

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

**LYNX LAKE**

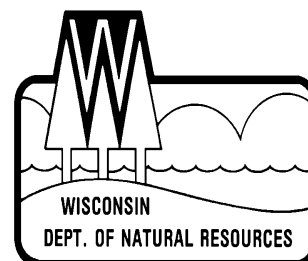
**VILAS COUNTY**

**2016**



**Treaty Fisheries Publication**

**Compiled by Jeff Blonski &  
Jason Halverson  
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 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). 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 angler harvest to assess its impact on the fishery. However, it would be highly impractical and very costly to conduct a complete census of every angler who fishes on a lake. Therefore, 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, or estimates, 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. Creel surveys are not conducted in 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 the number of anglers at predetermined times, and to interview anglers who have completed their fishing trip. Data is collected on what species they fished for, catch, harvest, lengths of fish harvested, marks (fin clips 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 estimates of total catch and harvest of each species, catch and harvest rates, and total fishing effort by month, as well as for the year in total. Keep in mind that these are only estimates based on the best information available, and not a complete accounting of effort, catch, and harvest. Accurate estimates 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.

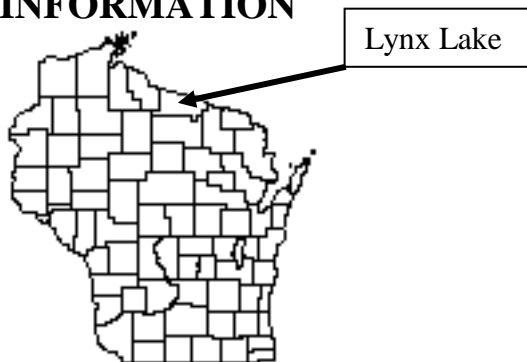
You may have encountered a DNR creel survey clerk on a recent fishing trip. We appreciate your cooperation during an interview. The survey only takes a moment of your time, and it gives the Department valuable information needed for management of the fishery.

This report provides estimates 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 Lynx Lake; discussion of results of the survey; and detailed summaries, by species, of fishing effort, catch and harvest.

## GENERAL LAKE INFORMATION



### Location

Lynx Lake is located in Vilas County near the town of Presque Isle.

### Physical Characteristics

Lynx Lake is a 339-acre drainage lake with a maximum depth of 48 feet. Littoral substrate consists primarily of sand with gravel, and some amounts of rock and muck. Lynx Lake contains soft, slightly acidic, stained water of moderate transparency.

### Seasons Surveyed

The period referred to in this report as the 2016 fishing season ran from May 7, 2016 through October 31, 2016. This creel survey was only conducted for the open water period due to expected low fishing pressure during winter months.

### Weather

Ice-out on Lynx Lake was around April 18, 2016.

### Fishing Regulations

The following seasons, daily bag limits, and length limits were in place on Lynx Lake during the 2016 fishing season:

Species	Season	Bag Limit	Min. Size
Largemouth Bass	5/7-3/5	5	14"
Smallmouth Bass	5/7-6/17	Catch&Release	
	6/18-3/5	5	14"
Musky	5/7-11/30	1	40"
Northern Pike	5/7-3/5	5	none
Walleye	5/7-3/5	3	15"
	20"-24" Protected Slot, 1>24"		
Panfish	year round	25	none
Rock Bass	year round	none	none

## SPECIES CATCH AND HARVEST INFORMATION

Angling effort, catch, and harvest information is summarized for each species in Table 2 and Figures 1-7. Table 2 also includes a comparison of these statistics with the previous creel survey. Each species page has up to five graphs depicting the following:

1. **ESTIMATED FISHING EFFORT**  
Total calculated number of hours during each month that anglers spent fishing for a species.
2. **ESTIMATED 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. **ESTIMATED 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 conducted a creel survey on Lynx Lake. The last creel survey took place in 1998-99.

