total	2588	0.7	2.4	4.4
Grand Total	21563	5.7	34.5	33.0

*"Summer" is May-October; "Winter" is December-March

Total Angler Hours is the estimated total number of hours that anglers spent fishing on Trout Lake during each month surveyed.

Total Angler Hours/Acre is the total angler hours divided by the area of the lake in acres. This is useful if you wish to compare effort on Trout Lake to other lakes.

County Average Hours/Acre is the average angler effort in hours per acre for county lakes that have been surveyed since 1990. This value can be useful in comparisons as well.

Ceded Territory Average Hours/Acre is the average angler effort in hours per acre for inland lakes in the ceded territory that have been surveyed since 1990. This value can be used to compare Trout Lake to other lakes statewide.

Table 2. Comparison of creel survey synopses, Trout Lake, 2013-14 and 2010-11 fishing seasons.

CREEL YEAR: 2013-14

SPECIES	DIRECTED EFFORT (Hours)	PERCENT OF TOTAL	TOTAL CATCH	SPECIFIC CATCH RATE (Hrs/Fish) *	TOTAL HARVEST	SPECIFIC HARVEST RATE (Hrs/Fish) **	MEAN LENGTH OF HARVESTED FISH
Walleye	14080	55.90%	4289	3.3	2084	6.8	18.4
Northern Pike	445	1.77%	59	69.9	6	69.9	20.3
Muskellunge	1714	6.80%	6	285.7	0		
Smallmouth Bass	2566	10.19%	1183	3.2	4	714.3	19.3
Largemouth Bass	571	2.27%	41	28.7	0		
Yellow Perch	632	5.69%	826	2.0	235	5.6	8.9
Bluegill	307	1.22%	130	2.5	34	9.0	7.4
Lake Trout	1422	13.33%	514	4.4	6	250.0	31.5
Rock Bass	0	0.00%	3		3		7.0
Black Crappie	128	1.20%	17	7.6	17	7.6	10.5
Pumpkinseed	194	1.82%	3		3		6.8
Cisco	145	0.58%	170	4.3	24	6.1	8.9
Whitefish	2986	11.85%	1060	2.9	1001	3.0	16.7

* A blank cell in this column indicates that no fish of a given species were caught by anglers who specifically targeted that species.

** A blank cell in this column indicates that no fish of a given species were harvested by anglers who specifically targeted that species.

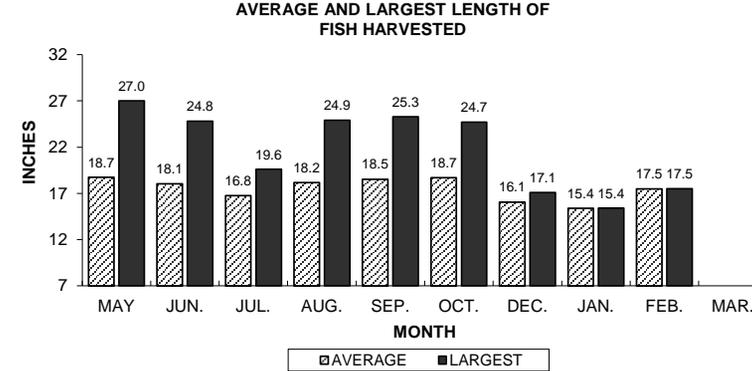
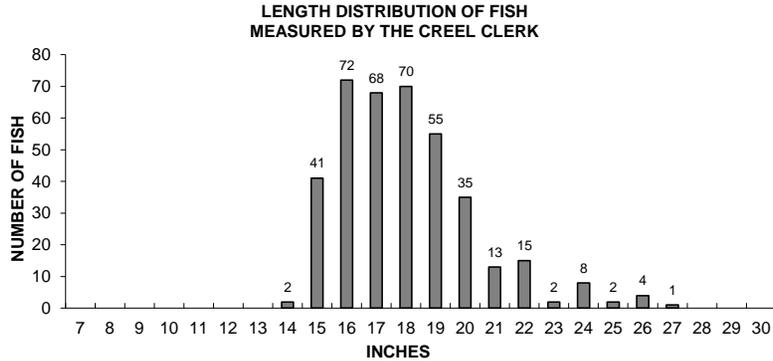
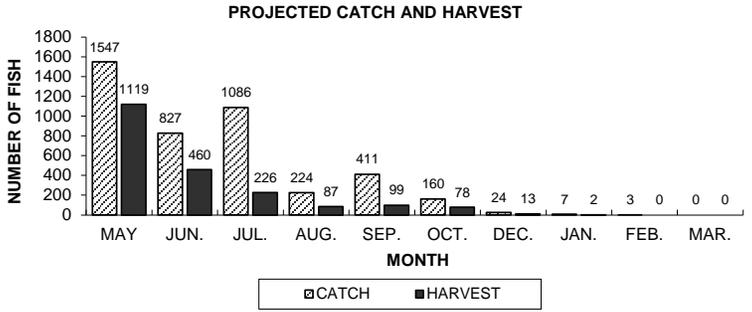
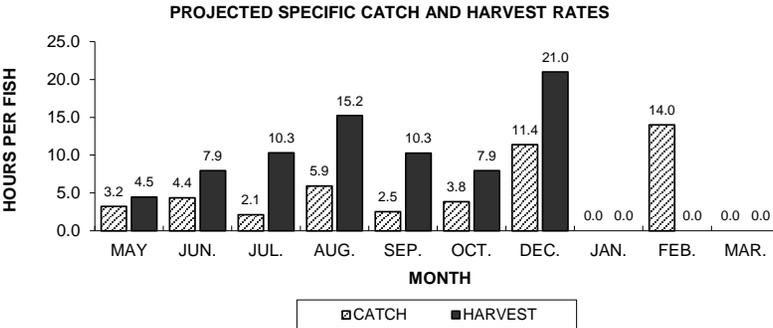
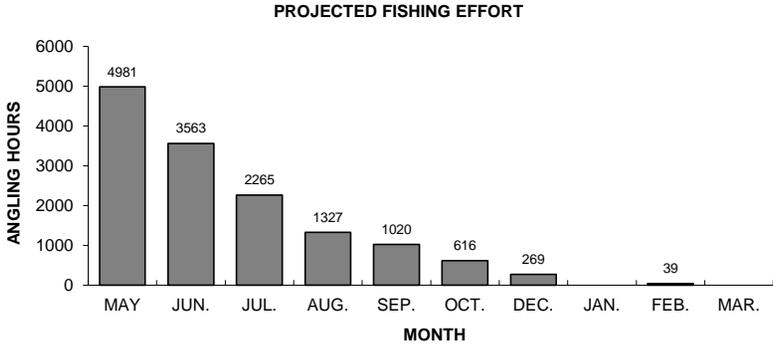
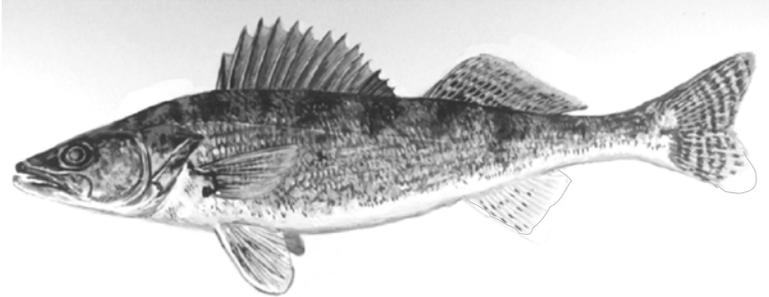
CREEL YEAR: 2010-11

SPECIES	DIRECTED EFFORT (Hours)	PERCENT OF TOTAL	TOTAL CATCH	SPECIFIC CATCH RATE (Hrs/Fish) *	TOTAL HARVEST	SPECIFIC HARVEST RATE (Hrs/Fish) **	MEAN LENGTH OF HARVESTED FISH
Walleye	16777	60.27%	3445	4.9	1591	10.6	17.5
Northern Pike	60	0.22%	9	25.5	9	25.5	20.0
Muskellunge	1903	6.84%	20	96.2	0		
Smallmouth Bass	1495	5.37%	923	2.3	2	625.0	19.0
Largemouth Bass	49	0.18%	0		0		
Yellow Perch	595	5.38%	791	0.9	173	4.1	8.6
Bluegill	103	0.37%	7		0		
Lake Trout	1570	14.27%	638	7.3	7	238.1	30.2
Rock Bass	59	0.21%	237	1.3	40		
Cisco	268	0.96%	267	8.6	69	9.1	9.5
Whitefish	4958	17.81%	2152	2.3	1934	2.6	16.4

* A blank cell in this column indicates that no fish of a given species were caught by anglers who specifically targeted that species.

