WISCONSIN DEPARTMENT OF NATURAL RESOURCES
CREEL SURVEY REPORT

PELICAN LAKE

ONEIDA COUNTY

2011-12

Treaty Fisheries Publication

Compiled by Tim Tobias & Jeff Blonski
Treaty Fisheries Technicians

CONTENTS

SUMMARY TABLES

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.

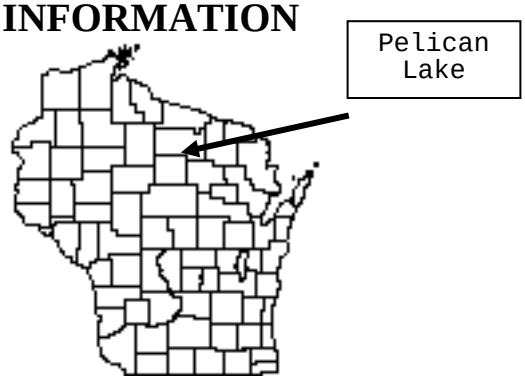
You may have encountered a DNR creel survey clerk on a recent fishing trip. We appreciate your cooperation during an interview. The survey only takes a moment of your time and it gives the Department valuable information needed for management of the fishery.

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

GENERAL LAKE INFORMATION



Location
Pelican Lake is located in Oneida County in the Town of Pelican Lake.

Physical Characteristics
Pelican Lake is a 3,585 acre drainage lake with a maximum depth of 39 feet. Littoral substrate consists primarily of sand, with lesser amounts of muck, and gravel. Pelican Lake is a soft water lake with slightly acidic, clear water of moderate transparency.

Seasons Surveyed
The period referred to in this report as the 2011-2012 fishing season ran from May 7, 2011 through March 4, 2012. The open water creel survey ran from May 7 through October 31, 2011 and the ice fishing creel survey ran from December 1, 2012 through March 4, 2012.

Weather
Ice-out on Pelican Lake was around April 27, 2011. Fishable-ice formed on Pelican Lake in mid December.

Sportfishing Regulations
The following seasons, daily bag limits, and length limits were in place on Pelican Lake during the 2011-12 fishing season:

		Catch&Release	
Largemouth Bass& Smallmouth Bass	5/7-6/17		
	6/18-3/4	1	18"
Musky	5/28-11/30	1	50"
Northern Pike	5/7-3/4	5	none
Walleye	5/7-3/4	2*	15"
Panfish	year round	25	none
White Bass	year round	none	none
Rock Bass	year round	none	none

* The statewide bag limit was 5 walleye, but due to tribal declarations it was reduced on Pelican 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 4 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. This was the fourth time the Department conducted a creel survey on Pelican Lake. The last creel survey took place in 1990-91.

General Angler Information
Anglers spent 165,768 hours or 46.2 hours per acre fishing Pelican Lake during the 2011-12 season (Table 1). That was more than the Oneida County average of 37.3 hours per acre. July was the most heavily fished month (9.7 hours per acre). Fishing effort was lightest in October (2.4 hours per acre) for those months when the entire month was creeled.

RESULTS BY SPECIES
Walleye (Table 2, Figure 1)
Walleyes received the second most fishing effort during the 2011-12 season. Anglers spent 52,019 hours targeting walleyes. The greatest fishing effort for walleyes was in May (12,711 hours). October had the least amount of walleye fishing effort (2,271hours).

Total catch of walleyes was 13,479 fish with a harvest of 3,915 fish. Highest catch (3,477 fish) occurred and harvest (1,932 fish) occurred in May. Anglers fished 4.3 hours to catch and 13.9 hours to harvest a walleyes during 2011-12.

The mean length of harvested walleyes was 17.8 inches and the largest walleye measured was a 24.2 inch fish.

Northern Pike (Table 2, Figure 2)
Fishing effort directed at northern pike was 36,946 hours during the 2011-12 season. Northern pike fishing effort was greatest in December (9,258 hours).

Total catch of northern pike was 14,976 with a harvest of 6,032 fish.

The mean length of harvested northern pike was 22.5 inches and the largest northern pike measured was a 36.0inch fish.

Muskellunge (Table 2, Figure 3)
Anglers spent 17,447 hours targeting muskellunge during the 2011-12 season. Muskellunge fishing effort was greatest in July (5,861 hours).

Total catch of muskellunge was 217 fish. Highest catch (132 fish) occurred in July. Anglers fished 116.3 hours to catch a muskellunge during 2011-12.

Smallmouth Bass (Table 2, Figure 4) Fishing effort targeted at smallmouth bass was 14,541 hours during the 2011-12 season. Smallmouth bass fishing effort was greatest in August (5,128 hours).

Total catch of smallmouth bass was 9,066 fish with 149 harvested. Highest catch (2,306 fish) occurred in August. Anglers fished 2.5 hours to catch a smallmouth bass during 2011-12.

Largemouth Bass (Table 2, Figure 5) Fishing effort directed at largemouth bass was 13,329 hours during the 2011-12 season. Largemouth bass fishing effort was greatest in August (5,289 hours).

Total catch of largemouth bass was 8,633 fish with a harvest of 30 fish. Highest catch (3,386 fish) occurred in August. Anglers fished 1.7 hours to catch a largemouth bass during 2011-12.

White Bass (Table 2, Figure 6)
Fishing effort directed at white bass was 449 hours of directed effort during the 2011-12 season. Effort was greatest in February (300 hours).

Panfish (Table 2, Figures 7-11)

Yellow perch were the most sought after panfish species during the survey. Fishing effort directed at yellow perch was 68,286 hours. Total catch of yellow perch was 131,000 fish with 40,141 harvested. The mean length of yellow perch harvested was 8.9 inches.

Bluegills were the second most sought after panfish species during the survey. Fishing effort directed at bluegills was 48,537 hours. Total catch of bluegills was 104,476 fish with 30,093 harvested. The mean length of bluegills harvested was 7.0 inches.

Black crappies were the third most sought after panfish species during the survey. Fishing effort directed at black crappies was 18,847 hours. Anglers caught 9,730 black crappies and harvested 5,682 fish. The mean length of black crappies harvested was 10.1 inches.

Pumpkinseeds and rock bass were also caught during the 2011-12 season.

ACKNOWLEDGMENTS

Completion of this survey was possible because of the efforts of the technical staff of the fisheries management and Treaty Fisheries Unit. Treaty staff responsible for ensuring completion of this survey included Jeff Blonski, Joelle Underwood, Marty Kiepke, Jason Halverson, and Tim Tobias. Jason Halverson, John Davis, and Bob Consolo were the creel clerks on Pelican 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, Gerrit's Lakeview Inn, who generously allowed the Department to keep a boat and snowmobile on their property during this survey.

This creel report was reviewed by, John Kubisiak 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/fish/ceded/reports.html

Table 1. Sportfishing effort summary, Pelican Lake, 2011-12 season.

Month	Total Angler Hours	Total Angler Hours/Acre	Oneida County Average Hours/Acre	Statewide Average Hours/Acre
May	17794	5.0	5.3	5.8
June	14054	3.9	7.1	6.1
July	34625	9.7	8.2	6.4
August	24742	6.9	6.2	5.4
September	12113	3.4	3.7	3.8
October	8749	2.4	1.8	1.6
December	13499	3.8	1.3	1.7
January	15826	4.4	1.7	1.5
February	23597	6.6	1.7	1.3
March	771	0.2	0.3	**
*Summer Total	112075	31.3	32.3	29.1
*Winter Total	53693	15.0	5.0	4.5
Grand Total	165768	46.2	37.3	33.6

*"Summer" is May-October; "Winter" is December-March
**Too few lakes have been surveyed in March to give a meaningful statewide average.

Total Angler Hours is the estimated total number of hours that anglers spent fishing on Pelican 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 Pelican 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.

Statewide Average Hours/Acre is the average angler effort in hours per acre for inland lakes in the state surveyed between 1990 and 1995. This value can be used to compare Pelican Lake to other lakes statewide.

Table 2. Comparison of creel survey synopses, Pelican Lake, 2011-12 and 1990-91 fishing seasons.