### **General Angler Information**

Anglers spent 3,119 hours, or 9.2 hours per acre, fishing Lynx Lake during the 2016 open-water season (Table 1). That was less than the Vilas County average of 32.1 hours per acre, and less than the fishing effort documented during the 1998-99 open-water creel survey (23.4 hours per acre). July and August were the most heavily fished months (718 hours each). Fishing effort was lightest in June (323 hours). The creel clerk was able to conduct 123 interviews throughout the survey.

## **RESULTS BY SPECIES**

### **Walleye** (Table 2, Figure 1)

Anglers spent 1,442 hours targeting walleye. The greatest fishing effort for walleyes was in August (443 hours). October had the least amount of walleye fishing effort (28 hours).

Total catch of walleyes was 73 fish, with no documented harvest. Highest catch (27 fish) occurred in May. Anglers fished an average of 19.7 hours to catch a walleye during the survey.

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

There was no fishing effort directed at northern pike during the 2016 open-water season. However, 14 northern pike were caught incidentally, but no documented harvest occurred.

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

Anglers spent 909 hours targeting muskellunge during the 2016 open-water season. Muskellunge fishing effort was greatest in October (337 hours). Total catch of muskellunge was 55 fish, and the highest catch (17 fish) occurred in both September and October. Anglers fished 20.8 hours to catch a muskellunge, and there was no documented harvest during the survey.

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

Smallmouth Bass received the most fishing effort of any gamefish species during the 2016 open-water season. Fishing effort targeted at smallmouth bass was 1,460 hours. Smallmouth bass fishing effort was greatest in August (491 hours). Total catch of smallmouth bass was 618 fish, with 5 being harvested. Highest catch (220 fish) occurred in August. Anglers fished an average of 2.8 hours to catch a smallmouth bass during the survey.

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

There was no fishing effort directed at largemouth bass during the 2016 open-water season. However, 36 largemouth bass were caught incidentally, but no documented harvest occurred. Highest catch (24 fish) occurred in June.

### **Panfish (Table 2, Figures 6-7)**

**Yellow Perch** were the most sought after panfish species during the survey. Fishing effort directed at yellow perch was 200 hours. Total catch of yellow perch was 261 fish, with no documented harvest.

**Bluegills** received 83 hours of directed fishing effort. Total catch of bluegills was 27 fish, with no documented harvest.

**Pumpkinseeds and Rock Bass** were also caught in low numbers during the 2016 open-water season (10 and 12 fish, respectively); however, no harvest was documented for either species.

## **ACKNOWLEDGMENTS**

Completion of this survey was possible because of the efforts of the following fisheries management and treaty fisheries staff: Lawrence Eslinger, Jeff Blonski, Joelle Underwood, Jason Halverson, and Marty Kiepke. Garrett Wilner was the creel clerk on Lynx Lake during the survey period.

We 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 our cooperator, Rick Green, who generously allowed the Department to keep a boat on his property during this survey.

This creel report was reviewed by John Kubisiak, Lawrence Eslinger, 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/trtycrs/rvys.html>

**Table 1. Sportfishing effort summary, Lynx Lake, 2016 season.**

<b>Month</b>	<b>Number of Angler Party Interviews</b>	<b>Total Angler Hours</b>	<b>Total Angler Hours/Acre</b>	<b>1998-99 Total Angler Hours/Acre</b>	<b>Vilas County Average Hours/Acre</b>	<b>Ceded Territory Average Hours/Acre</b>
May	13	420	1.2	1.3	5.3	5.0
June	19	323	1.0	5.7	6.9	6.3
July	30	718	2.1	7.0	7.3	6.8
August	16	718	2.1	5.0	6.4	5.4
September	23	564	1.7	3.3	4.2	3.3
October	22	376	1.1	1.2	2.0	1.5
*Summer Total	123	3119	9.2	23.4	32.1	28.0
**Grand Total	NA	NA	NA	23.5	34.5	32.6

\*"Summer" is May-October

\*\*Lynx was not surveyed the entire 2016-17 season; the 1998-99 survey, Vilas Co. and Ceded Territory averages include entire season values (summer and winter combined)

**Number of Angler Party Interviews** is the number of groups of anglers interviewed by the creel clerk. A party is considered the members of a group who fish together in the same boat, ice shanty, or from shore. The clerk fills out one interview form for each group of anglers. The number of individual anglers actually contacted by the clerk is usually much greater than the number of groups listed in this table since most groups consist of more than one angler.