** A blank cell in this column indicates that no fish of a given species were harvested by anglers who specifically targeted that species.

WALLEYE



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Figure 1. Walleye sportfishing effort, catch, harvest, and length distribution, Trout Lake, during 2013-14.

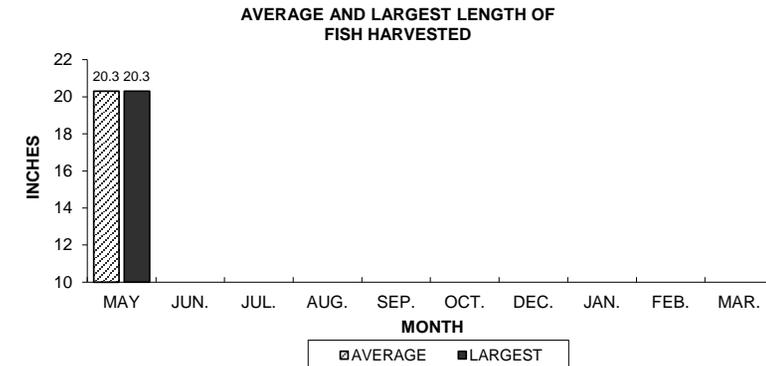
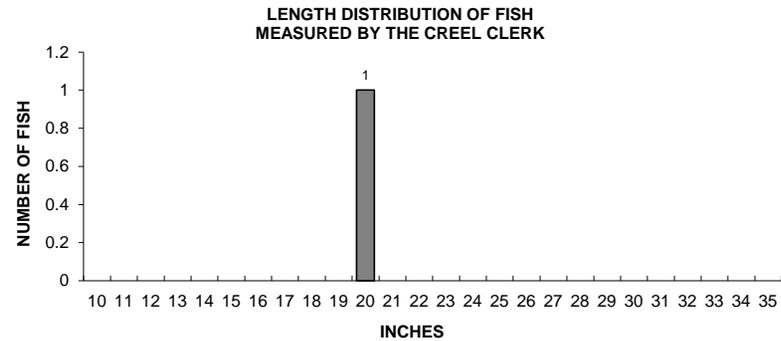
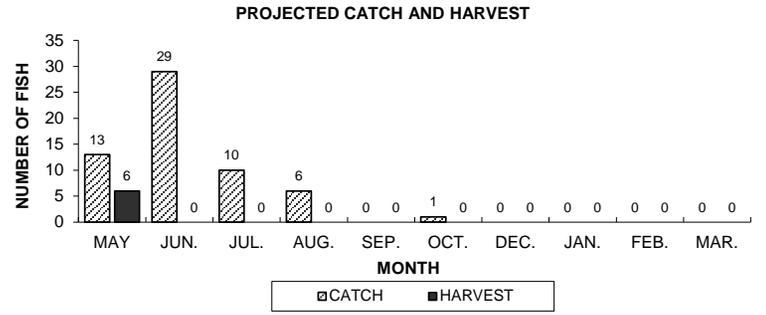
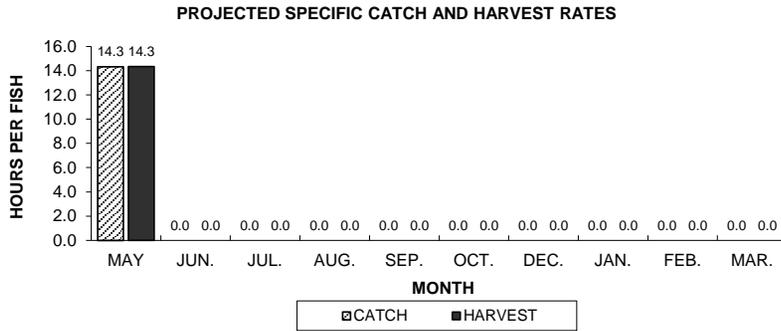
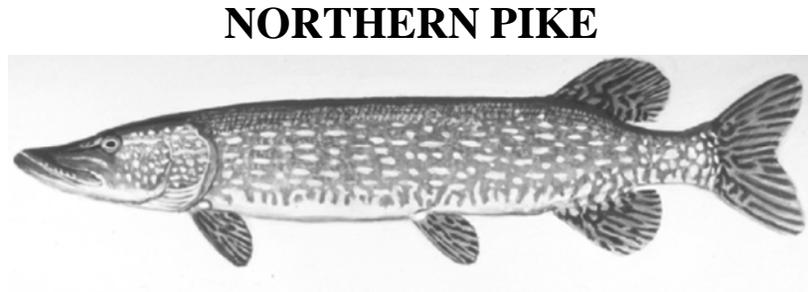
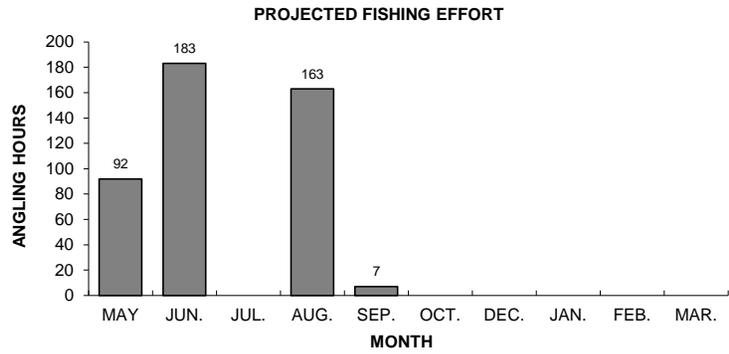
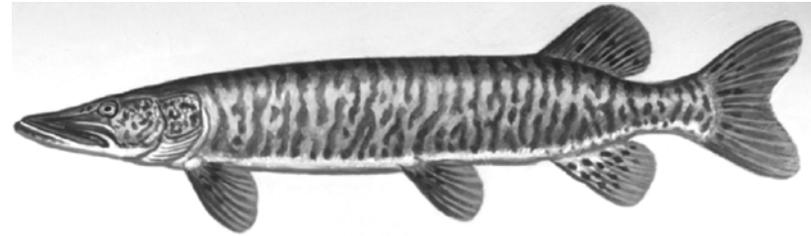
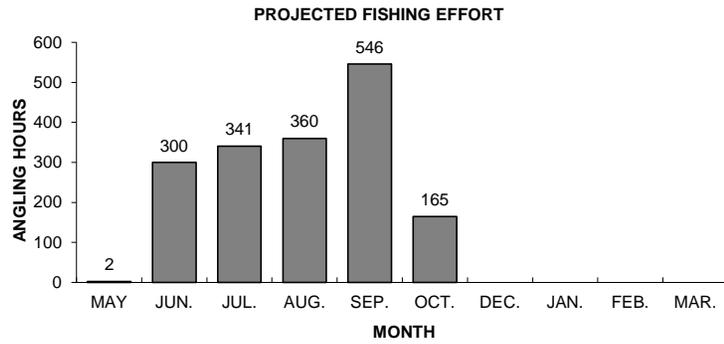


Figure 2. Northern pike sportfishing effort, catch, harvest, and length distribution, Trout Lake, during 2013-14.