CREEL YEAR: 2011-12

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	52019	18.43%	13479	4.3	3915	13.9	17.8
Northern Pike	36946	13.09%	14976	4.0	6032	7.2	22.5
Muskellunge	17447	6.18%	217	116.3	0		
Smallmouth Bass	14541	5.15%	9066	2.5	149	122.0	18.8
Largemouth Bass	13329	4.72%	8633	1.7	30		18.2
Yellow Perch	68286	24.19%	131000	0.5	40141	1.7	8.9
Bluegill	48537	17.20%	104476	0.5	30093	1.7	7.0
Pumpkinseed	11595	4.11%	9220	2.3	1830	8.0	6.6
Rock Bass	236	0.08%	4269	0.6	403	1.2	8.0
Black Crappie	18847	6.68%	9730	2.2	5682	3.8	10.1
White Bass	449	0.16%	699	1.3	468	1.4	12.5

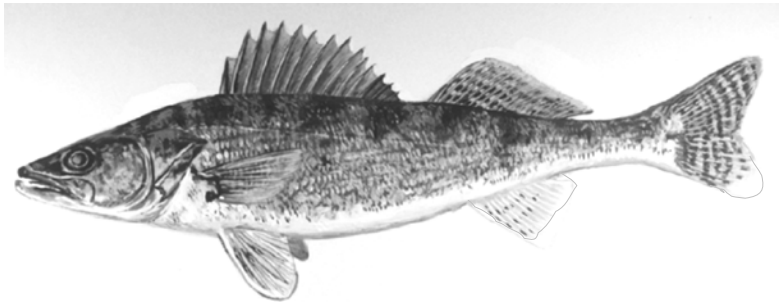
* A blank cell in this column indicates that no fish of a given species were caught by anglers who specifically targeted that species.

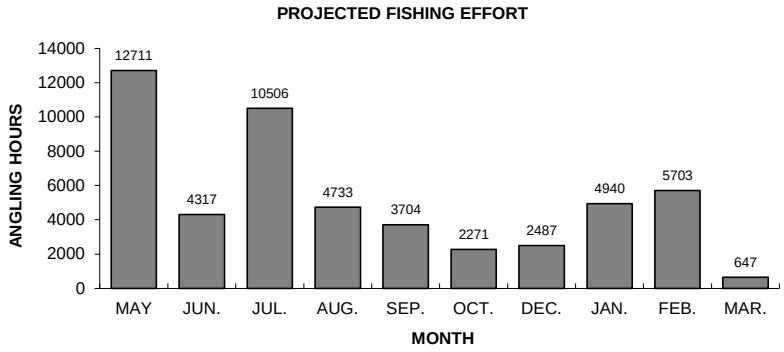
** A blank cell in this column indicates that no fish of a given species were harvested by anglers who specifically targeted that species.

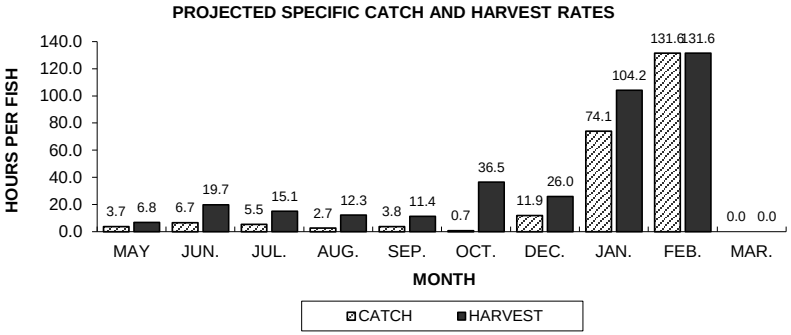
CREEL YEAR: 1990-91

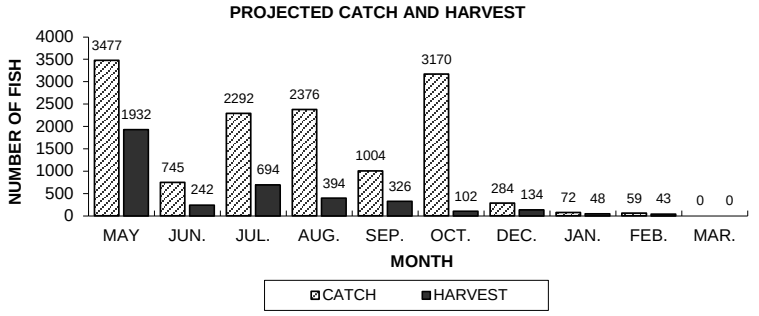
SPECIES	DIRECTED EFFORT (Hours)	PERCENT OF TOTAL	TOTAL CATCH	SPECIFIC CATCH RATE (Hrs/Fish)	TOTAL HARVEST	SPECIFIC HARVEST RATE (Hrs/Fish)	MEAN LENGTH OF HARVESTED FISH
Walleye	78430	21.01%	11324	7.3	1356	57.8	16.7
Northern Pike	63832	17.10%	10918	6.7	6023	11.0	21.9
Muskellunge	40736	10.91%	1261	38.9	146	277.8	37.8
Smallmouth Bass	1114	0.30%	891	3.6	80	25.3	13.6
Largemouth Bass	6325	1.69%	1337	5.9	584	12.3	13.5
Yellow Perch	84468	22.63%	109607	0.8	98455	0.9	7.7
Bluegill	52917	14.17%	58624	0.9	37188	1.5	6.5
Pumpkinseed	1976	0.53%	1655	1.7	1017	2.7	6.5
Rock Bass	636	0.17%	1238	1.3	216	3.0	8.2
Black Crappie	39103	10.47%	22891	1.8	20028	2.0	8.9
White Bass	3796	1.02%	3681	1.3	2198	2.2	11.6

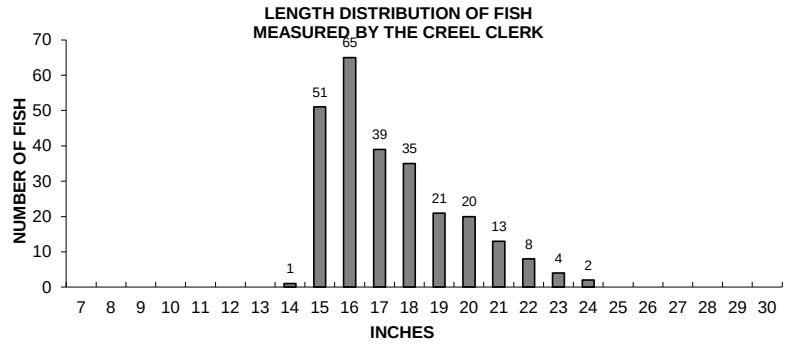
WALLEYE











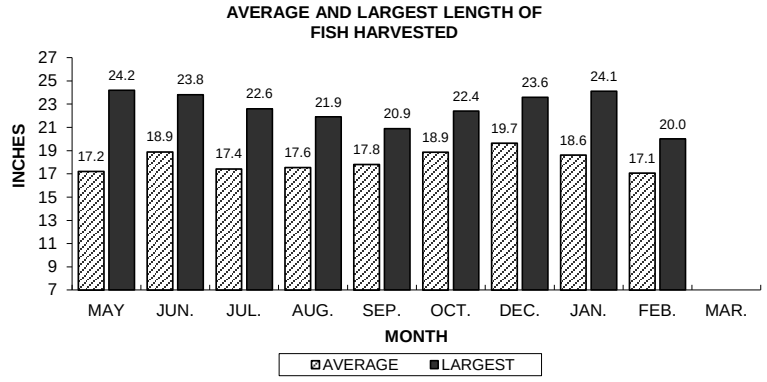
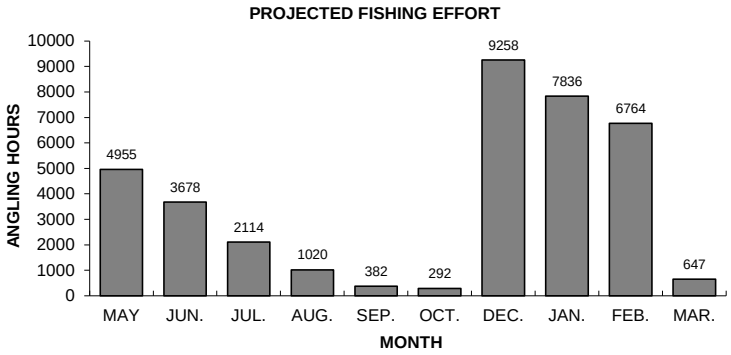
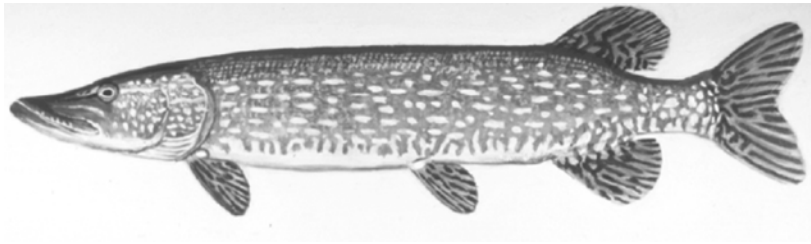
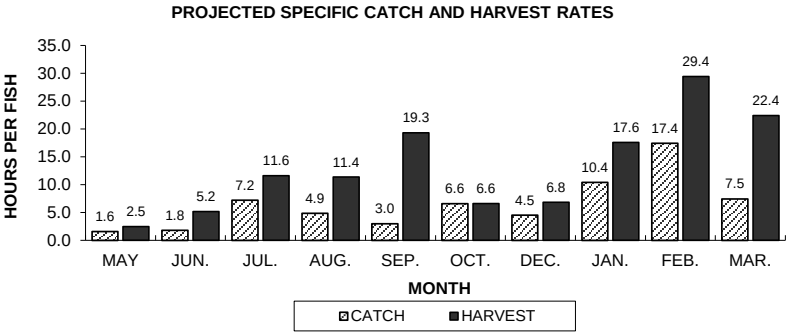