**Total Angler Hours** is the estimated total number of hours that anglers spent fishing on Lynx 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 in order to compare effort on Lynx Lake to other lakes.

**1998-99 Total Angler Hours/Acre** is the total angler hours divided by the area of the lake in acres. This is from the previous creel survey that took place on Lynx Lake.

**County Average Hours/Acre** is the average angler effort in hours per acre for county lakes that have been surveyed since 1990. This value is useful for fishing pressure comparisons with other waters.

**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 Lynx Lake to other lakes in northern Wisconsin.

**Table 2. Comparison of creel survey synopses, Lynx Lake, 2016 (summer only) and 1998-99 fishing seasons.**

CREEL YEAR: 2016 Summer Only

<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	1442	35.2%	73	19.7	0		
Northern Pike	0	0.0%	14		0		
Muskellunge	909	22.2%	55	20.8	0		
Smallmouth Bass	1460	35.7%	618	2.8	5	322.6	17.2
Largemouth Bass	0	0.0%	36		0		
Yellow Perch	200	4.9%	261	1.2	0		
Bluegill	83	2.0%	27	4.6	0		
Pumpkinseed	0	0.0%	10		0		
Rock Bass	0	0.0%	12		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.

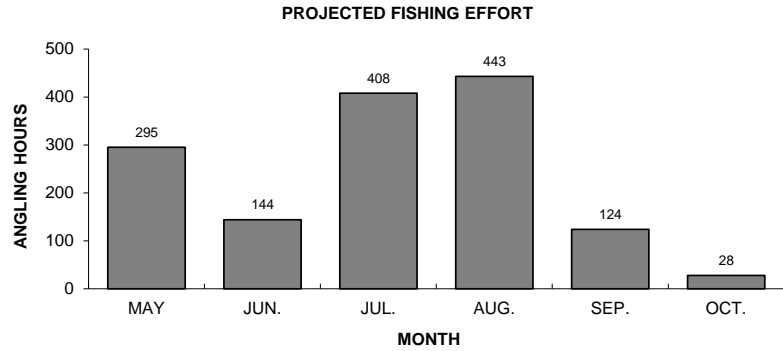
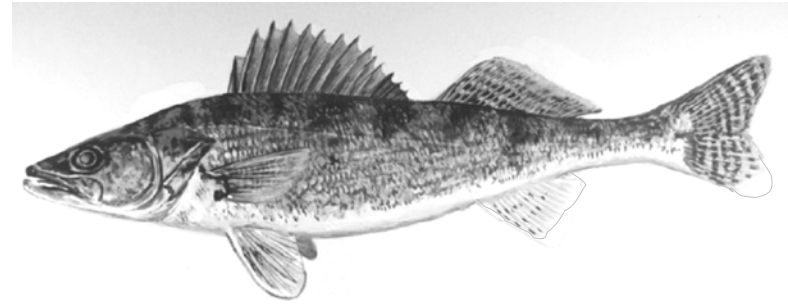
\*\* A blank cell in this column indicates that no fish of a given species were harvested by anglers who specifically targeted that species.

