

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

**CRANBERRY LAKE  
(Eagle River Chain)**

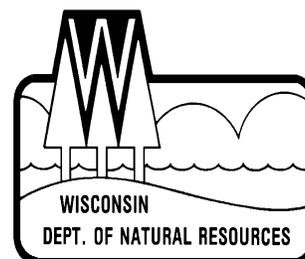
**VILAS COUNTY**

**2013-14**



**Treaty Fisheries Publication**

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



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## 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.

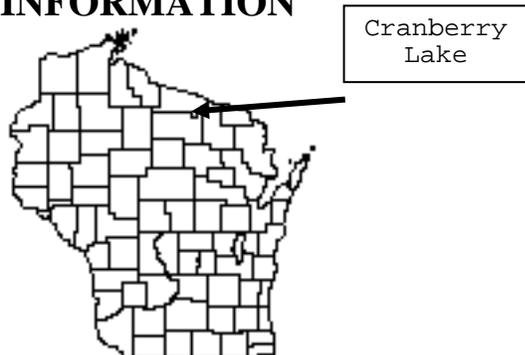
You may have encountered a DNR creel survey clerk on a recent fishing trip. We appreciate your cooperation during an interview. The survey only takes a moment of your time and it gives the Department valuable information needed for management of the fishery.

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 Cranberry Lake; discussion of results of the survey; and detailed summaries, by species of fishing effort, catch and harvest.

## GENERAL LAKE INFORMATION



### Location

Cranberry Lake is part of the Eagle River Chain of Lakes, located in Vilas County near the Town of Eagle River.

### Physical Characteristics

Cranberry Lake is located at the upstream end of the chain with 924 acres and it accounts for 27% of the total chain acreage. Littoral substrate consists primarily of sand, with lesser amounts of muck, and gravel. Cranberry Lake is a soft water lake with slightly acidic, slightly stained waters.

### 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 Cranberry Lake was around May 7, 2013. Fishable-ice formed on Cranberry Lake in Late November.

## Sportfishing Regulations

The following seasons, daily bag limits, and length limits were in place on Cranberry 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	14"
Musky	5/25-11/30	1	40"
Northern Pike	5/4-3/2	5	none
Walleye	5/4-3/2	2*	
No Minimum, 14"-18" Protected Slot, 1>18" Chain Wide Daily Bag Limit of 3			
Panfish	year round	25	none
Rock Bass	year round	none	none

\*Due to tribal harvest declarations, walleye bag limits were initially set at 1 on Cranberry Lake, and then revised to 2 on May 25<sup>th</sup>.

## SPECIES CATCH AND HARVEST INFORMATION

Angling effort, catch, and harvest information is summarized for each species in Table 2 and Figures 1-9. 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:

- PROJECTED FISHING EFFORT**  
Total calculated number of hours during each month that anglers spent fishing for a species.
- 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. This was the third time the department has conducted a creel survey on Cranberry Lake in the last 20 years. The last creel survey took place in 2000-01.

### **General Angler Information**

Anglers spent 23,849 hours or 25.8 hours per acre fishing Cranberry Lake during the 2013 season (Table 1). That was less than the Vilas County average of 35.2 hours per acre. August was the most heavily fished month (6.7 hours per acre). Fishing effort was lightest in February (0.05 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)

Anglers spent 8,702 hours targeting walleyes. The greatest fishing effort for walleyes was in May (2,661 hours). February and March had the least amount of walleye fishing effort when none occurred.

Total catch of walleyes was 3449 fish with a harvest of 866 fish. Highest catch (1,435 fish) and harvest (398 fish) occurred in May. Anglers fished 2.5 hours to catch and 10.0 hours to harvest a walleye during 2013-14.

The mean length of harvested walleyes was 12.6 inches and the largest walleye measured was a 21.4 inch fish.

### **Northern Pike** (Table 2, Figure 2)

Fishing effort directed at northern pike was 2,616 hours during the 2013-14 season. Northern pike fishing effort was greatest in July (781 hours).

Total catch of northern pike was 1,548 fish with a harvest of 194 fish.

The mean length of harvested northern pike was 21.3 inches and the largest northern pike measured was a 36.3 inch fish.

### **Muskellunge** (Table 2, Figure 3)

Muskellunge received the most fishing effort during the 2013-14 season. This is due to number of major musky tournaments throughout the musky season that are conducted on the chain. Anglers spent 12,669 hours targeting muskellunge during the 2013-14 season. Muskellunge fishing effort was greatest in August (4147 hours).

Total catch of muskellunge was 589 fish. Highest catch (216 fish) occurred in August. Anglers fished 23.5 hours to catch a muskellunge during 2013-14.

### **Smallmouth Bass** (Table 2, Figure 4)

Fishing effort targeted at smallmouth bass was 2,340 hours during the 2013-14 season. Smallmouth bass fishing effort was greatest in July (1,099 hours).

Total catch of smallmouth bass was 1,084 fish with none reported as harvested. Highest catch (446 fish) occurred in July. Anglers fished 3.9 hours to catch a smallmouth bass during 2013-14.

**Largemouth Bass** (Table 2, Figure 5)

Fishing effort directed at largemouth bass was 291 hours during the 2013-14 season. Largemouth bass fishing effort was greatest in July (222 hours).

Total catch of largemouth bass was 214 fish with none reported as harvested. Highest catch (96 fish) occurred in June. Anglers fished 8.1 hours to catch a largemouth bass during 2013-14.

**Panfish (Table 2, Figures 6-9)**

**Yellow perch** were the most sought after panfish species during the survey. Fishing effort directed at yellow perch was 4,209 hours.

Total catch of yellow perch was 3,113 fish with 918 harvested. The mean length of yellow perch harvested was 8.4 inches.

**Black crappies** were the second most sought after panfish species during the survey. Fishing effort directed at black crappies was 3,302 hours.

Anglers caught 2,412 black crappies and harvested 1,445 fish. The mean length of black crappies harvested was 10.0 inches.

**Bluegills** were the third most sought after panfish species during the survey. Fishing effort directed at bluegills was 2,382 hours.

Total catch of bluegills was 2,221 fish with 804 harvested. The mean length of bluegills harvested was 7.2 inches.