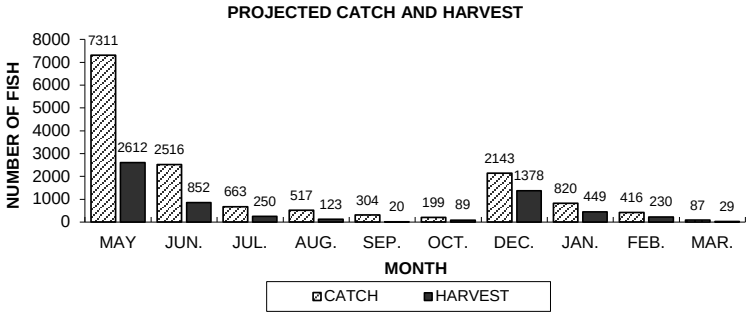
Figure 1. Walleye sportfishing effort, catch, harvest, and length distribution, Pelican Lake, during 2011-12.

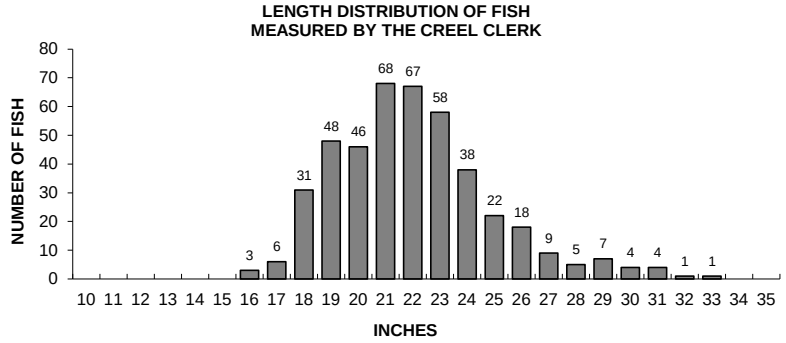


NORTHERN PIKE









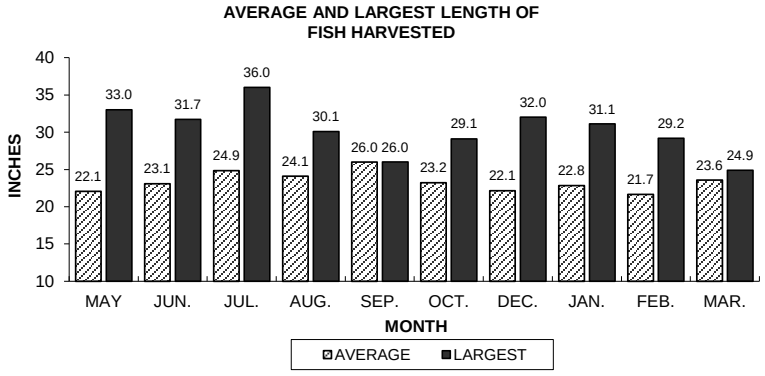
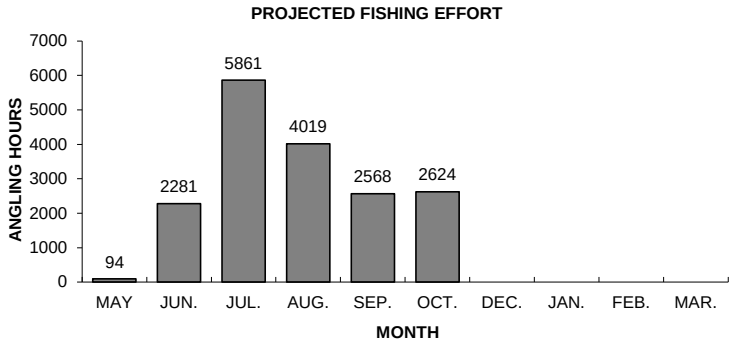
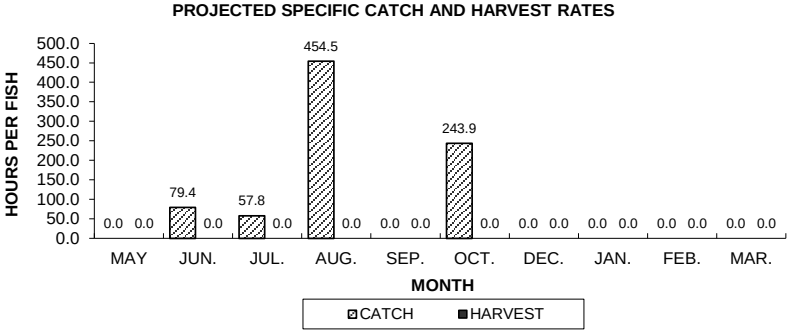
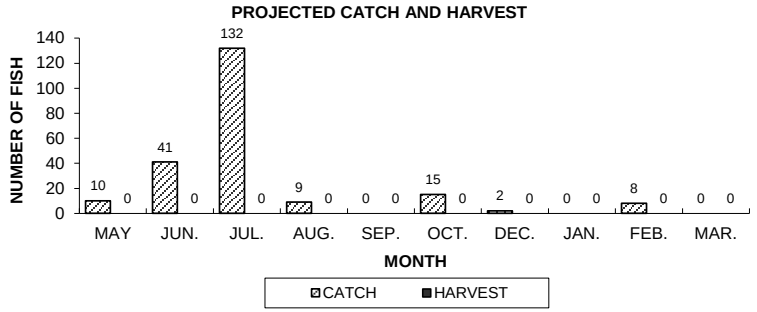


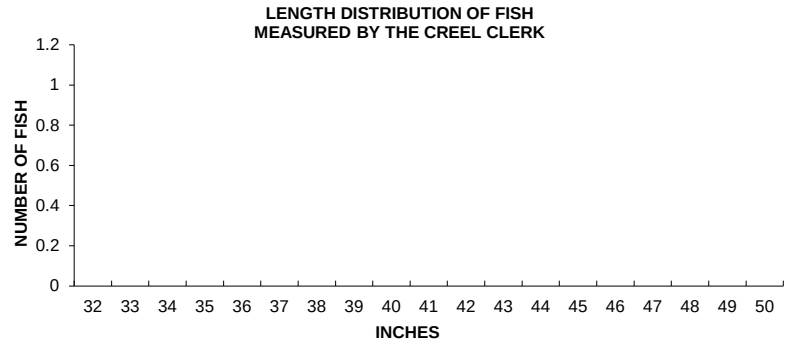
Figure 2. Northern pike sportfishing effort, catch, harvest, and length distribution, Pelican Lake, during 2011-12.