CREEL YEAR: 1998-99 Summer and Winter

<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	3740	30.6%	308	12.1	54	69.9	16.6
Northern Pike	35	0.3%	6	8.2	0	0.0	
Muskellunge	2056	16.8%	97	31.7	0	0.0	
Smallmouth Bass	3987	32.6%	1565	2.9	45	88.5	14.7
Largemouth Bass	27	0.2%	50	0.0	45	0.0	
Yellow Perch	1854	15.2%	1313	2.0	63	29.3	6.4
Bluegill	453	3.7%	8	0.0	0	0.0	
Pumpkinseed	63	0.5%	30	10.4	0	0.0	
Rock Bass	0	0.0%	94	0.0	0	0.0	



# WALLEYE



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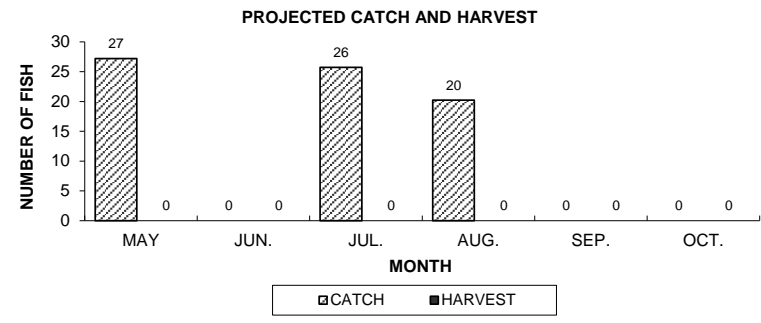
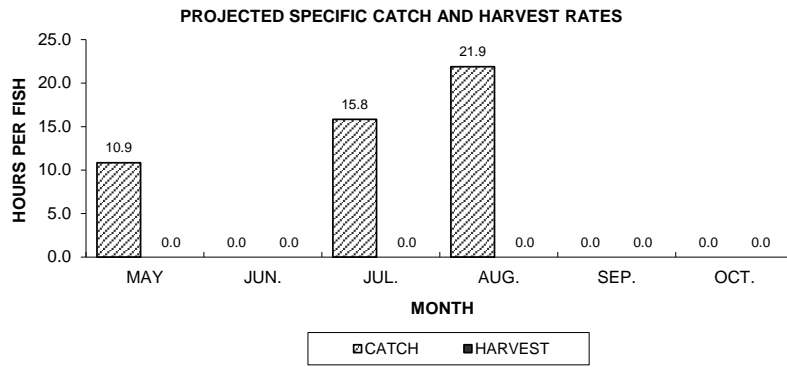


Figure 1. Walleye sportfishing effort, catch, harvest, and length distribution, Lynx Lake, during 2016 season.

# NORTHERN PIKE

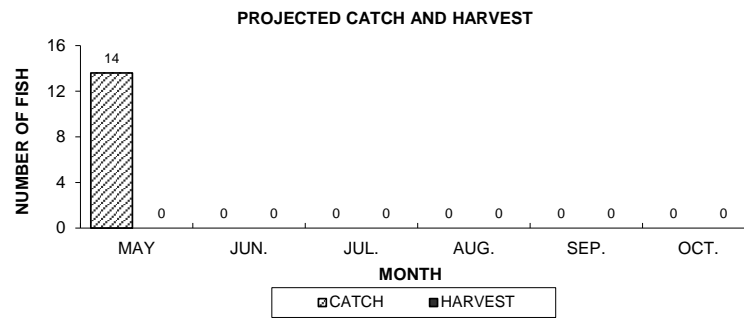
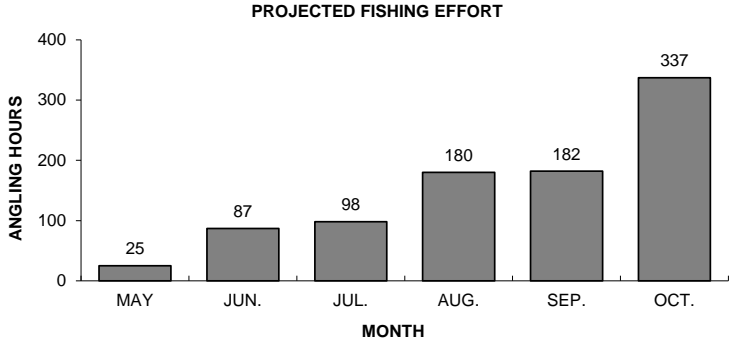


Figure 2. Northern pike sportfishing effort, catch, harvest, and length distribution, Lynx Lake, during 2016 season.