**Rock bass** were also caught during the 2013-14 season but due to low numbers reported they are not discussed here.

## ACKNOWLEDGMENTS

Completion of this survey was possible because of the efforts of the following Fisheries Management and Treaty Fisheries staff: Jonathan Pyatskowitz, Jeff Blonski, Joelle Underwood, Marty Kiepkke, Jason Halverson, Tim Tobias, Steve Gilbert, Dennis Scholl, and Madison fisheries staff including Joe Hennessy, Tom Cichosz, Jon Hansen, and Heidi Nelson. Tom Lima, Lynn Robinson, John Logan, Dean Johnson, Mike Rynski, Rich Cechal, John Davis, and Marty Kiepkke were the creel clerks on the Eagle River Chain 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 all of the cooperators: Gail Ely, Bill Landwehr, Vern & Diane Kramer, James (Yukon Jack) & Joyce Mecikalski, Vince Wagner, Richard Matkin, Bill & Sandy Jacobs, Gerda & Dean Safer of Gypsy Villa Resort, Chris Hartman of Wild Eagle Lodge, Shari Buller & Joe Panci of Trees For Tomorrow, Boat Sport Marina, and Twelve Pines Resort, who generously allowed the Department to keep a boat and snowmobile on their property during this survey.

This creel report was reviewed by Dennis Scholl and Steve Gilbert 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, Cranberry Lake, 2013-14\_season.**

<b>Month</b>	<b>Total Angler Hours</b>	<b>Total Angler Hours/Acre</b>	<b>Vilas County Average Hours/Acre</b>	<b>Ceded Territory Average Hours/Acre</b>
May	3768	4.1	5.4	5.1
June	4827	5.2	7.0	6.4
July	4734	5.1	7.5	6.9
August	6229	6.7	6.6	5.4
September	2590	2.8	4.3	3.3
October	1172	1.3	2.0	1.5
December	326	0.4	0.6	1.1
January	146	0.2	0.8	1.6
February	46	0.05	0.9	1.5
March	12	0.01	0.1	0.5
*Summer Total	23319	25.2	32.8	28.6
*Winter Total	530	0.6	2.4	4.7
Grand Total	23849	25.8	35.2	33.3

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

**Total Angler Hours** is the estimated total number of hours that anglers spent fishing on Cranberry 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 Cranberry 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 Cranberry Lake to other lakes statewide.

**Table 2. Comparison of creel survey synopses, Cranberry Lake, 2013-14 and 2000-01 fishing seasons.**

CREEL YEAR: 2013-14

<b>SPECIES</b>	<b>DIRECTED EFFORT (Hours)</b>	<b>PERCENT OF TOTAL</b>	<b>TOTAL CATCH</b>	<b>SPECIFIC CATCH RATE (Hrs/Fish) *</b>	<b>TOTAL HARVEST</b>	<b>SPECIFIC HARVEST RATE (Hrs/Fish) **</b>	<b>MEAN LENGTH OF HARVESTED FISH</b>
Walleye	8702	23.80%	3449	2.5	866	10.0	12.6
Northern Pike	2616	7.15%	1548	5.8	194	19.2	21.3
Muskellunge	12669	34.65%	589	23.5	9	1428.6	44.3
Smallmouth Bass	2340	6.40%	1084	3.9	0		
Largemouth Bass	291	0.80%	214	8.1	0		
Yellow Perch	4209	11.51%	3113	1.7	918	5.2	8.4
Bluegill	2382	6.51%	2221	1.1	804	3.0	7.2
Rock Bass	56	0.15%	305	2.7	33		7.8
Black Crappie	3302	9.03%	2412	1.5	1445	2.4	10.0

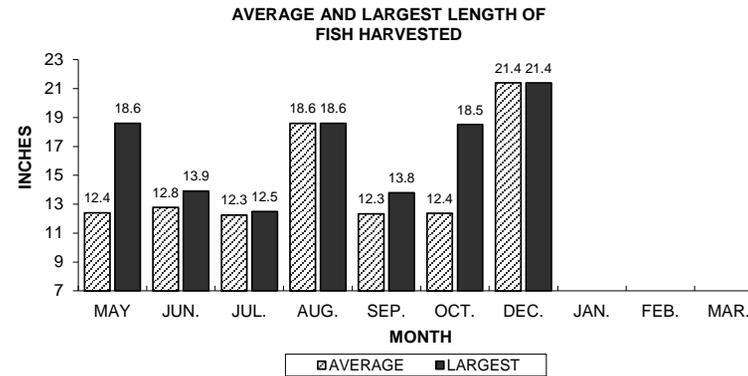
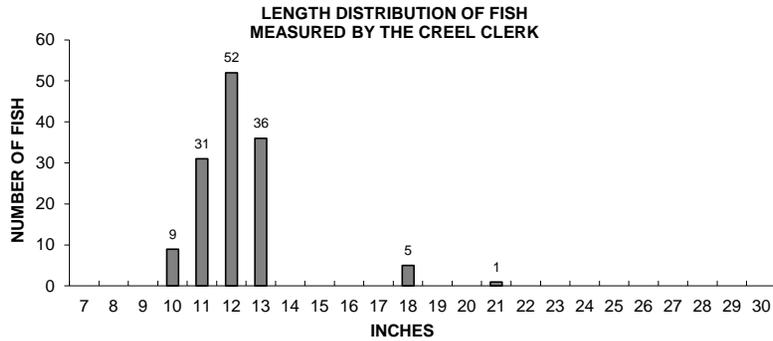
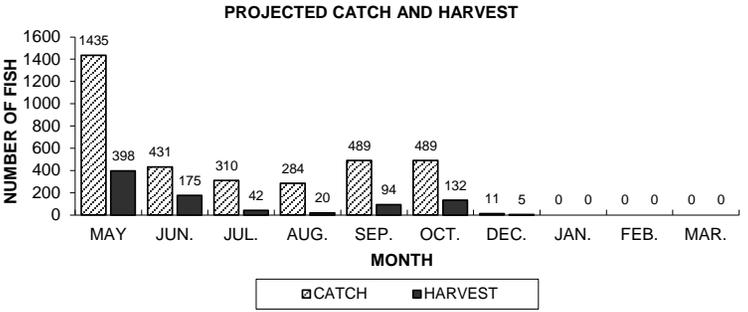
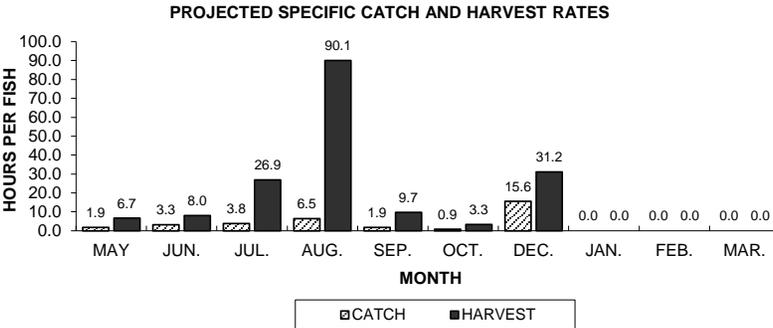
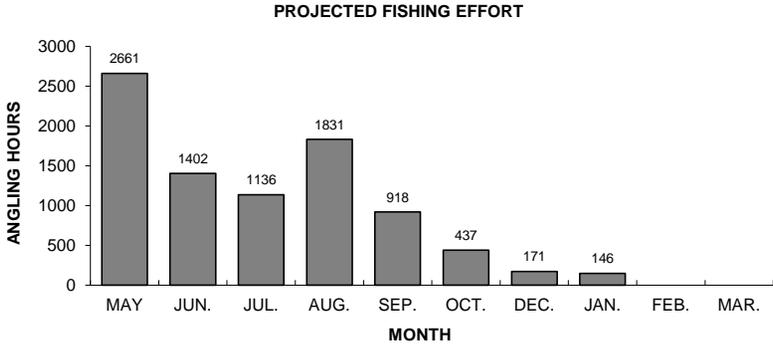
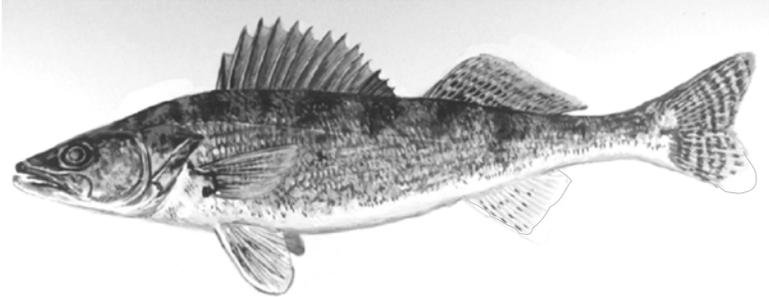
9 \* A blank cell in this column indicates that no fish of a given species were caught by anglers who specifically targeted that species.