MUSKELLUNGE









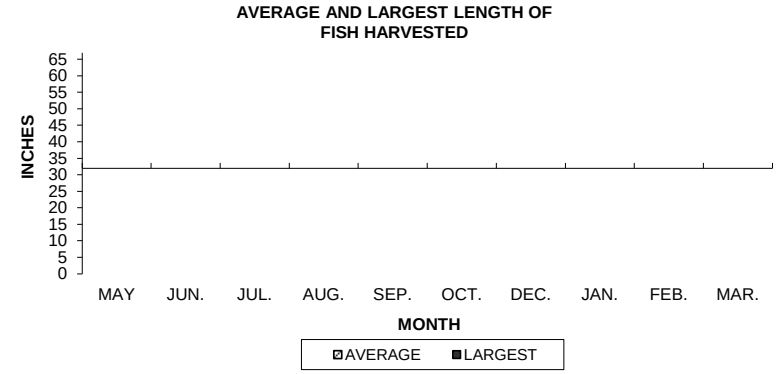
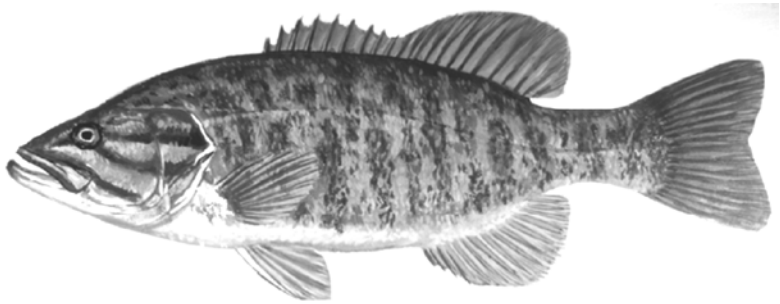
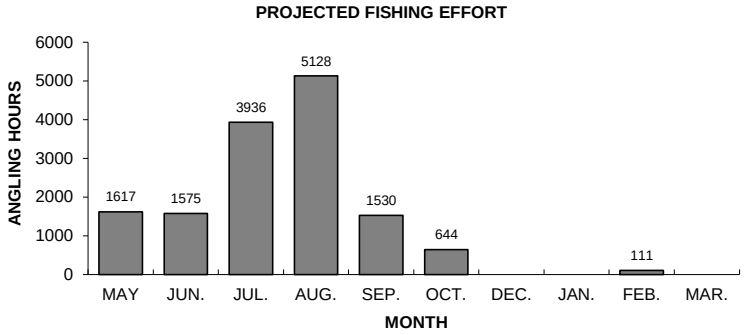
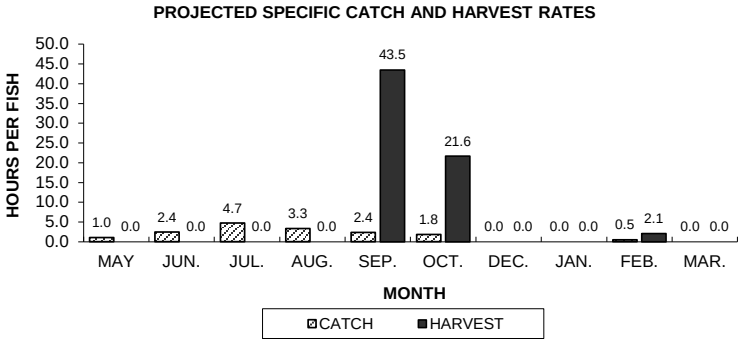


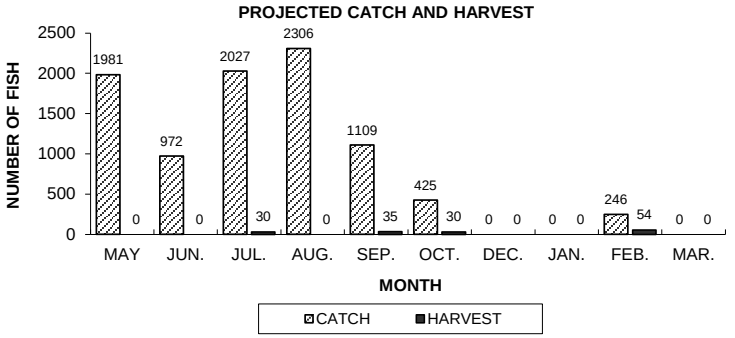
Figure 3. Muskellunge sportfishing effort, catch, harvest, and length distribution, Pelican Lake, during 2011-12.

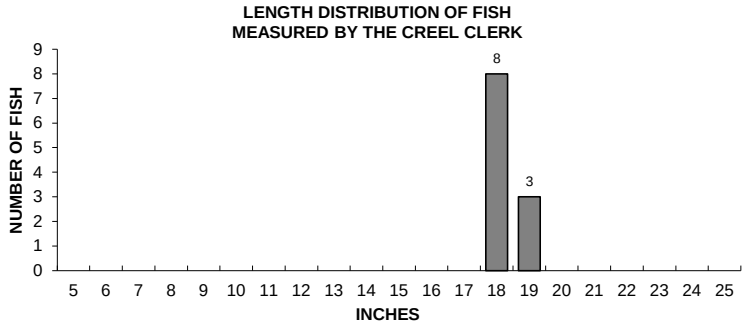
SMALLMOUTH BASS











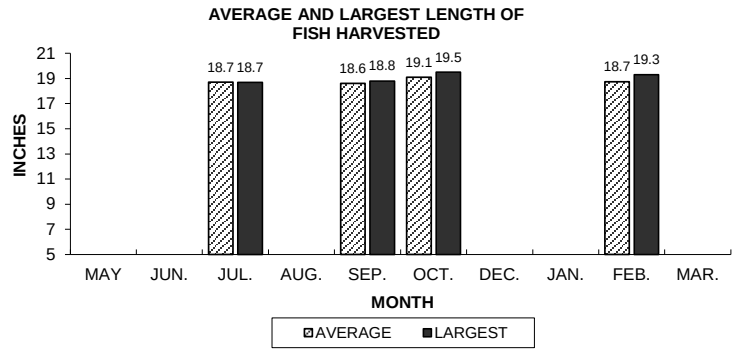
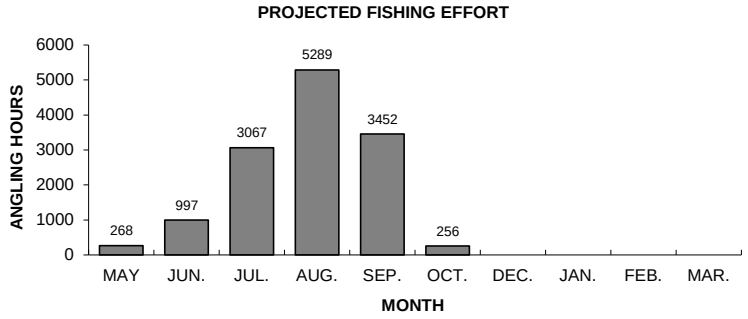
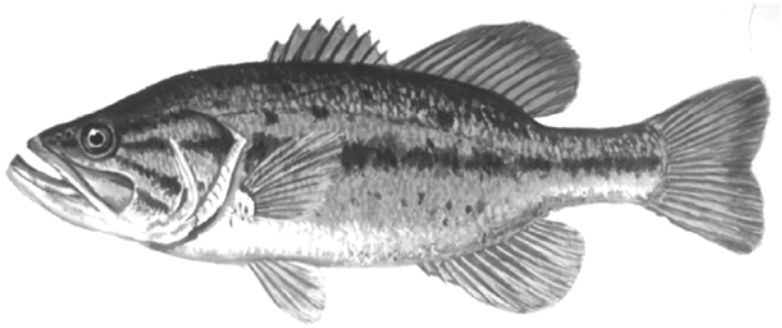
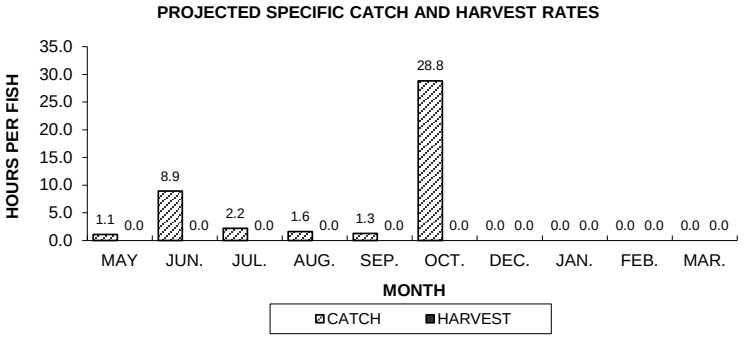


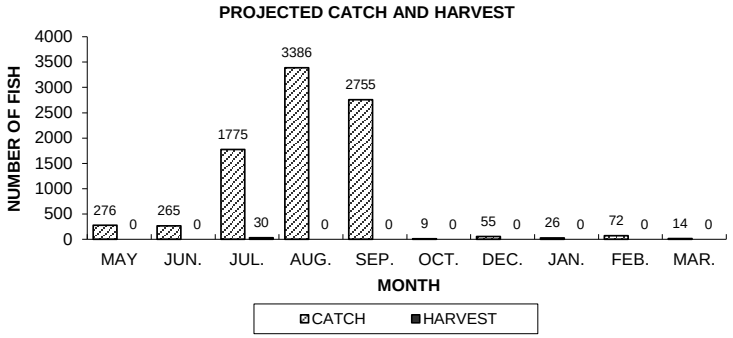
Figure 4. Smallmouth bass sportfishing effort, catch, harvest, and length distribution, Pelican Lake, during 2011-12.