# MUSKELLUNGE



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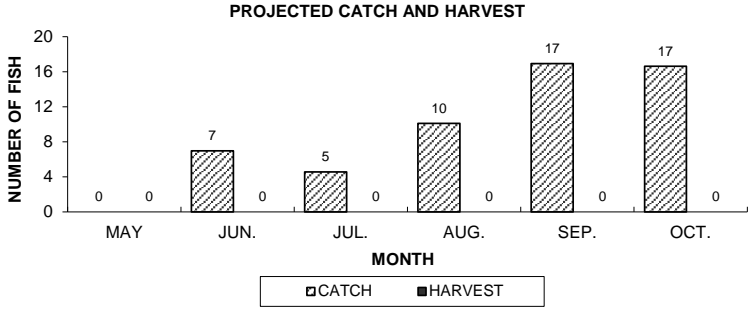
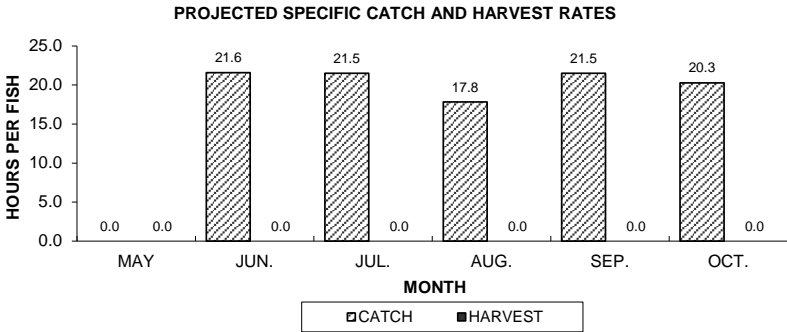


Figure 3. Muskellunge sportfishing effort, catch, harvest, and length distribution, Lynx Lake, during 2016 season.