\*\* 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: 2000-01

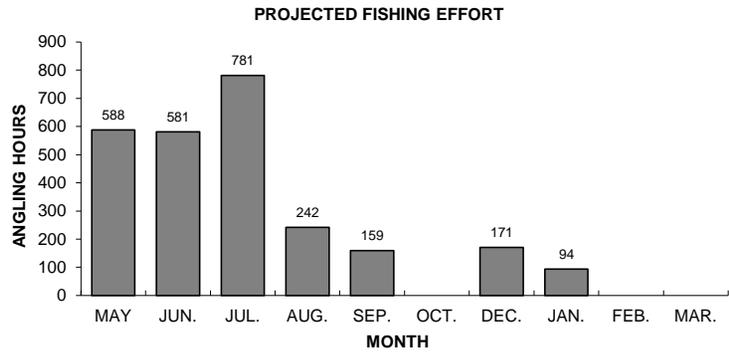
<b>SPECIES</b>	<b>DIRECTED EFFORT (Hours)</b>	<b>PERCENT OF TOTAL</b>	<b>TOTAL CATCH</b>	<b>SPECIFIC CATCH RATE (Hrs/Fish)</b>	<b>TOTAL HARVEST</b>	<b>SPECIFIC HARVEST RATE (Hrs/Fish)</b>	<b>MEAN LENGTH OF HARVESTED FISH</b>
Walleye	11697	41.71%	1210	9.7	314	37.3	13.1
Northern Pike	173	0.62%	474	0.0	36	0.0	23.4
Muskellunge	8929	31.84%	773	14.0	0	0.0	
Smallmouth Bass	1406	5.01%	555	7.3	18	0.0	15.5
Largemouth Bass	545	1.94%	0	0.0	0	0.0	
Yellow Perch	2166	7.72%	6393	0.9	1891	1.8	8.2
Bluegill	489	1.74%	216	3.9	0	0.0	
Rock Bass	0	0.00%	646	0.0	133	0.0	9.3
Black Crappie	2640	9.41%	414	6.5	393	6.7	10.9