MUSKELLUNGE



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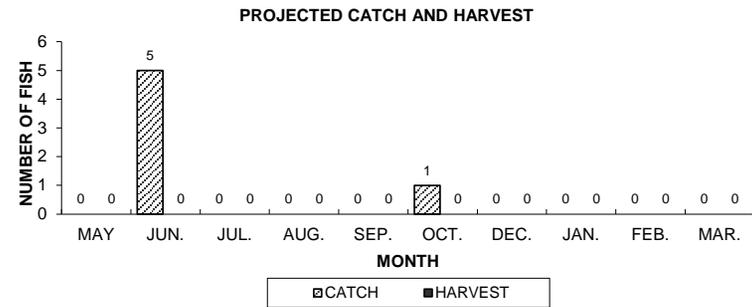
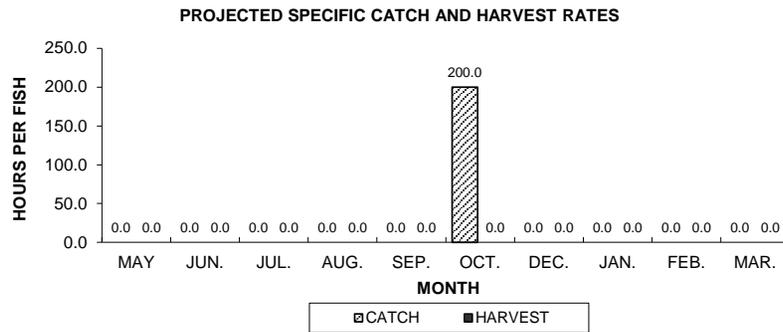


Figure 3. Muskellunge sportfishing effort, catch, harvest, and length distribution, Trout Lake, during 2013-14.

SMALLMOUTH BASS

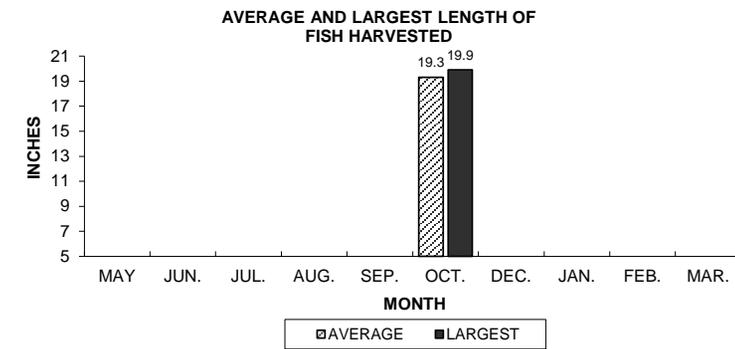
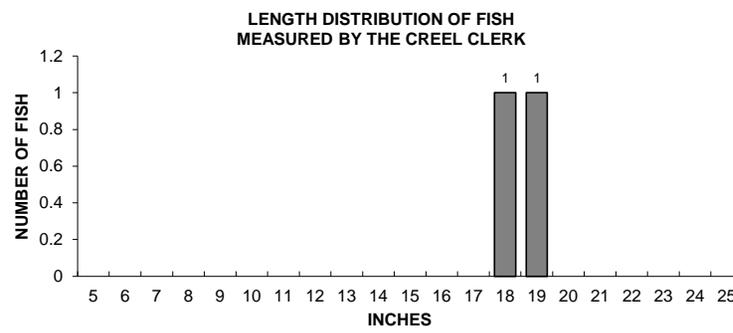
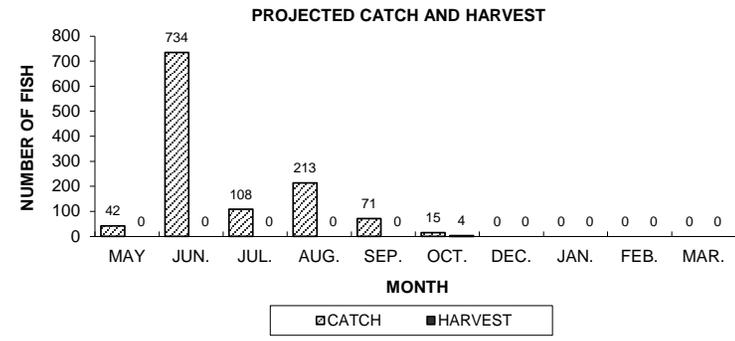
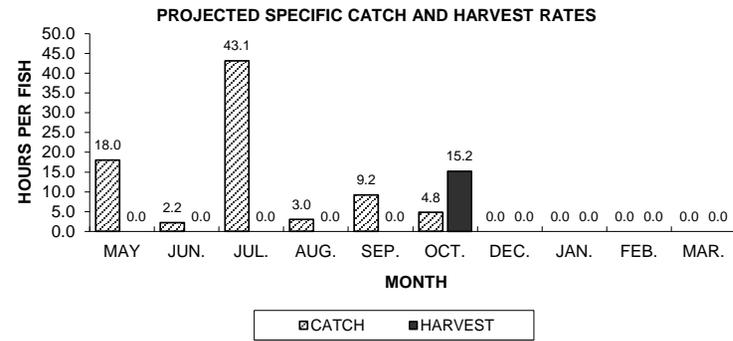
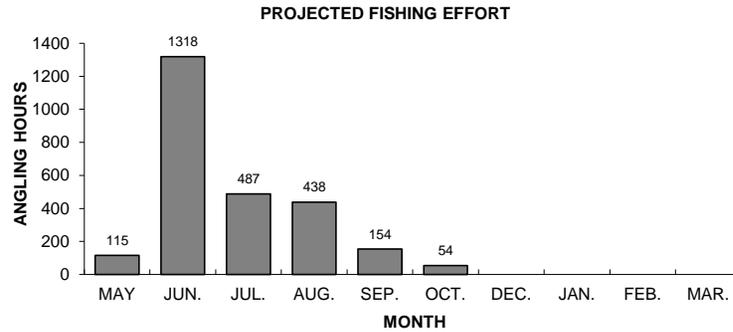
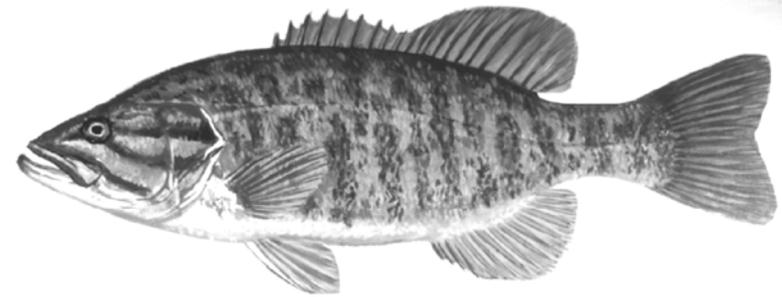
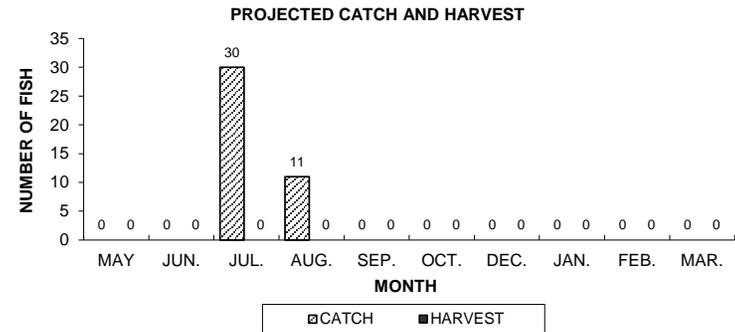
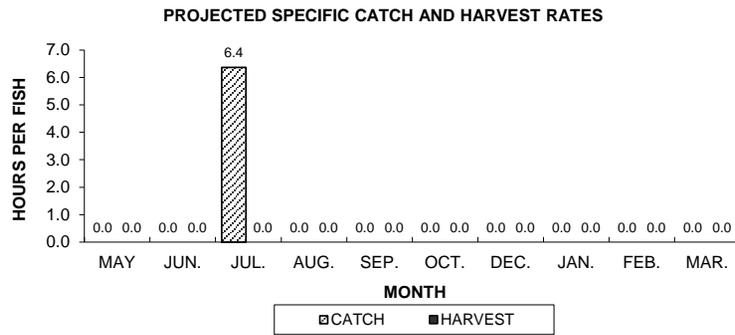
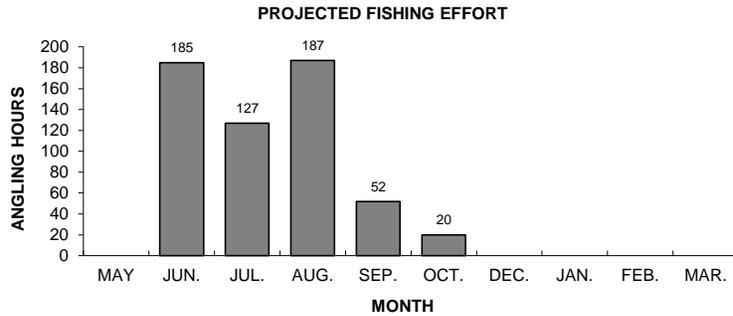
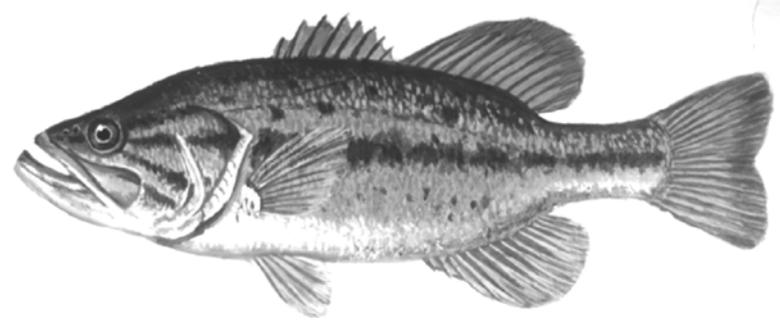