# SMALLMOUTH BASS

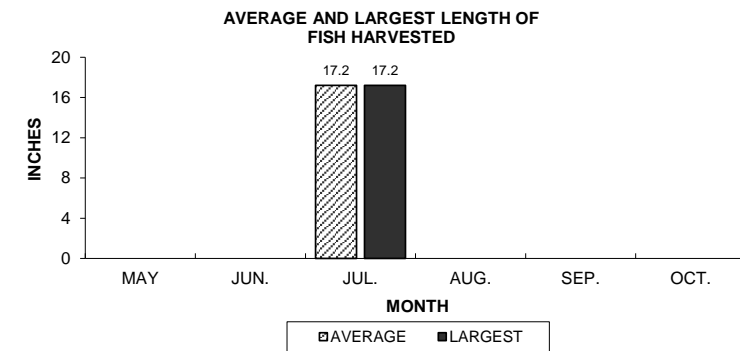
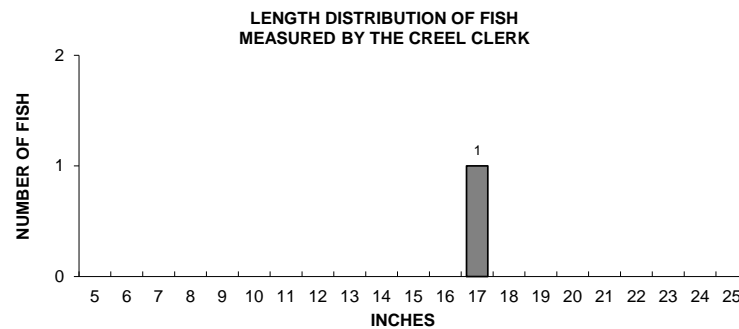
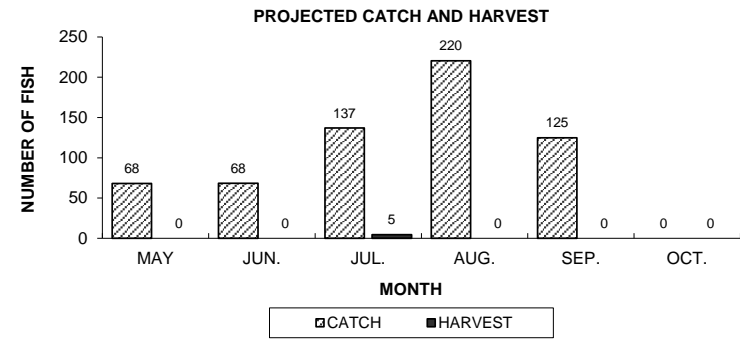
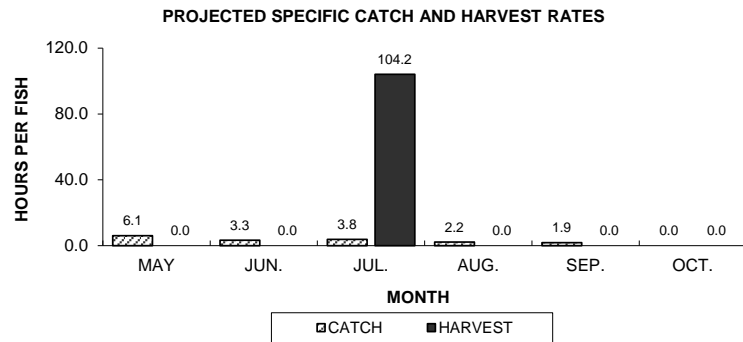
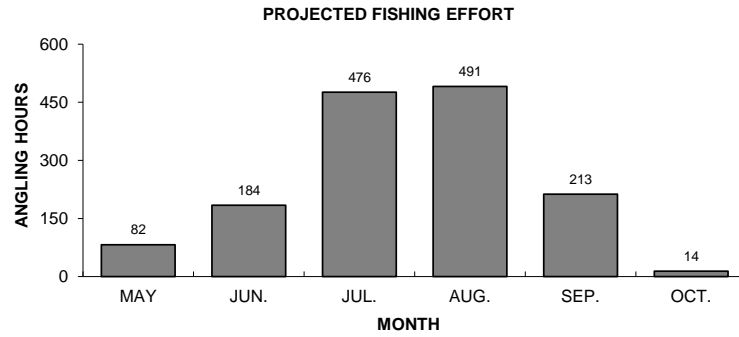
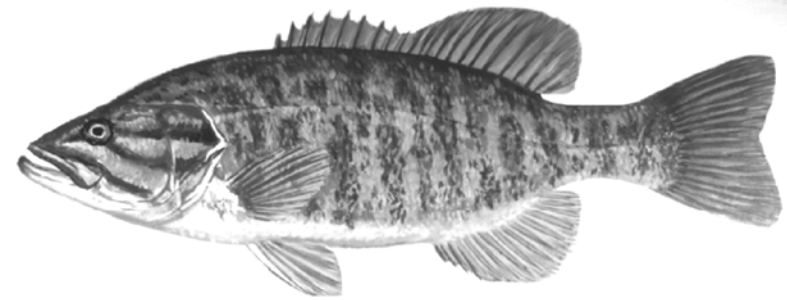
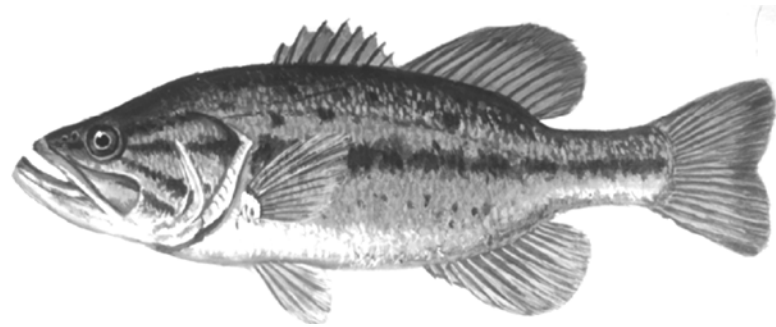


Figure 4. Smallmouth bass sportfishing effort, catch, harvest, and length distribution, Lynx Lake, during 2016 season.