# WALLEYE



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



## NORTHERN PIKE

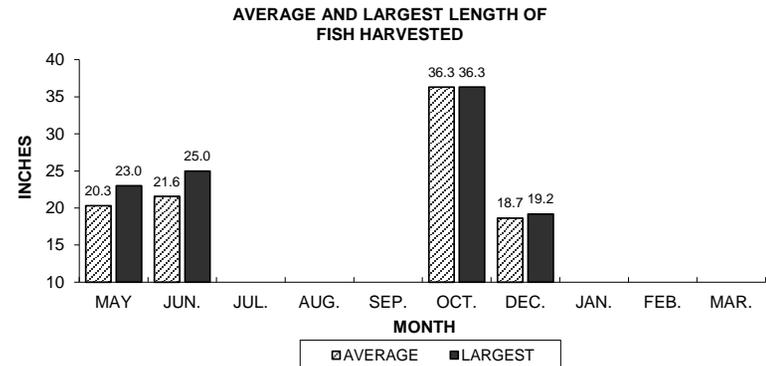
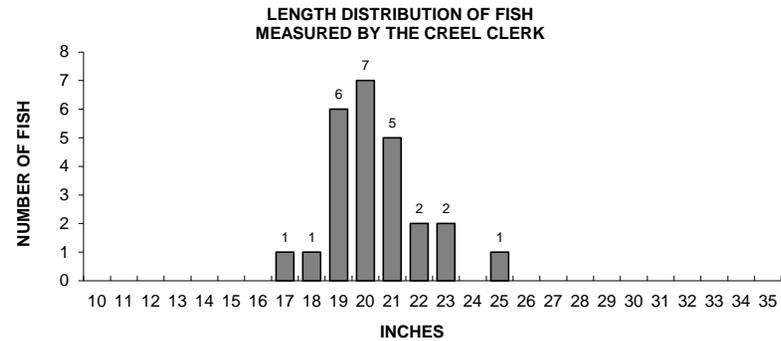
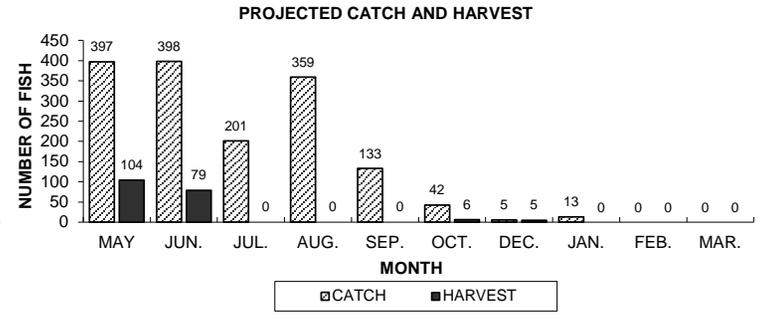
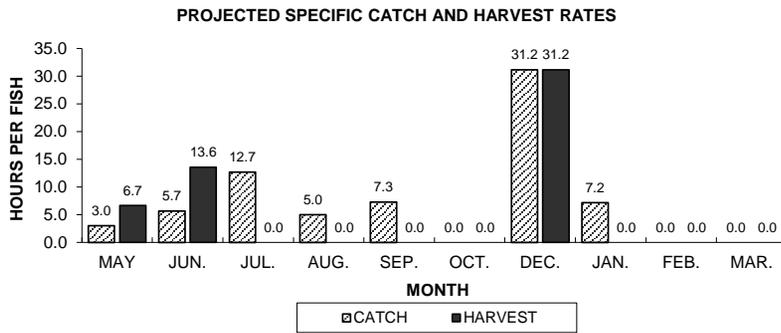
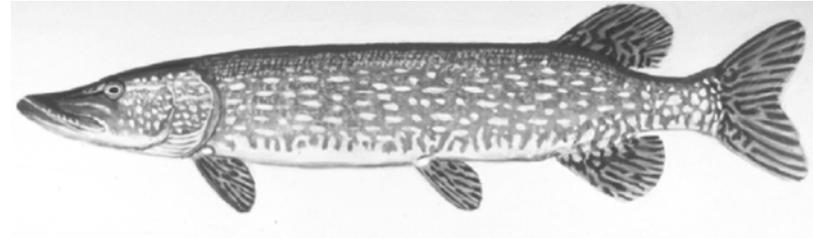
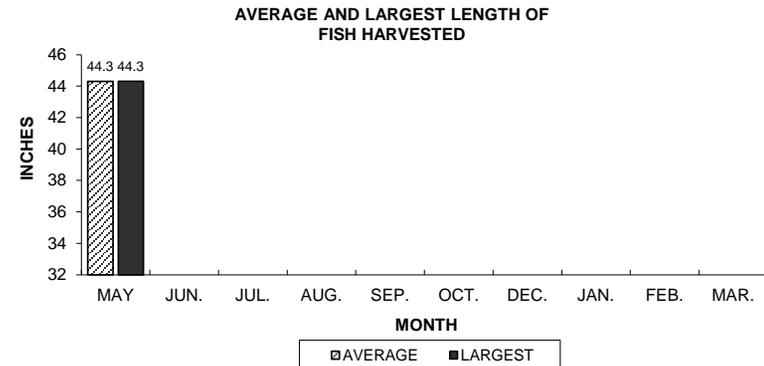
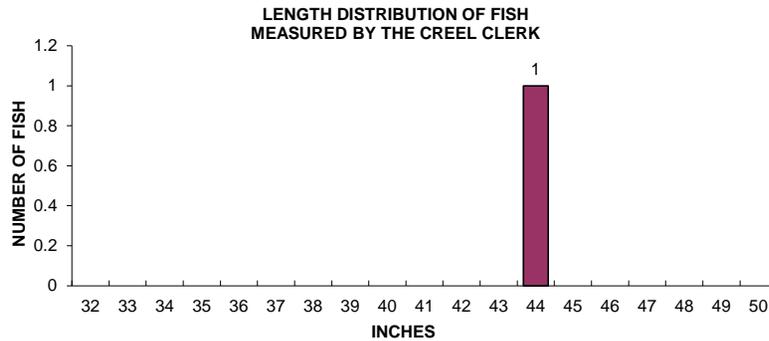
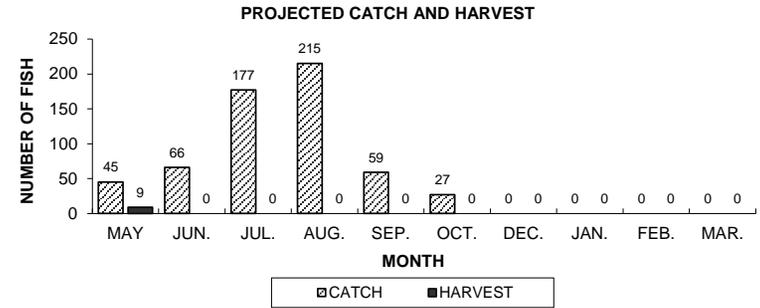
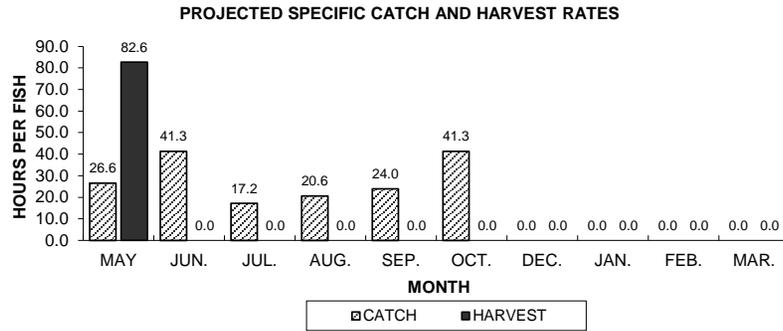
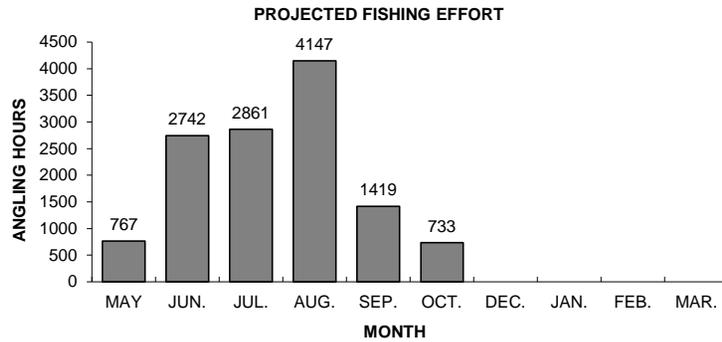
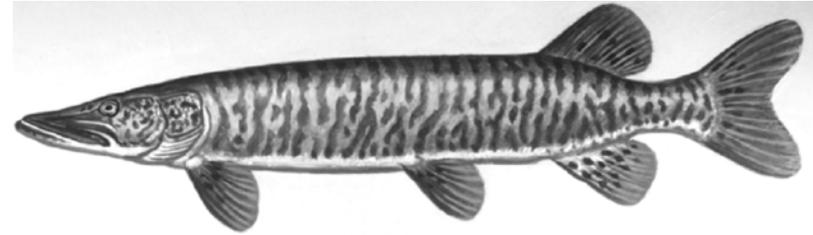


Figure 2. Northern pike sportfishing effort, catch, harvest, and length distribution, Cranberry Lake, during 2013-14.