Figure 4. Smallmouth bass sportfishing effort, catch, harvest, and length distribution, Trout Lake, during 2013-14.

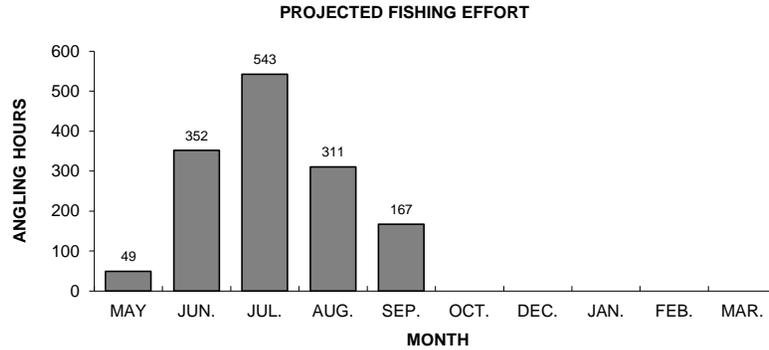
LARGEMOUTH BASS



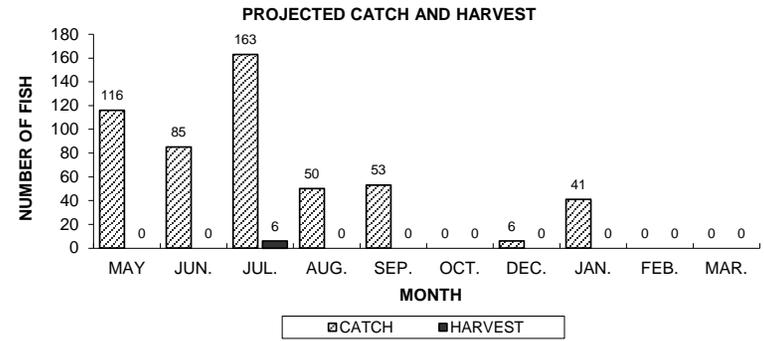
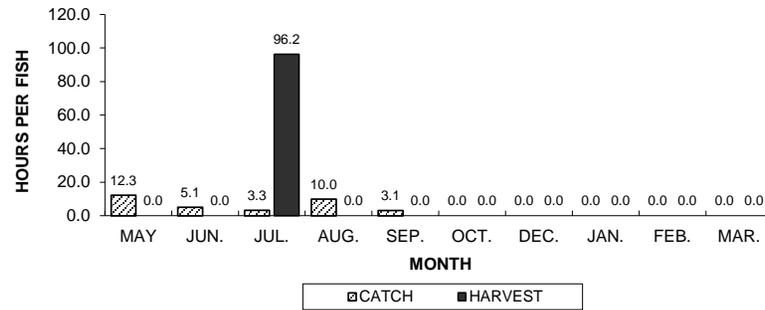
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Figure 5. Largemouth bass sportfishing effort, catch, harvest, and length distribution, Trout Lake, during 2013-14.

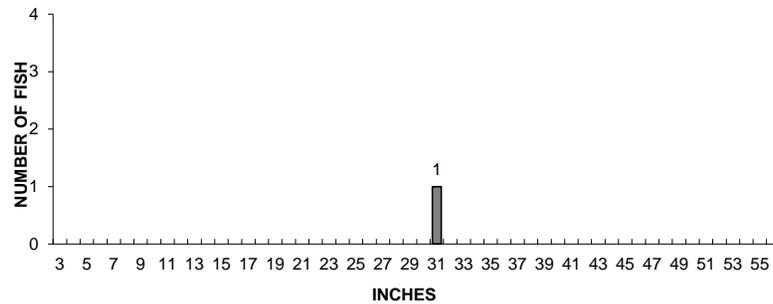
LAKE TROUT



PROJECTED SPECIFIC CATCH AND HARVEST RATES



LENGTH DISTRIBUTION OF FISH MEASURED BY THE CREEL CLERK



AVERAGE AND LARGEST LENGTH OF FISH HARVESTED

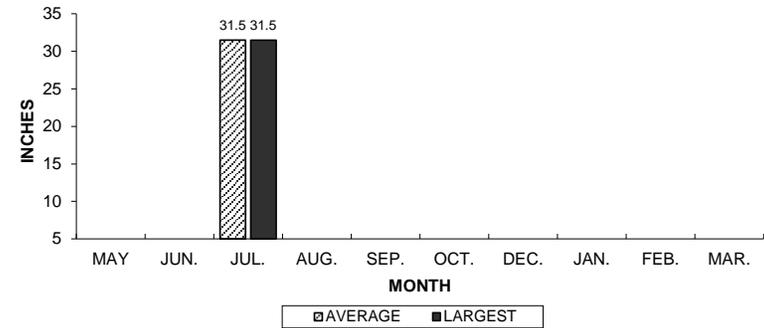


Figure 6. Lake Trout sportfishing effort, catch, harvest, and length distribution, Trout Lake, during 2013-14.