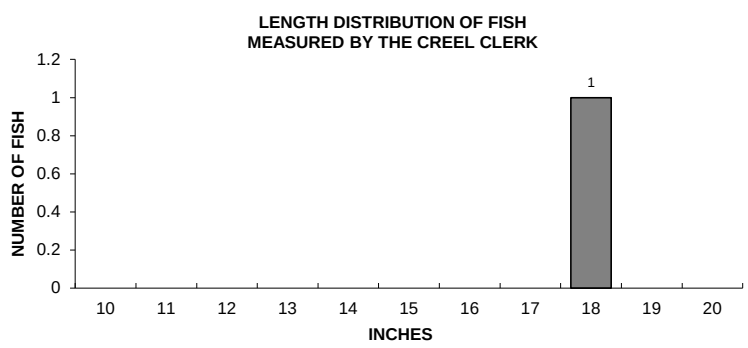
LARGEMOUTH BASS











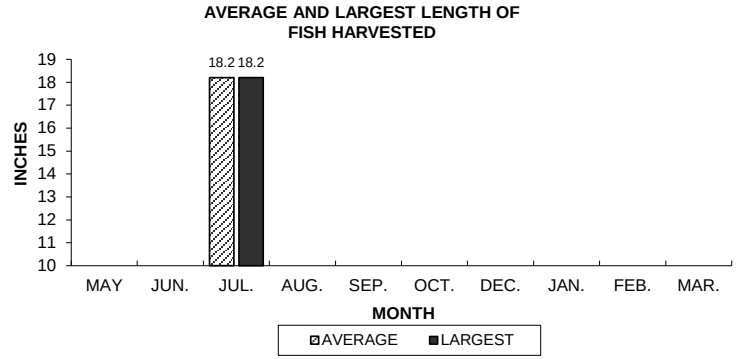


Figure 5. Largemouth bass sportfishing effort, catch, harvest, and length distribution, Pelican Lake, during 2011-12.

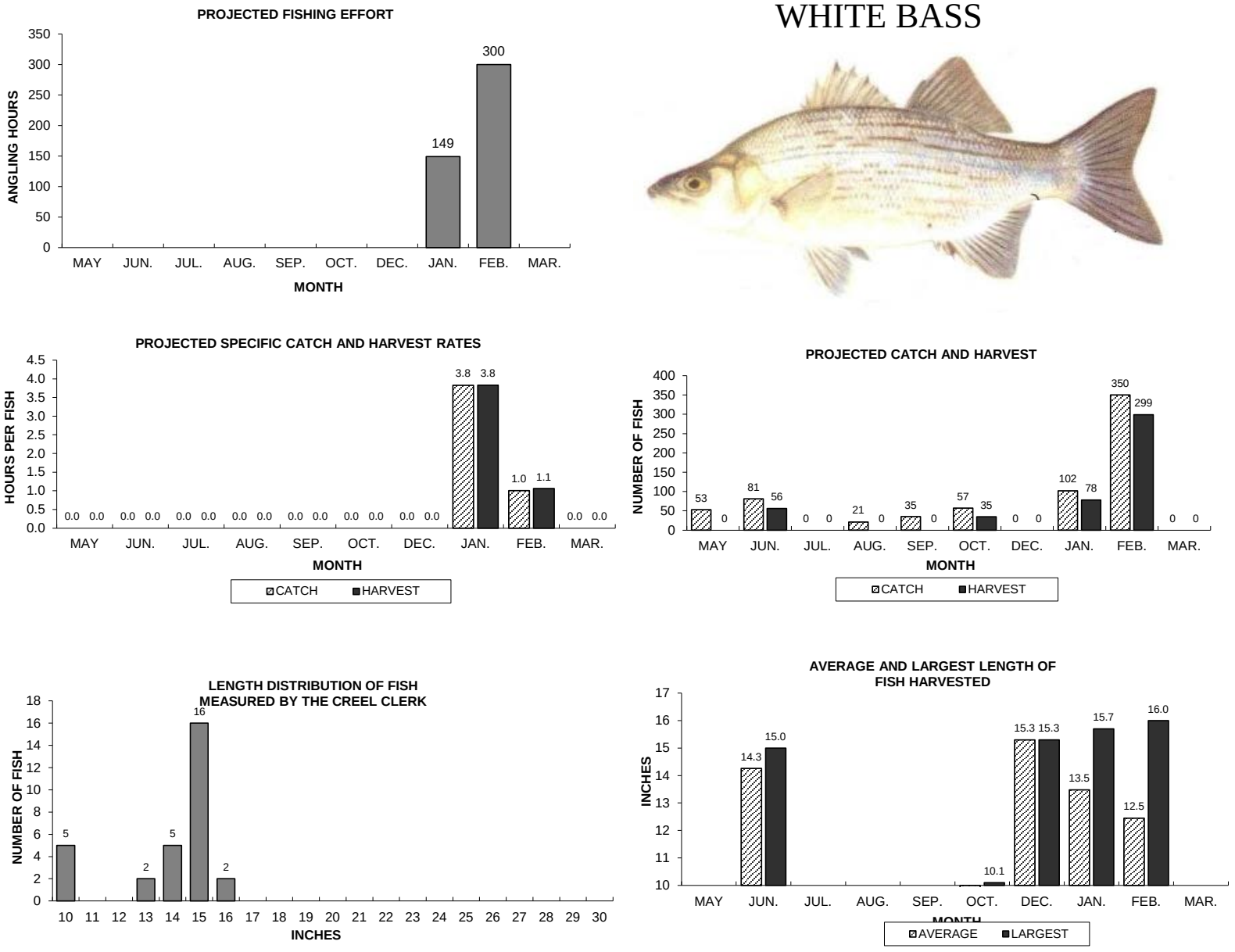
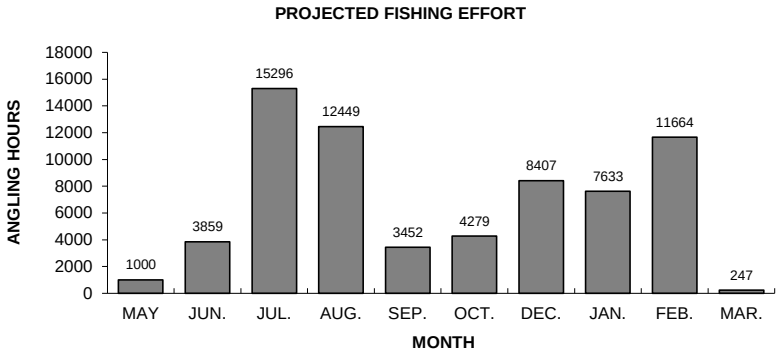
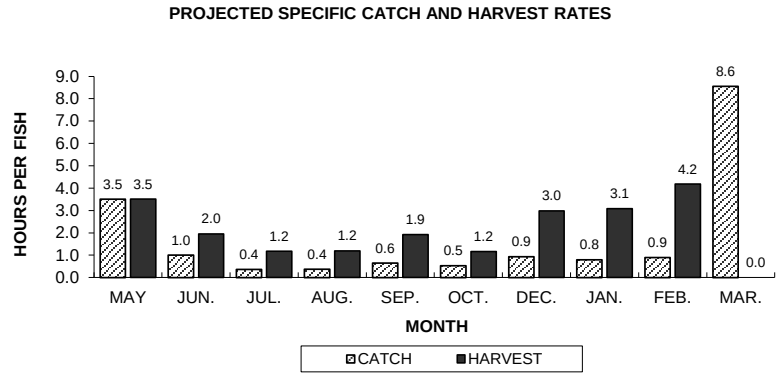
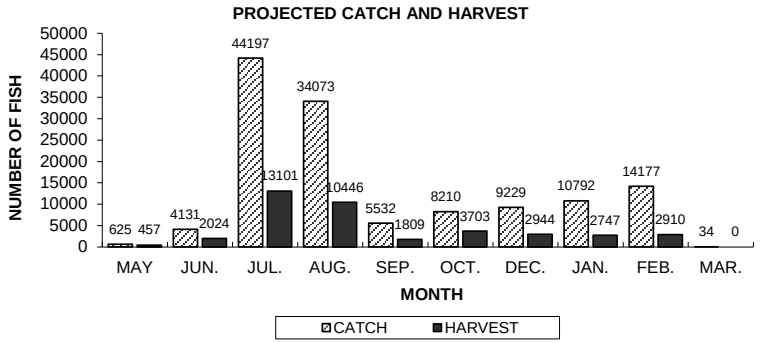