# MUSKELLUNGE



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

# SMALLMOUTH BASS

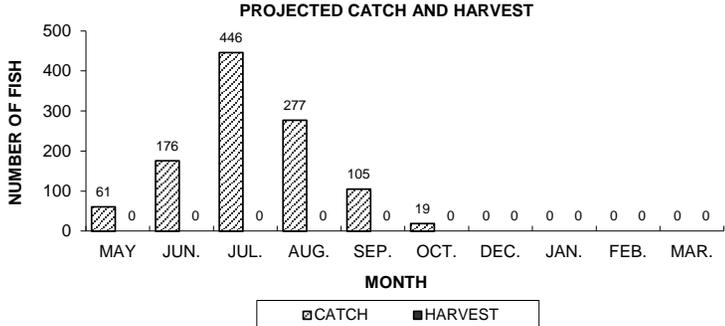
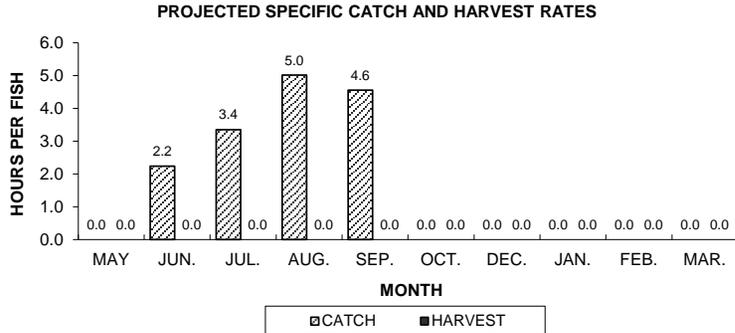
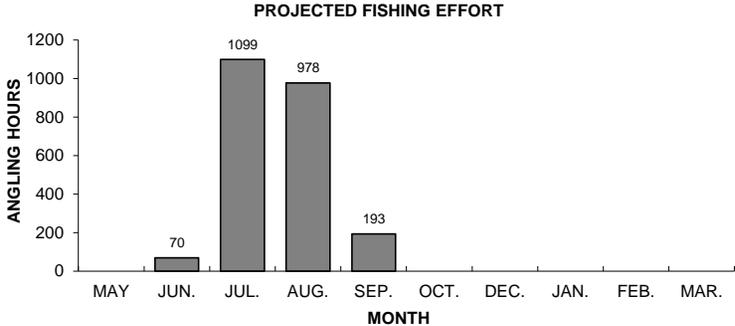
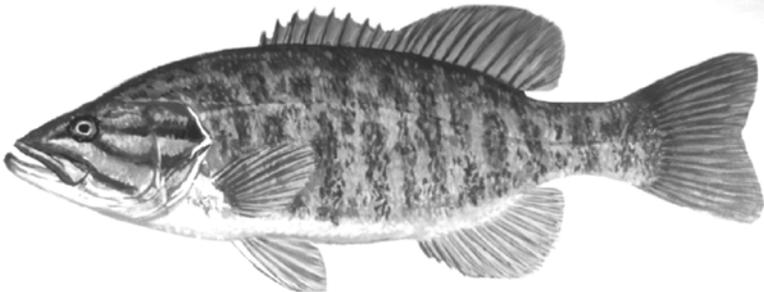


Figure 4. Smallmouth bass sportfishing effort, catch, harvest, and length distribution, Cranberry Lake, during 2013-14.

# LARGEMOUTH BASS

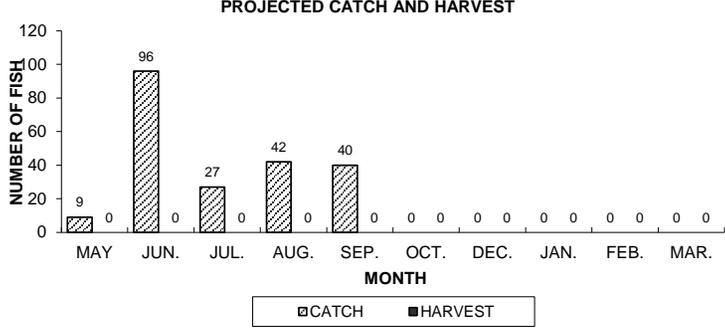
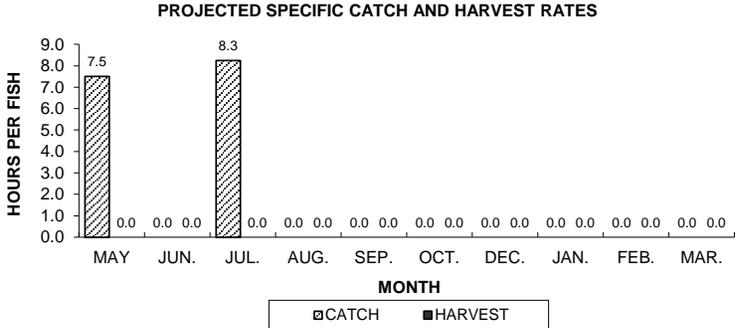
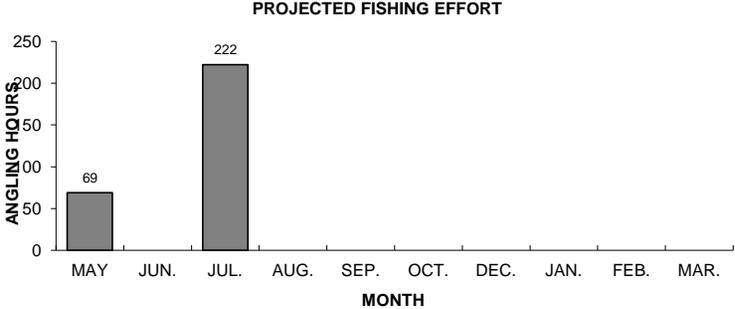
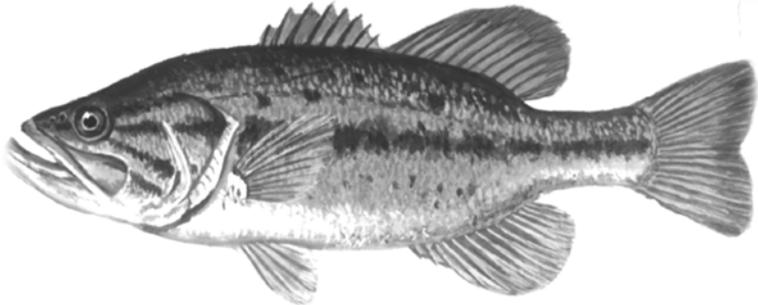


Figure 5. Largemouth bass sportfishing effort, catch, harvest, and length distribution, Cranberry Lake, during 2013-14.