# LARGEMOUTH BASS



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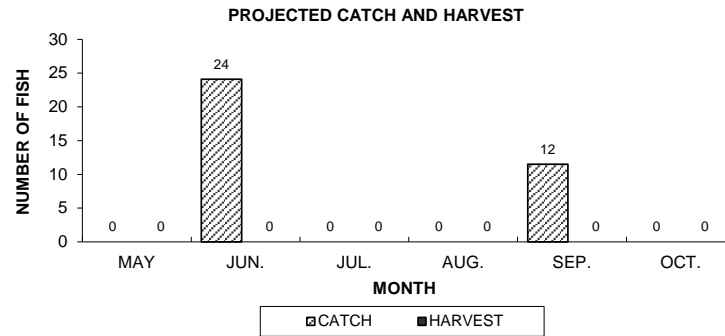
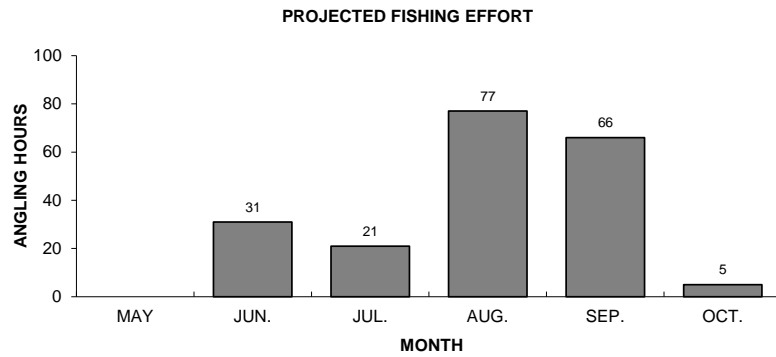


Figure 5. Largemouth bass sportfishing effort, catch, harvest, and length distribution, Lynx Lake, during 2016 season.

# YELLOW PERCH



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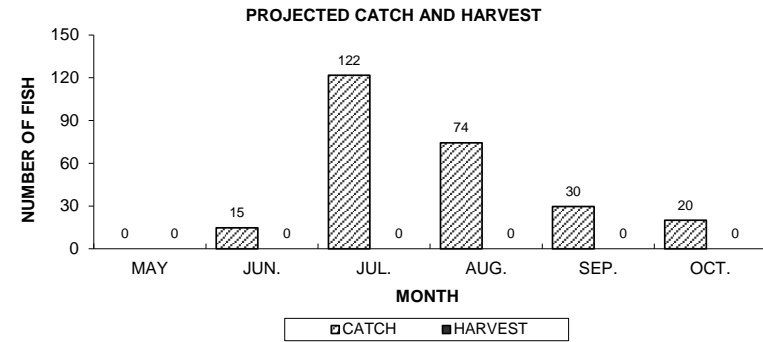
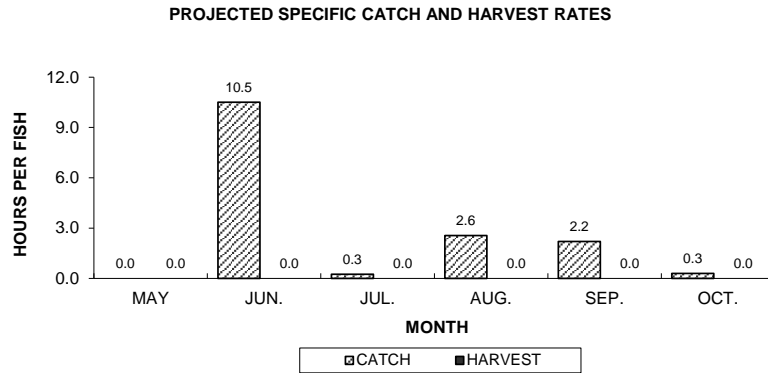


Figure 6. Yellow perch sportfishing effort, catch, harvest, and length distribution, Lynx Lake, during 2016 season.