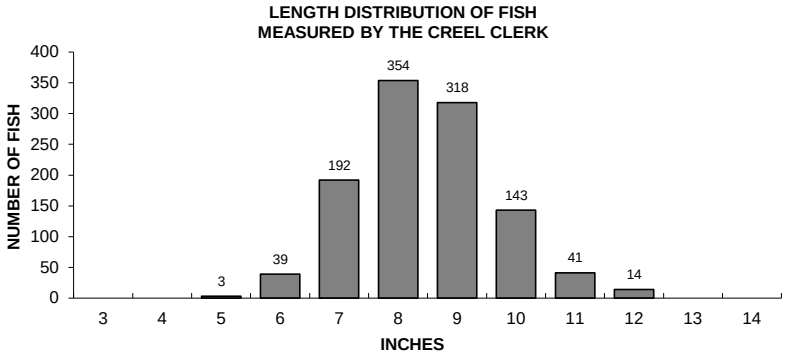
Figure 6. White Bass sportfishing effort, catch, harvest, and length distribution, Pelican Lake, during 2011-12.

YELLOW PERCH









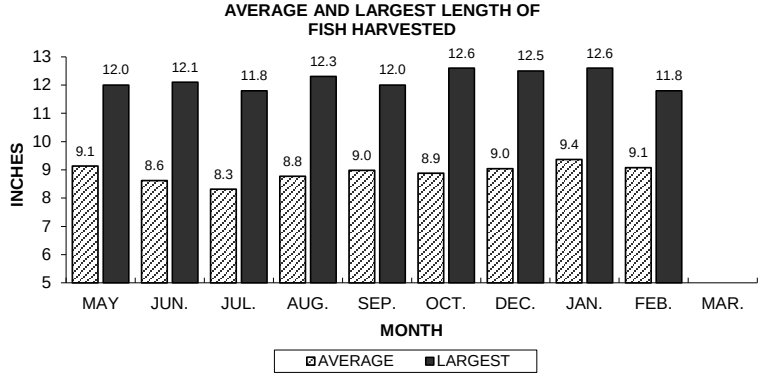
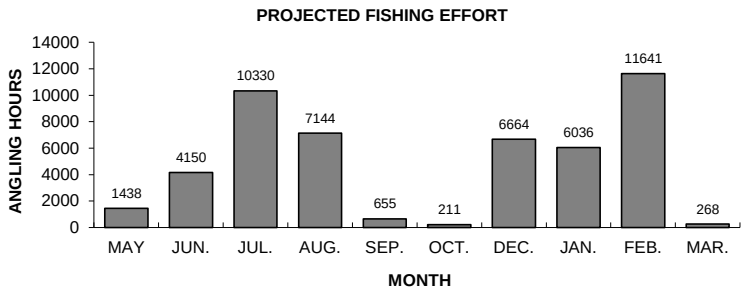
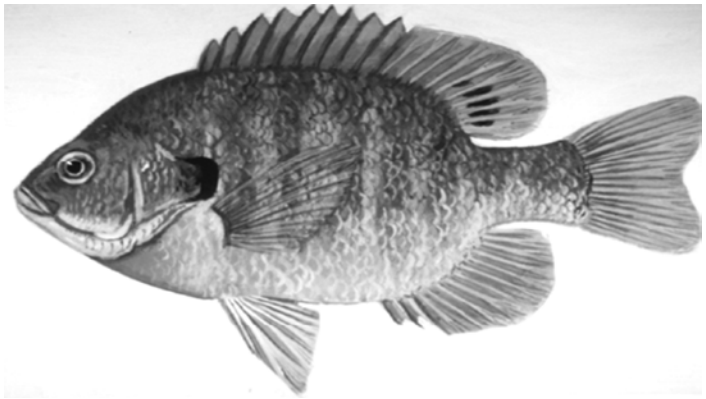
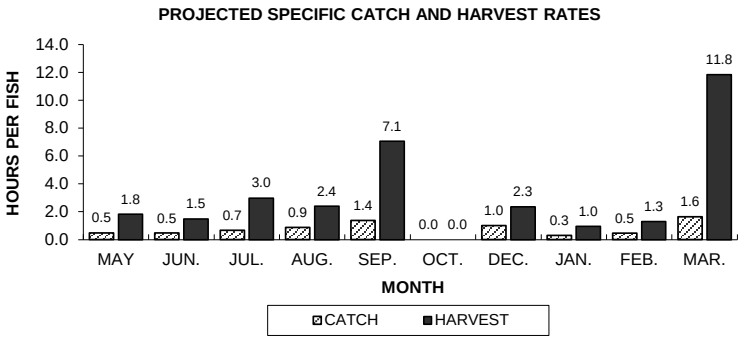


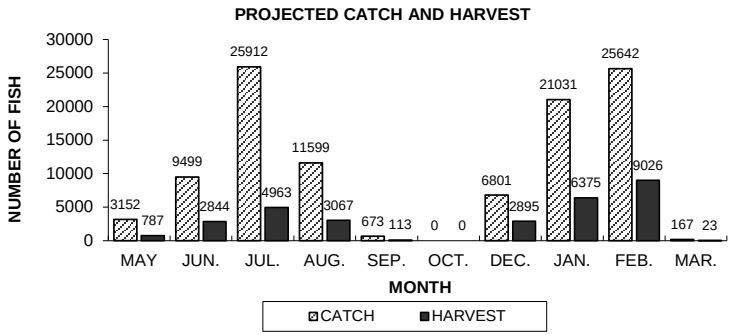
Figure 7. Yellow perch sportfishing effort, catch, harvest, and length distribution, Pelican Lake, during 2011-12.