CISCO OR LAKE HERRING

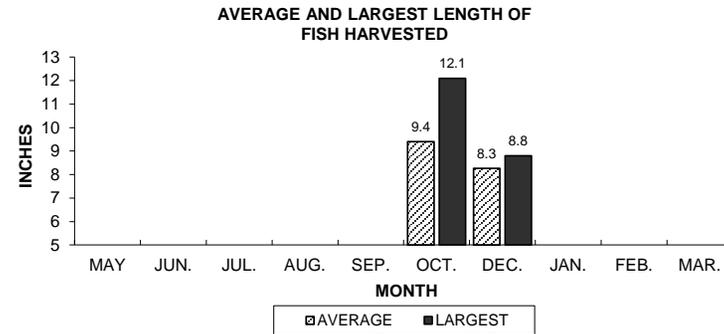
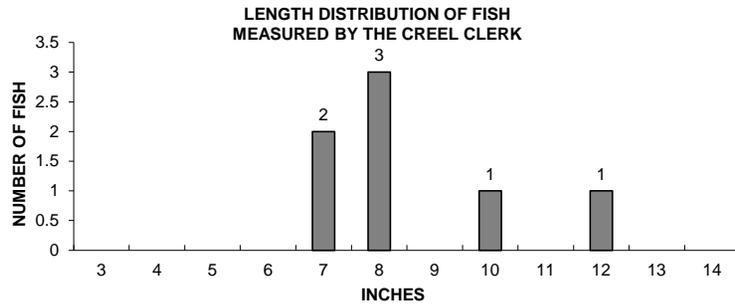
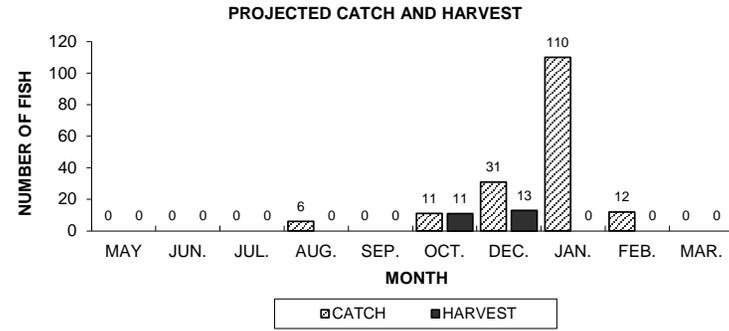
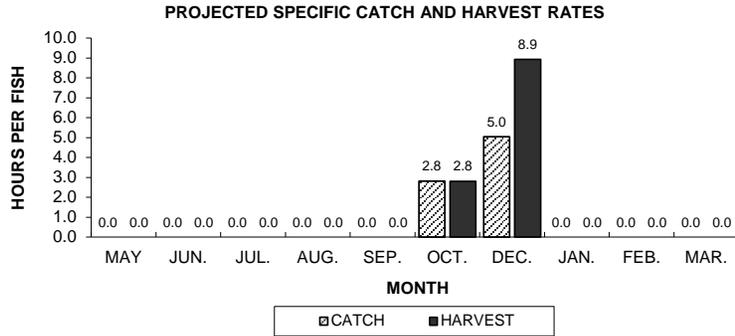
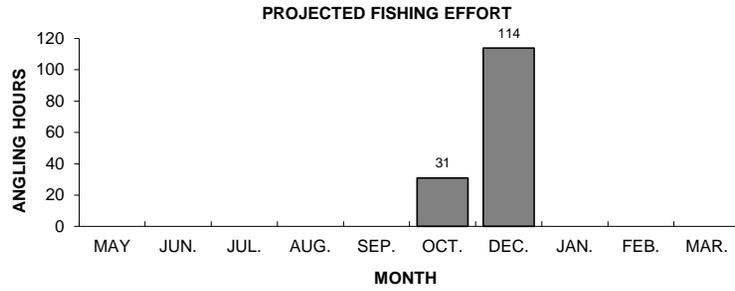


Figure 7. Cisco or Lake Herring sportfishing effort, catch, harvest, and length distribution, Trout Lake, during 2013-14.

LAKE WHITEFISH

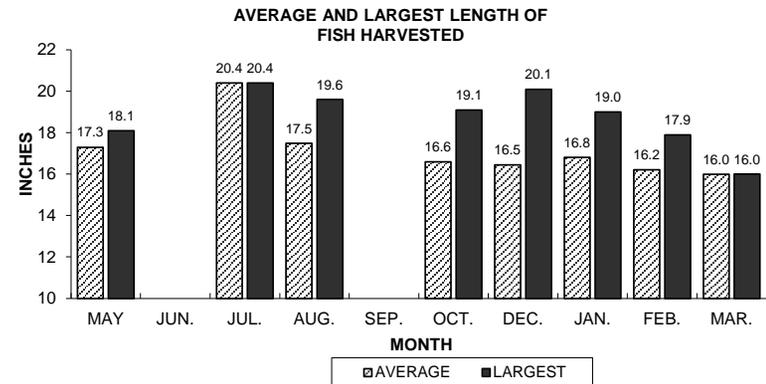
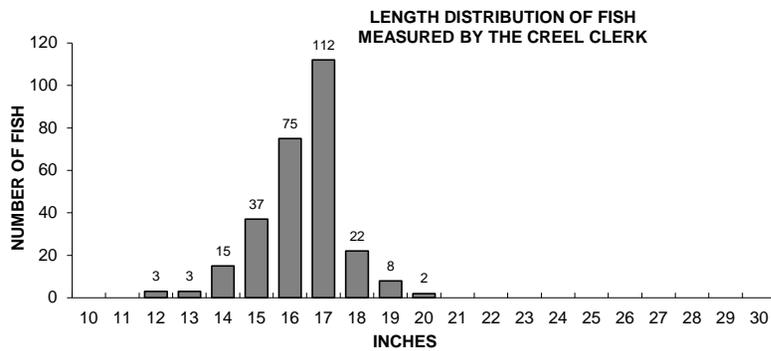
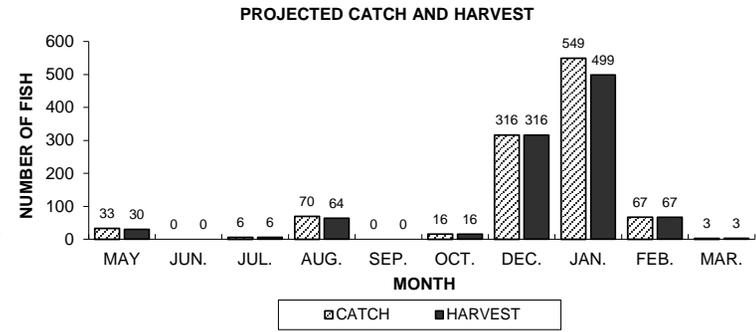
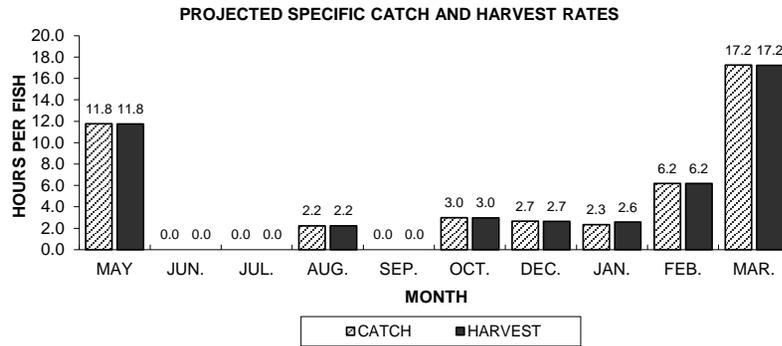
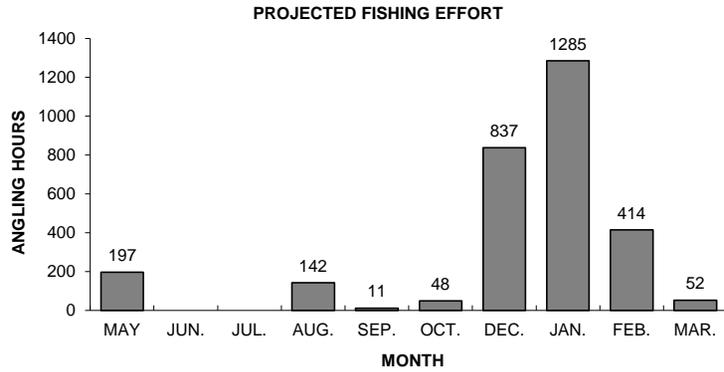


Figure 8. Lake Whitefish sportfishing effort, catch, harvest, and length distribution, Trout Lake, during 2013-14.