# BLUEGILL

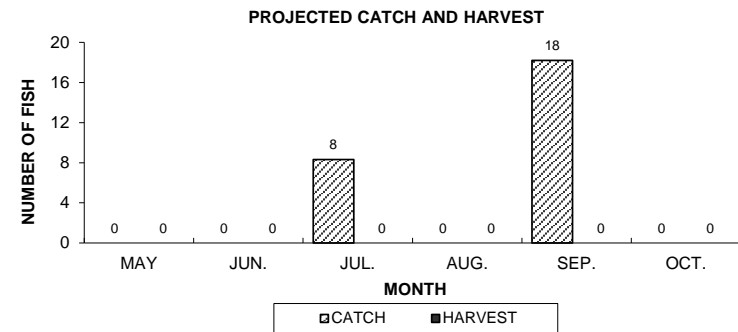
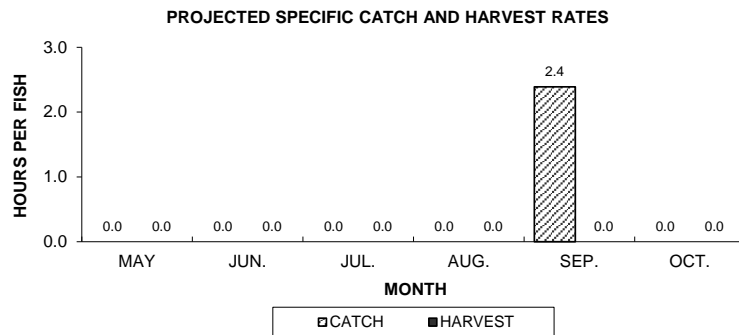
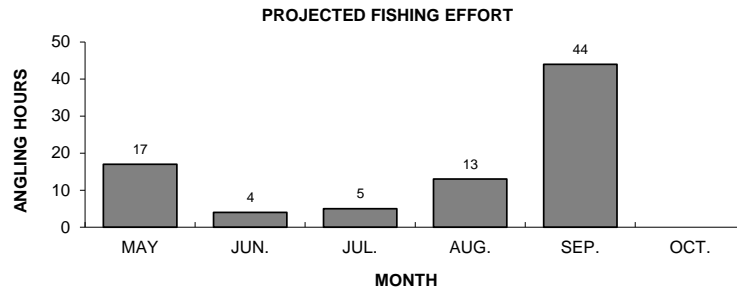
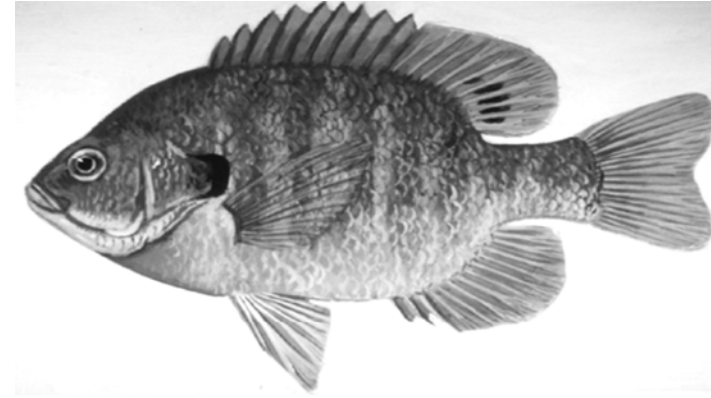


Figure 7. Bluegill sportfishing effort, catch, harvest, and length distribution, Lynx Lake, during 2016 season.