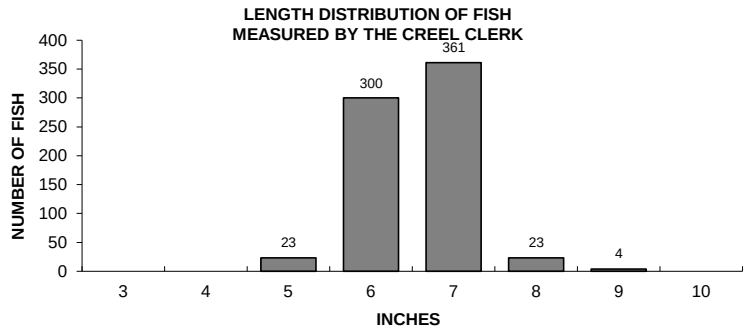
BLUEGILL











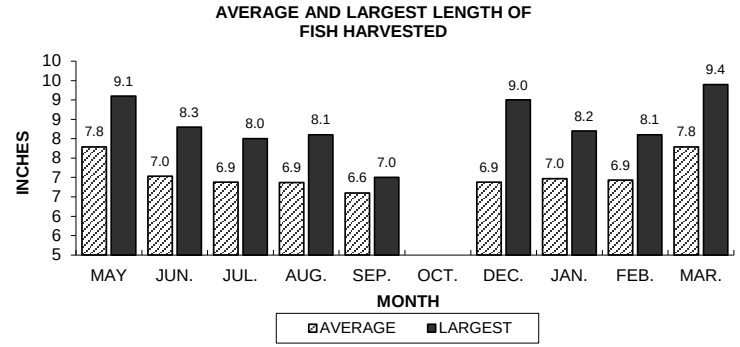
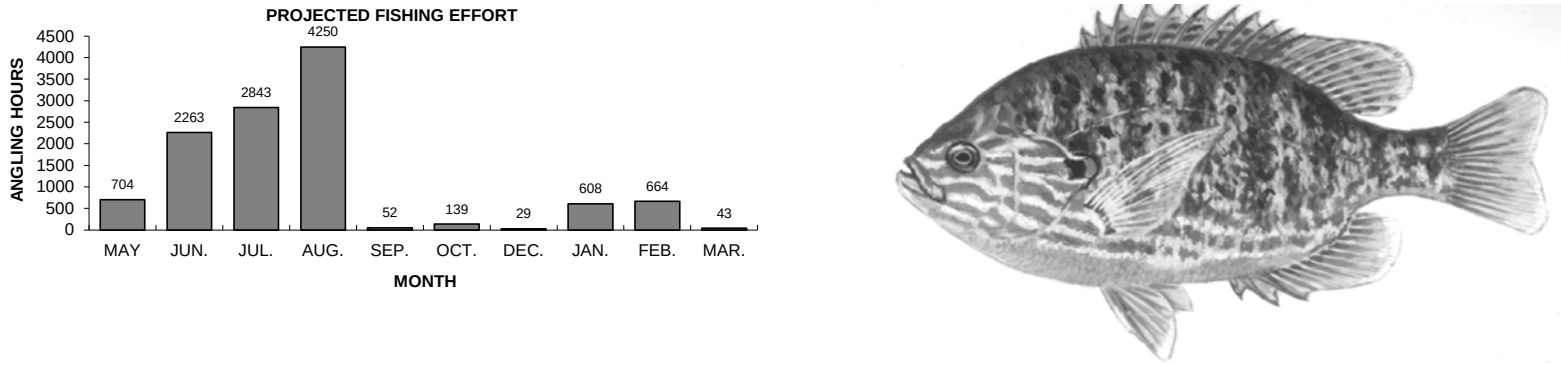
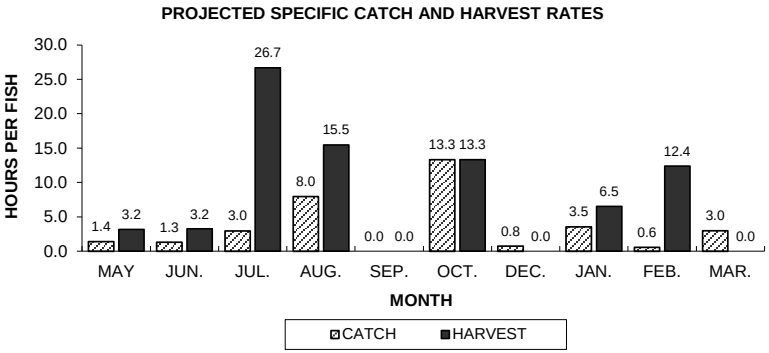
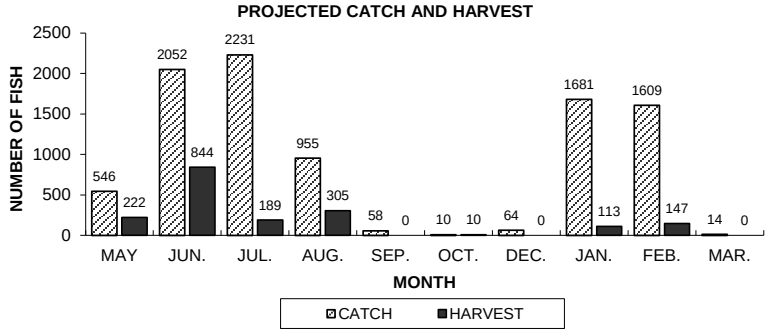


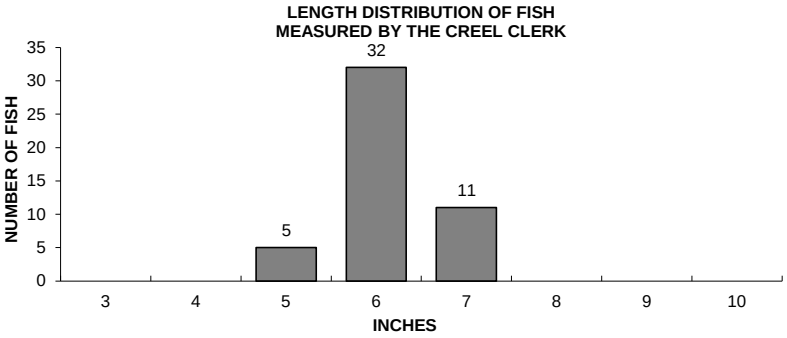
Figure 8. Bluegill sportfishing effort, catch, harvest, and length distribution, Pelican Lake, during 2011-12.

PUMPKINSEED









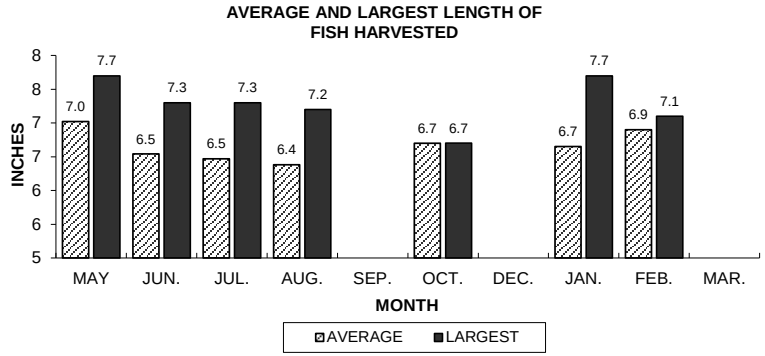
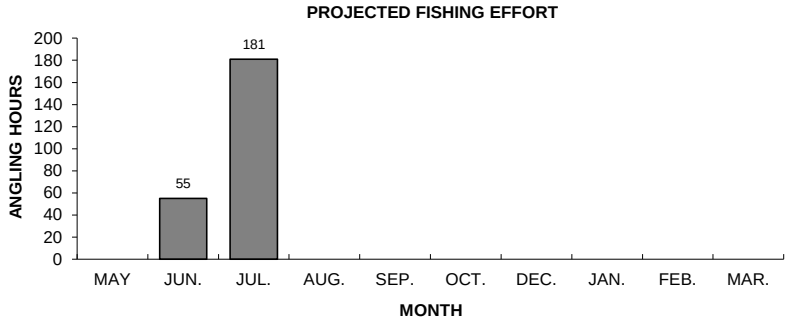
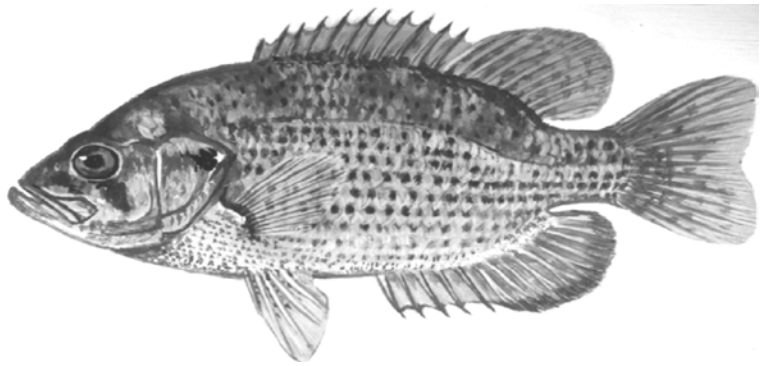
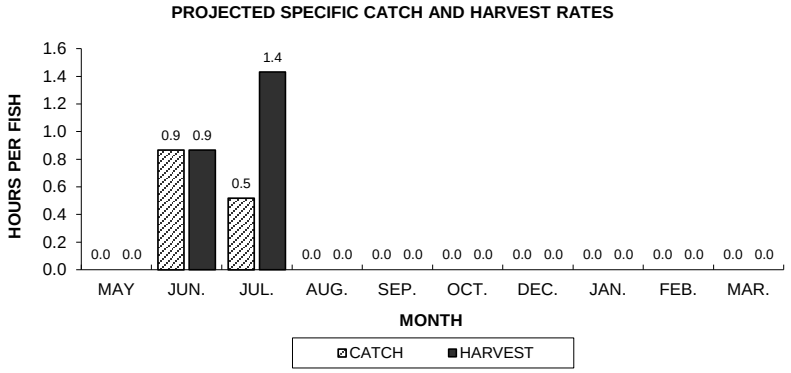


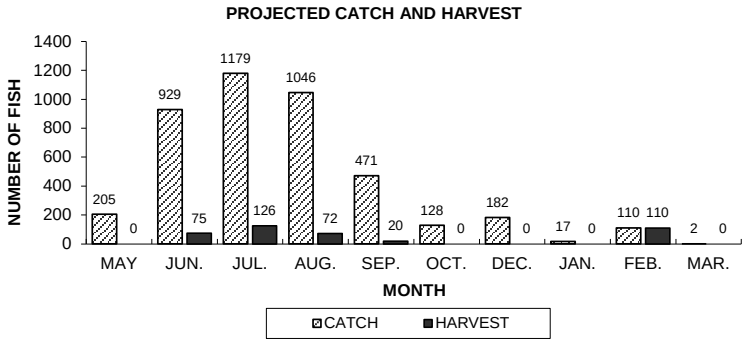
Figure 9. Pumpkinseed sportfishing effort, catch, harvest, and length distribution, Pelican Lake, during 2011-12.