YELLOW PERCH

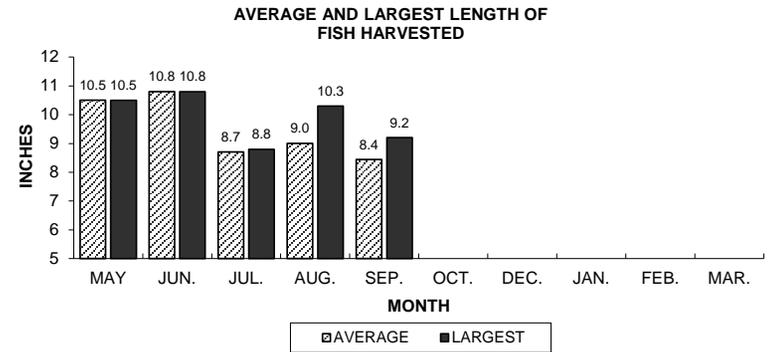
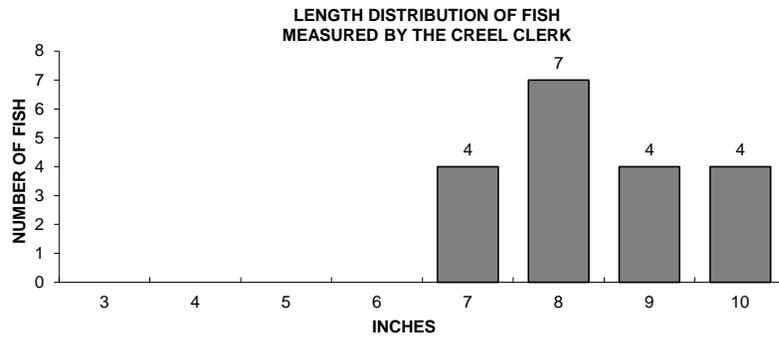
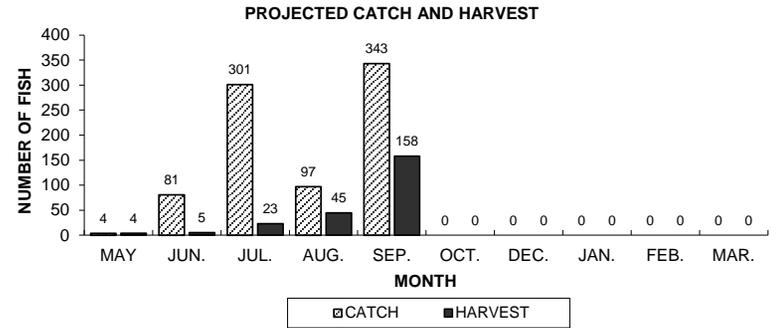
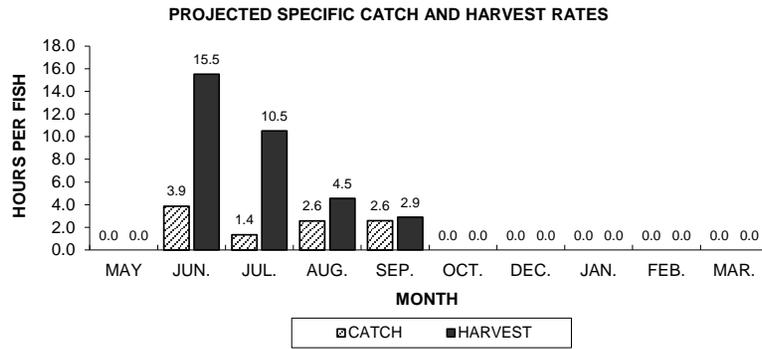
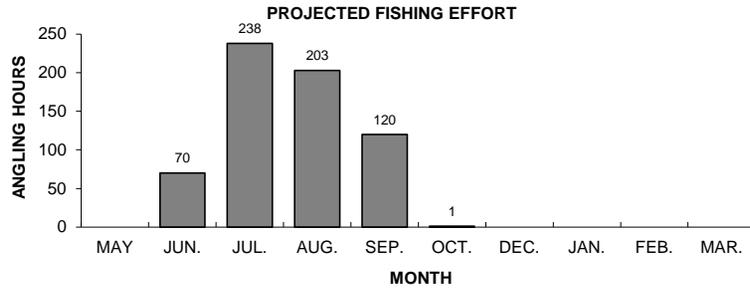
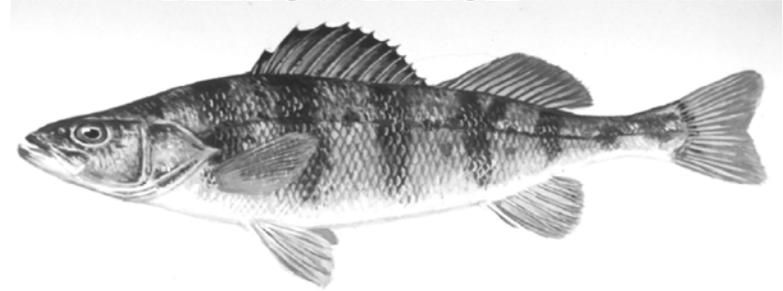


Figure 9. Yellow Perch sportfishing effort, catch, harvest, and length distribution, Trout Lake, during 2013-14.