# YELLOW PERCH

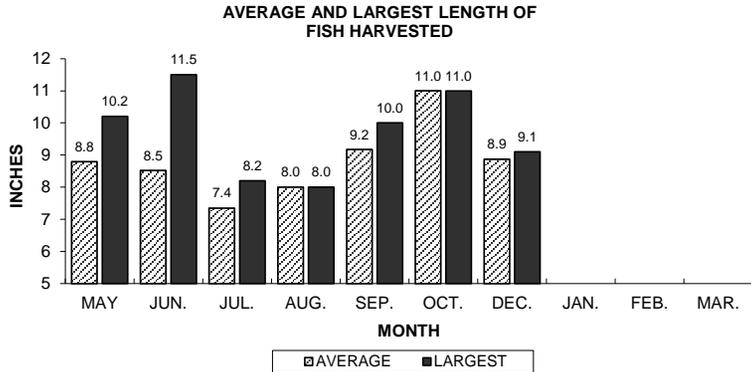
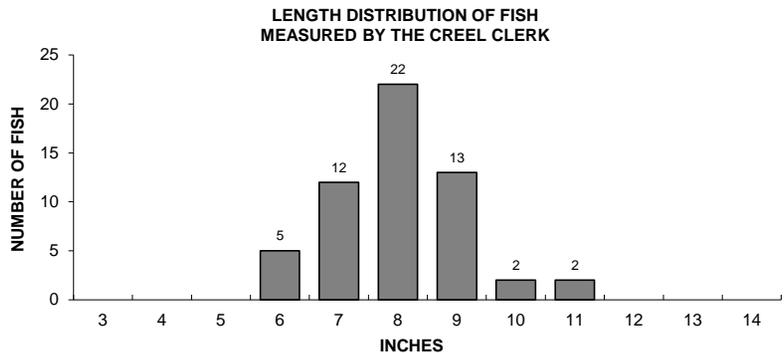
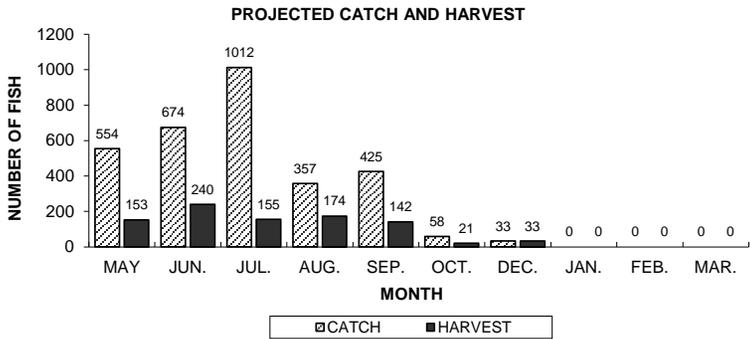
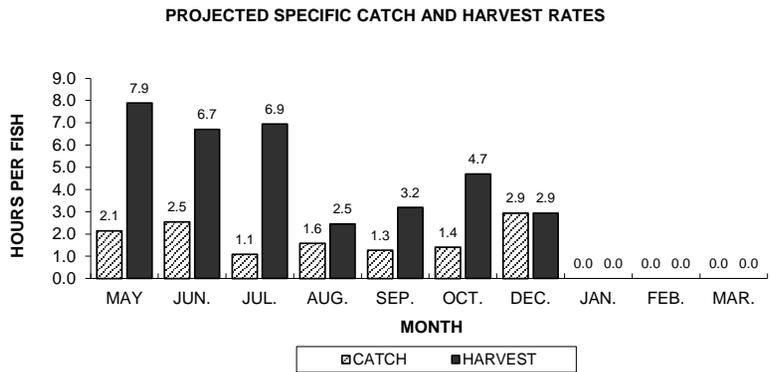
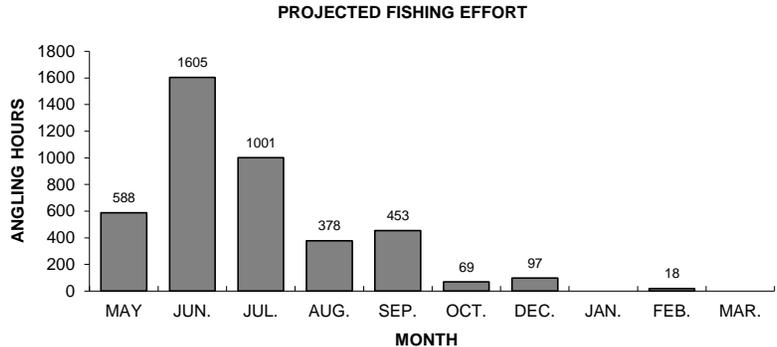


Figure 6. Yellow perch sportfishing effort, catch, harvest, and length distribution, Cranberry Lake, during 2013-14.