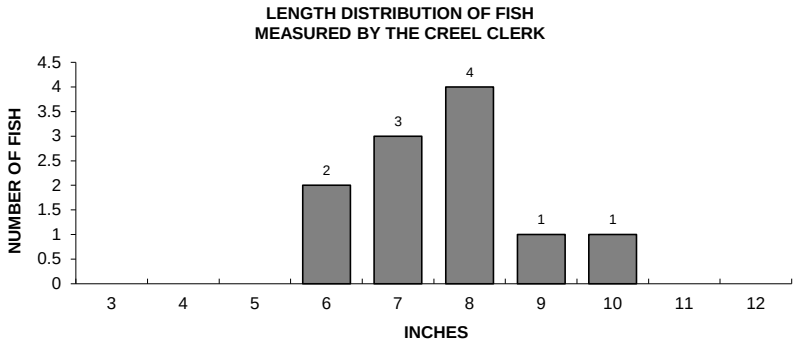
ROCK BASS











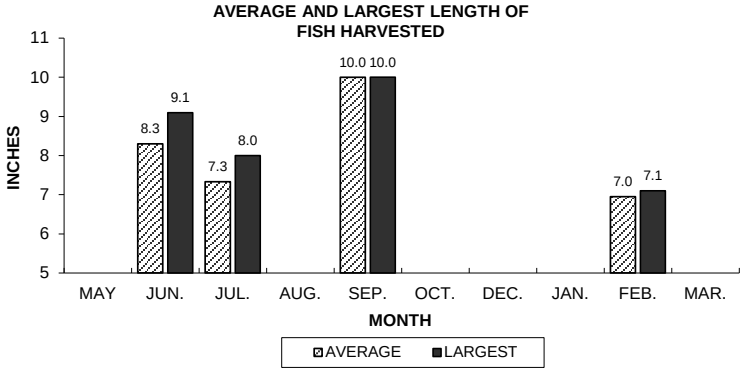
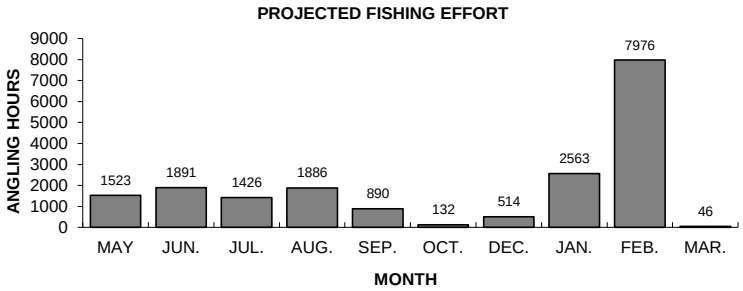
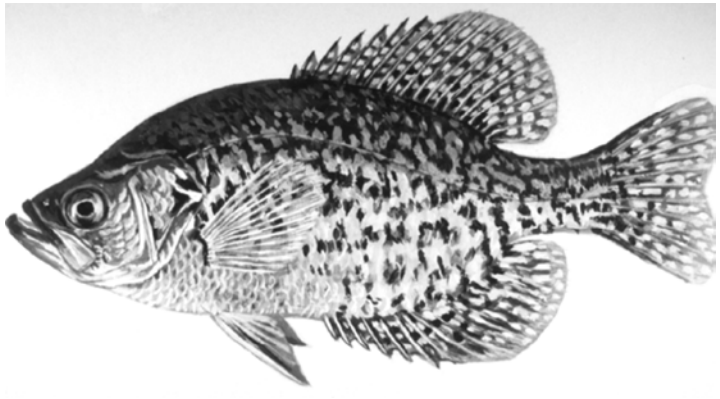
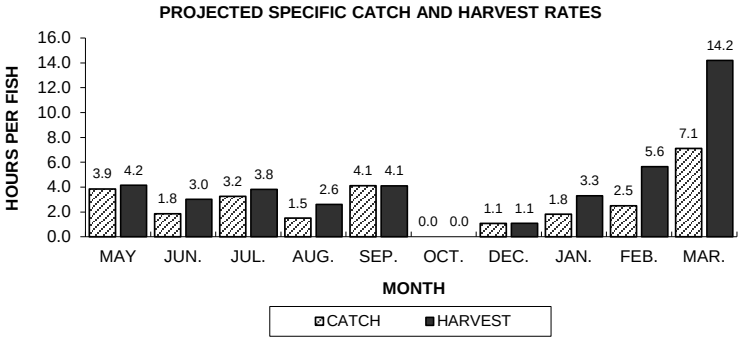


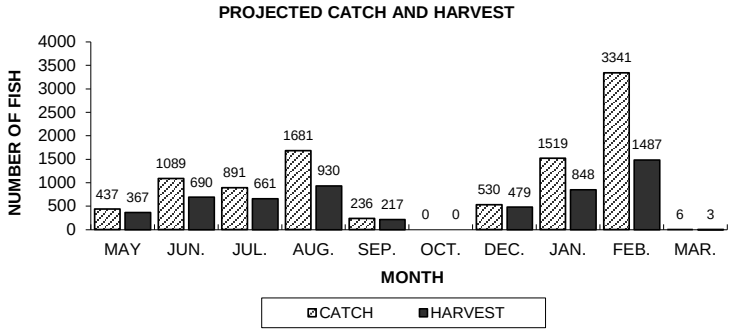
Figure 10. Rock bass sportfishing effort, catch, harvest, and length distribution, Pelican Lake, during 2011-12.

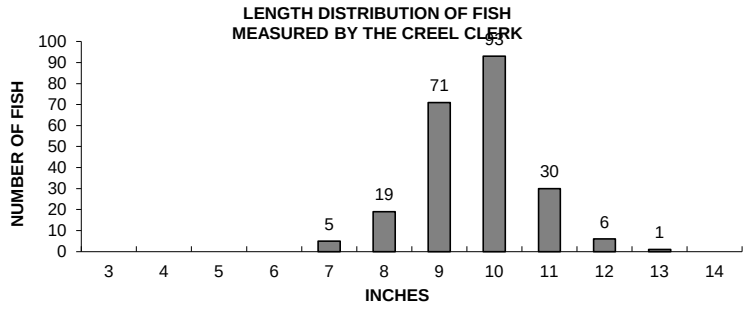
BLACK CRAPPIE











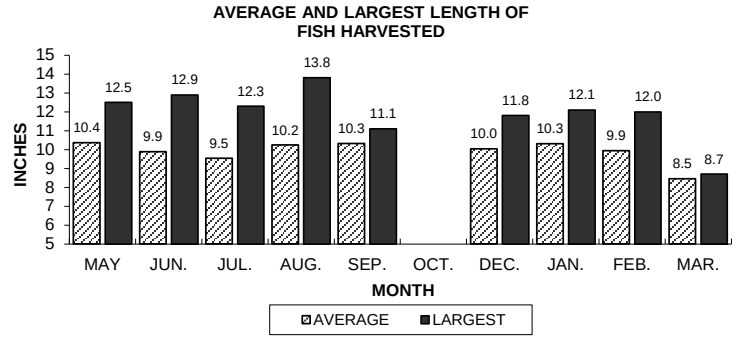


Figure 11. Black crappie sportfishing effort, catch, harvest, and length distribution, Pelican Lake, during 2011-12.