BLUEGILL

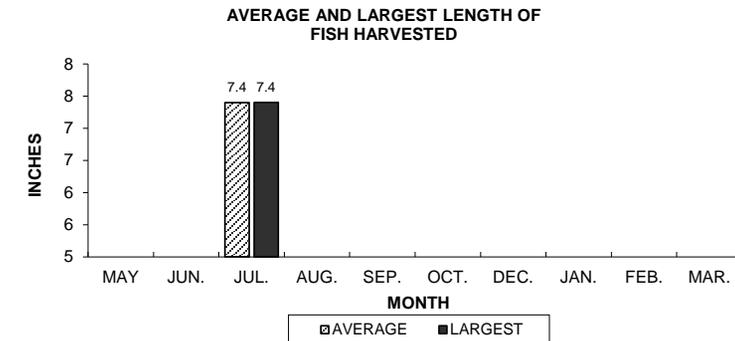
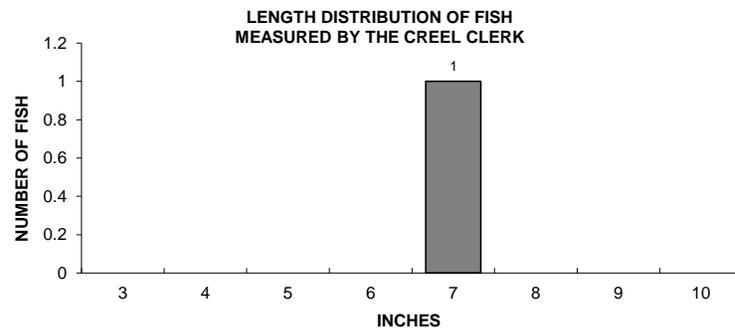
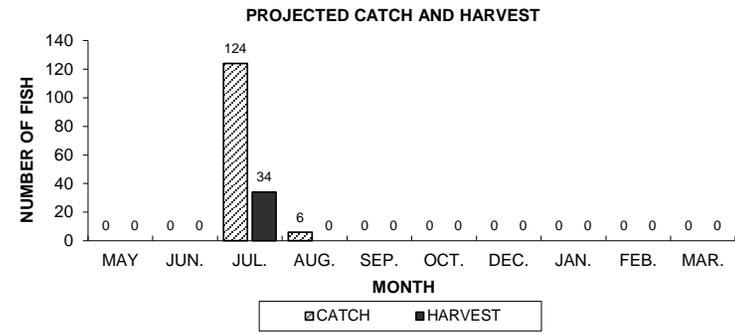
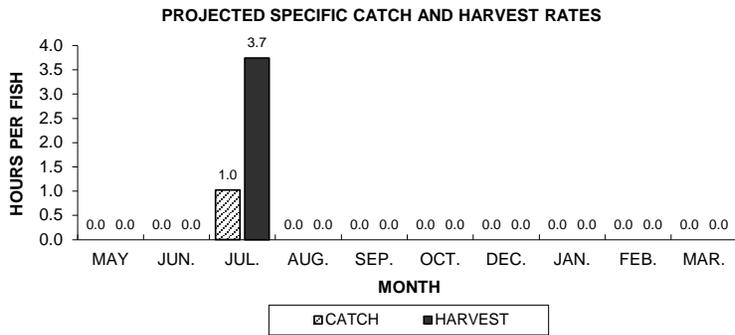
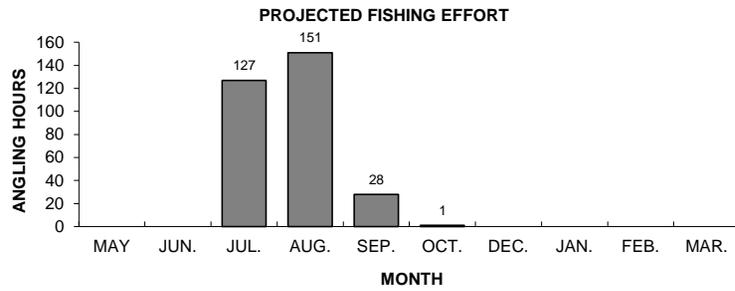
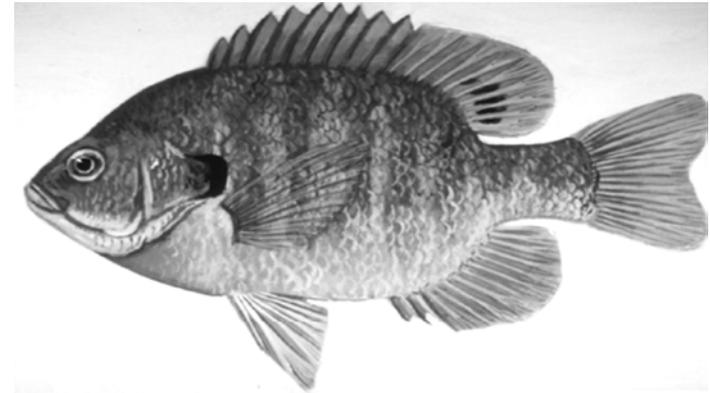


Figure 10. Bluegill sportfishing effort, catch, harvest, and length distribution, Trout Lake, during 2013-14.

PUMPKINSEED

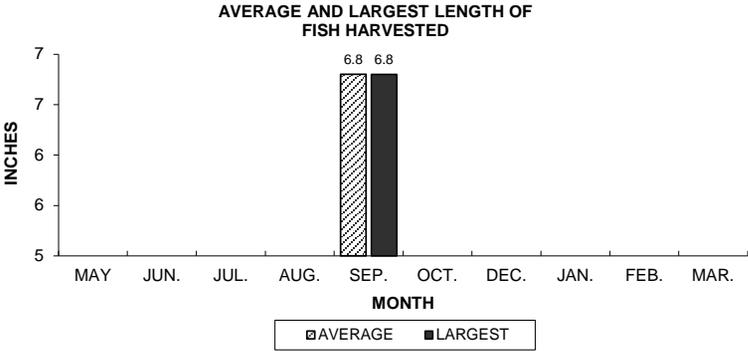
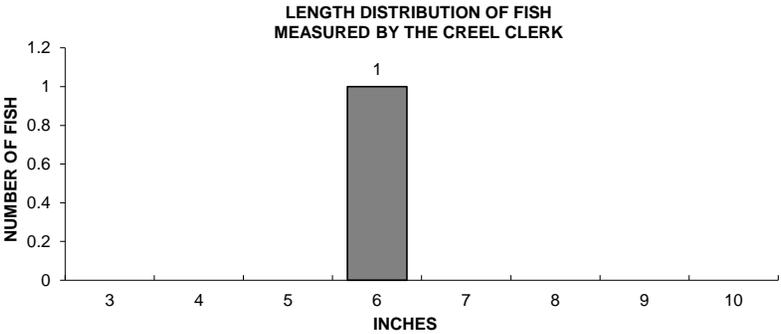
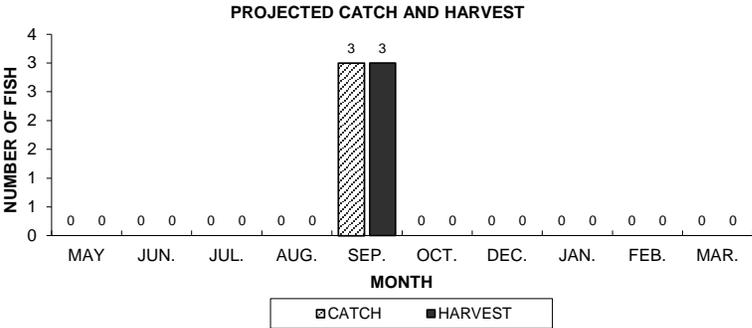
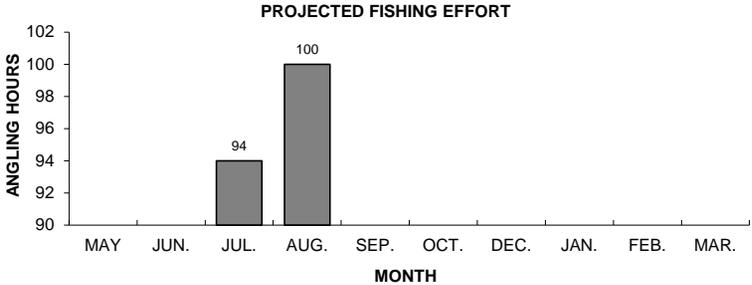
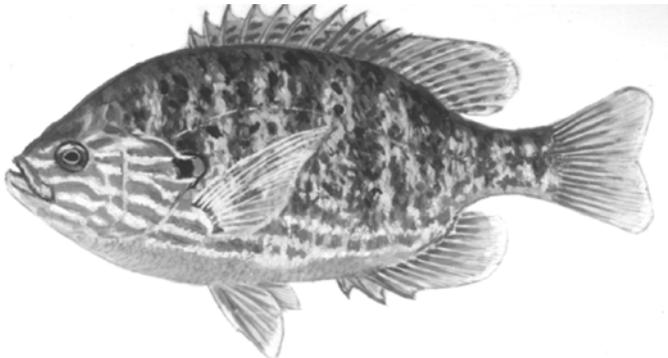


Figure 11. Pumpkinseed sportfishing effort, catch, harvest, and length distribution, Trout Lake, during 2013-14.