# BLUEGILL

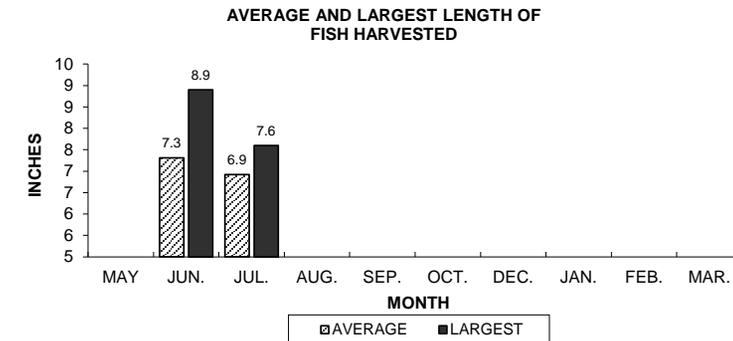
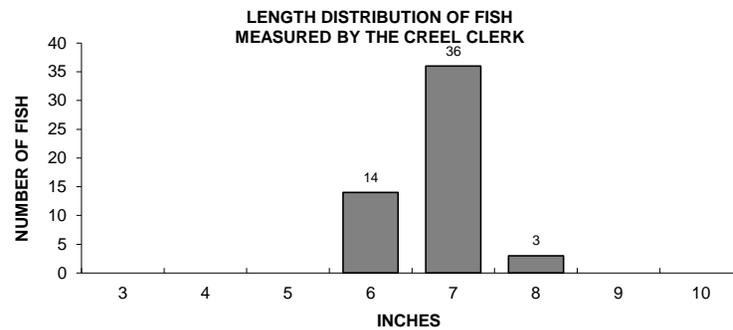
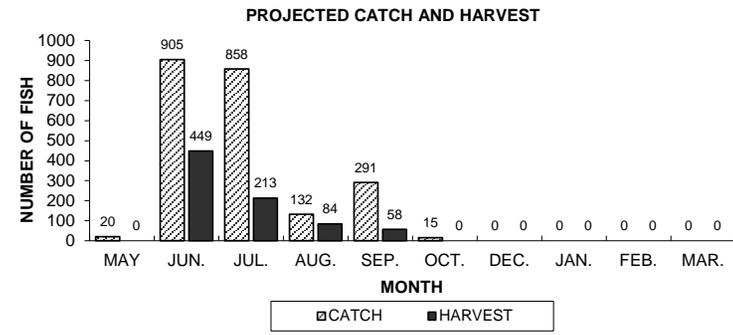
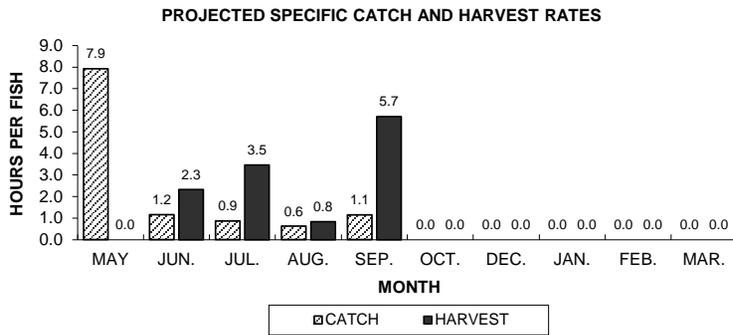
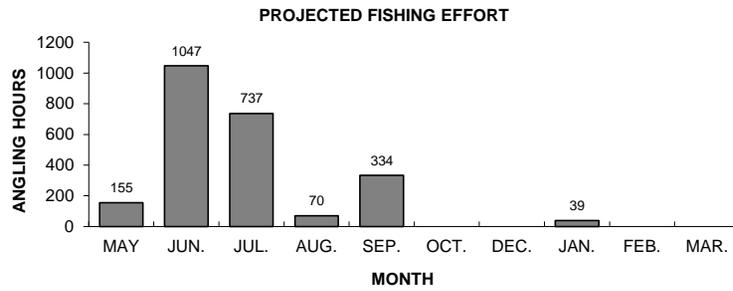
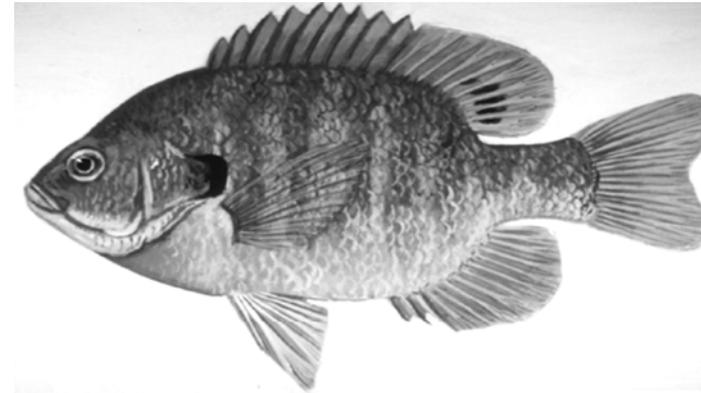


Figure 7. Bluegill sportfishing effort, catch, harvest, and length distribution, Cranberry Lake, during 2013-14.

# ROCK BASS

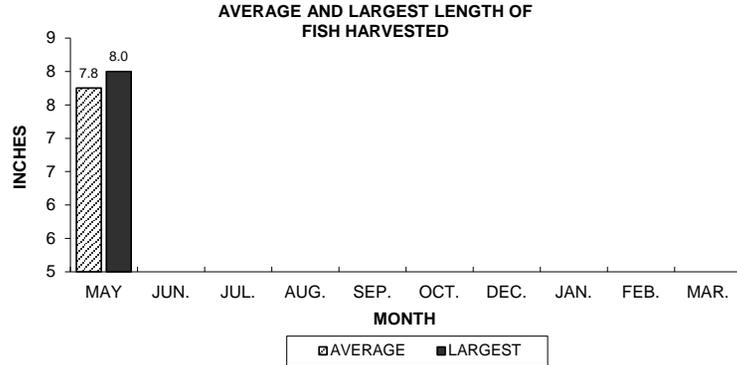
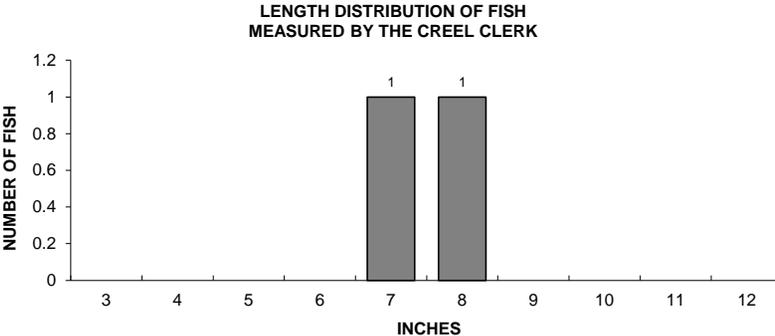
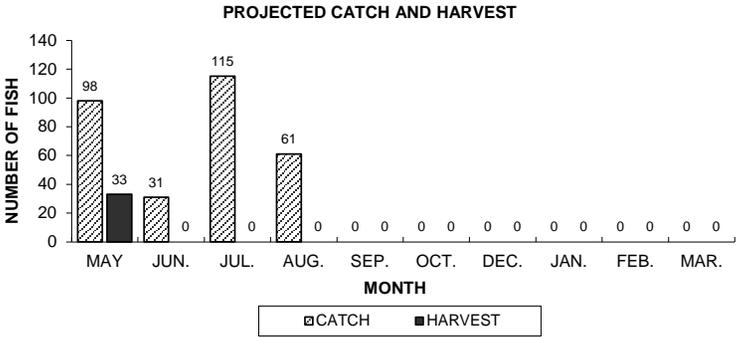
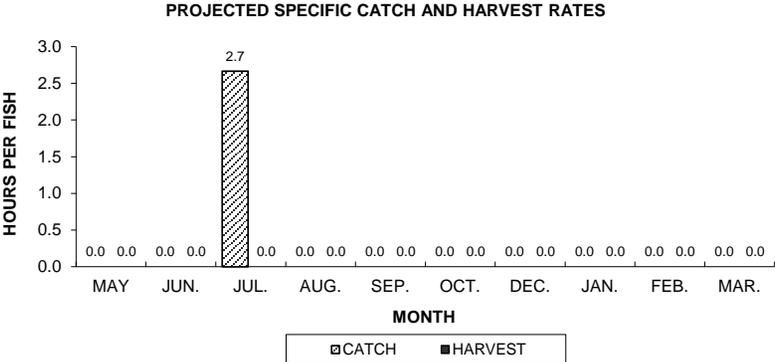
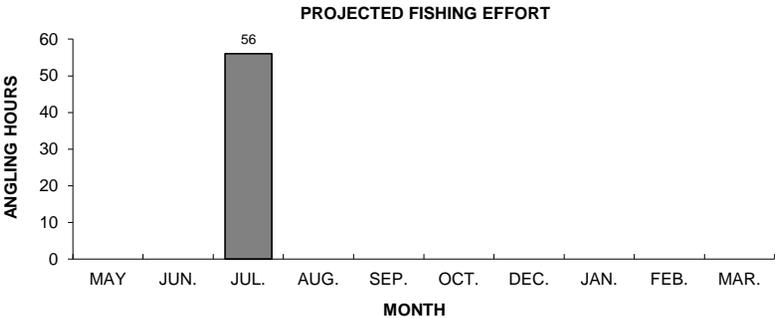
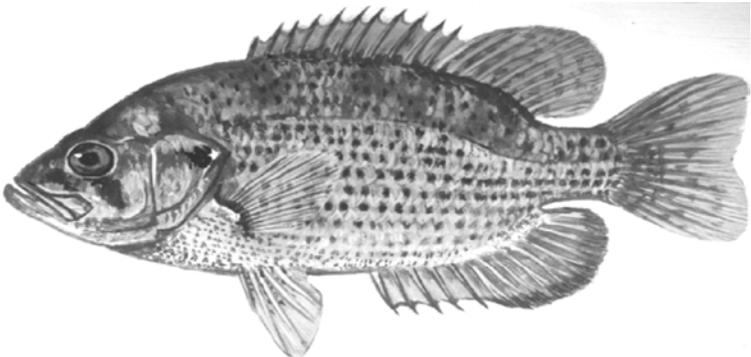