ROCK BASS

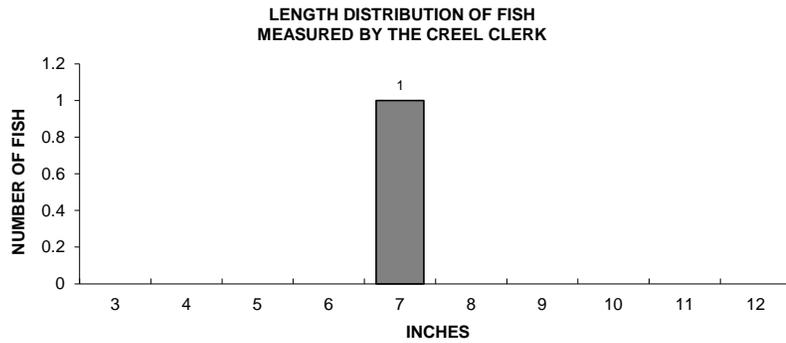
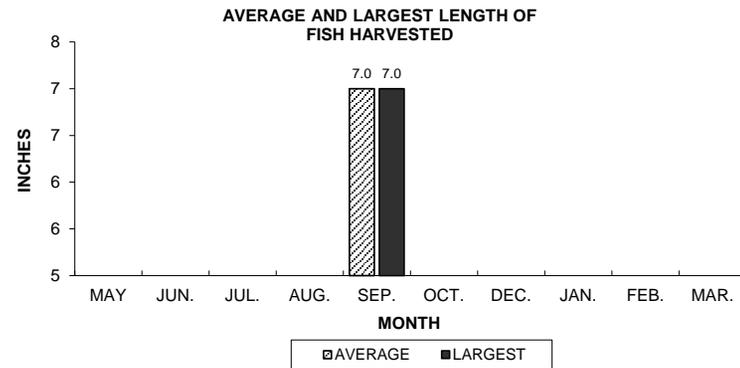
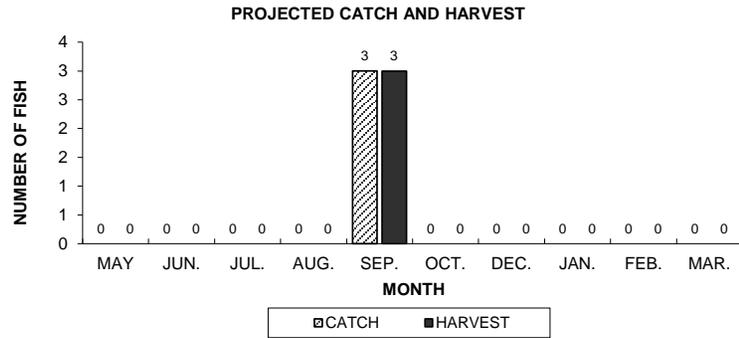
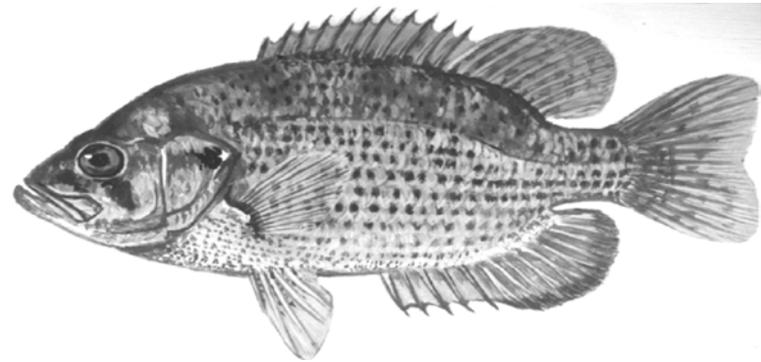


Figure 12. Rock bass sportfishing effort, catch, harvest, and length distribution, Trout Lake, during 2013-14.

BLACK CRAPPIE

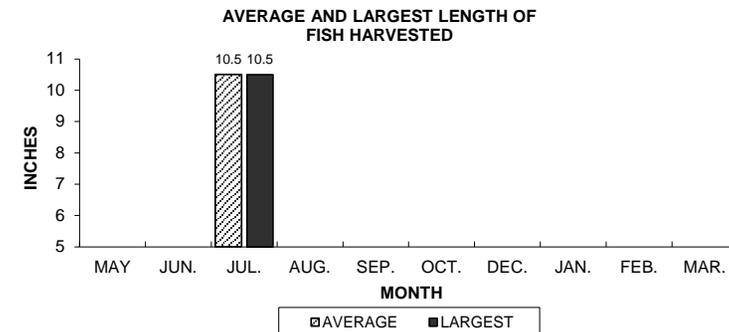
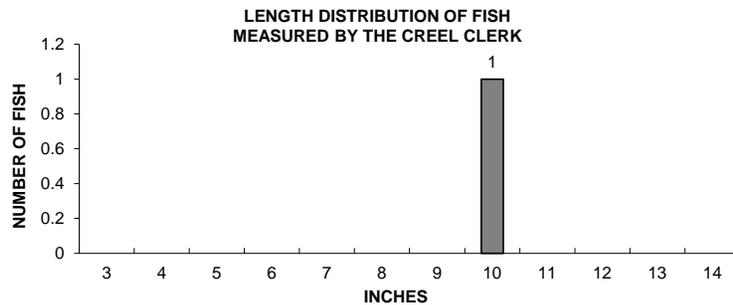
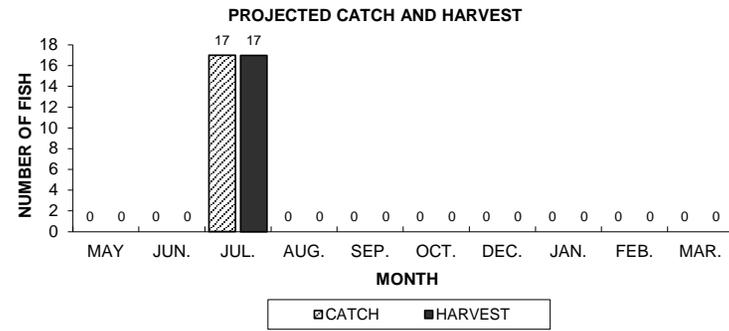
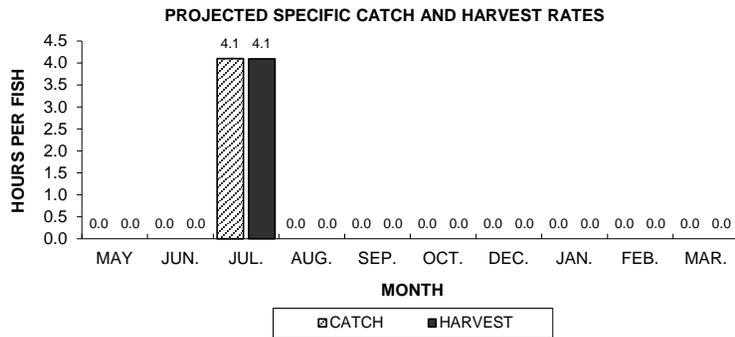
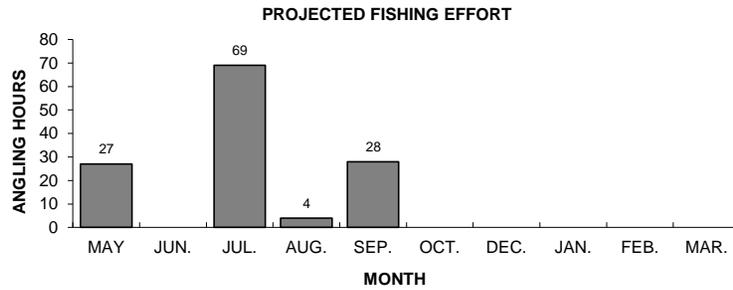
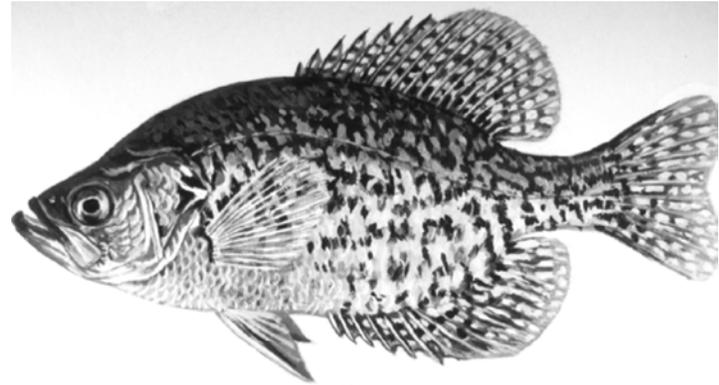


Figure 13. Black crappie sportfishing effort, catch, harvest, and length distribution, Trout Lake, during 2013-14.