Figure 8. Rock bass sportfishing effort, catch, harvest, and length distribution, Cranberry Lake, during 2013-14.

# BLACK CRAPPIE

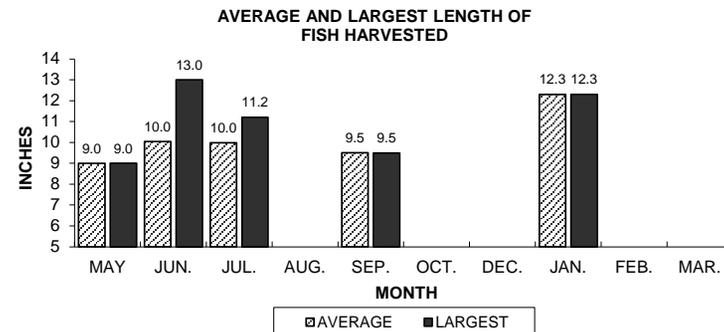
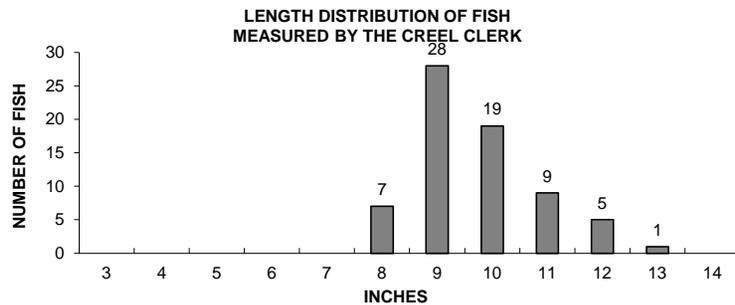
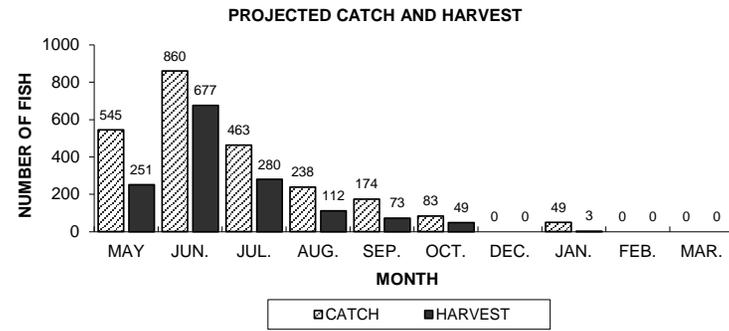
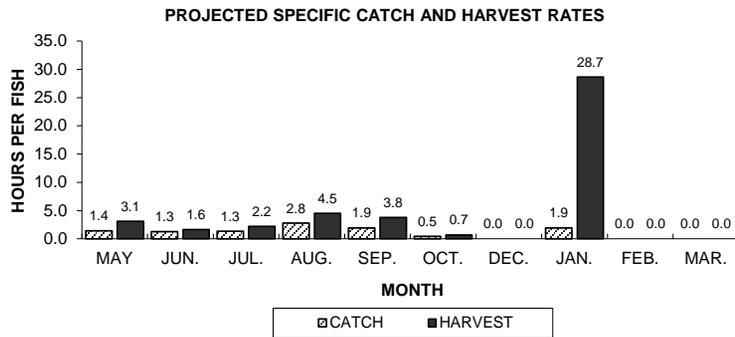
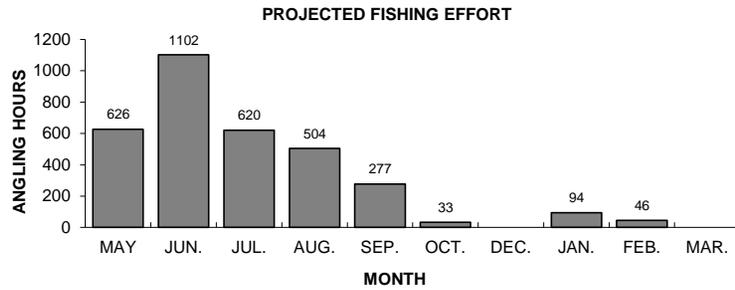
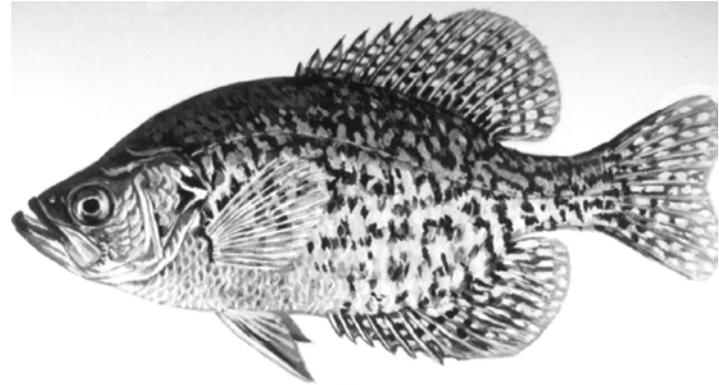


Figure 9. Black crappie sportfishing effort, catch, harvest, and length distribution, Cranberry Lake, during 2013-14.