

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

Lac Vieux Desert

Vilas County

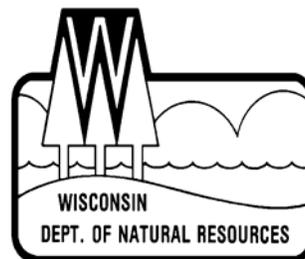
2006-07



Treaty Fisheries Publication

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Treaty Fisheries Technician**

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Fisheries Biologist**



June 2007

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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.

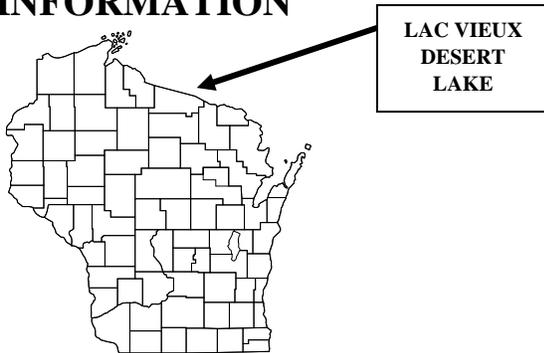
You may have encountered a DNR creel survey clerk on a recent fishing trip. We appreciate your cooperation during an interview. The survey only takes a moment of your time and it gives the Department valuable information needed for management of the fishery.

This report provides projections of:

1. Overall fishing 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 Lac Vieux Desert Lake; discussion of results of the survey; and detailed summaries, by species of fishing effort, catch and harvest.

GENERAL LAKE INFORMATION



Location

Lac Vieux Desert Lake is located four miles north of the town of Phelps in Vilas County. This lake is boundary water with the state of Michigan. Of the 4,300 total lake acres 1,520 are in Michigan. It is also the headwater of the Wisconsin River.

Physical Characteristics

Lac Vieux Desert is a 4,300-acre drainage lake with moderate fertility. It has moderate water transparency depending upon the algal response to the lake's fertility. Substrate consists of thirty-five percent sand, thirty percent gravel, and thirty-five percent muck.

Water levels are regulated by a dam at the outlet that is owned by the Wisconsin Valley Improvement Company.

Seasons Surveyed

The period referred to in this report ran from May 6, 2006 through March 1, 2007. The

open water creel survey ran from May 6 through October 31, 2006 and the ice fishing creel survey ran from December 1, 2006 through March 1, 2007.

Weather

Ice-out on Lac Vieux Desert Lake was around April 16, 2006 which is considered normal for northern Wisconsin. Spring, summer and fall weather was normal.

Fishable-ice formed on Lac Vieux Desert Lake in early December.

Sportfishing Regulations

The following seasons, daily bag limits, and length limits were in place on Lac Vieux Desert Lake during the 2006-fishing season:

Species	Season	Bag Limit	Min. Size
Largemouth Bass & Smallmouth Bass	5/06-6/16	Catch & Release	
	6/17-11/30	5	14"
Musky	5/15-11/30	1	34"
Northern Pike	5/06-3/01	5	none
Walleye	5/06-3/01	2*	15"
Panfish	all year	25	none
Rock Bass	all year	none	none

* The statewide bag limit and on Michigan water was 5 fish, but due to tribal declarations it was reduced on the Wisconsin side of Lac Vieux Desert Lake.

SPECIES CATCH AND HARVEST INFORMATION

Angling information is summarized for each species (Figures 1-10) with effort and/or catch information. Information presented about species whose fishing season extends beyond March 1 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.

General Angler Information

Anglers spent 192,910 hours or 44.9 hours

per acre fishing Lac Vieux Desert Lake during the 2006 season (Table 1). That was higher than the statewide average of 33.6 hours per acre and the Vilas County average of 36.2 hours per acre. May was the most heavily fished month (8.0 hours per acre). Fishing effort was lightest in October (1.9 hours per acre).

SPECIES INFORMATION

Walleye (Table 2, Figure 1)

Walleye was the most sought after fish during the 2006 season. Anglers spent 79,989 hours targeting walleye. Walleye fishing effort was greatest in May (19,092 hours). October had the least amount of walleye fishing effort (1,090 hours).

Catch was 13,501 fish and harvest 3,061 fish. Highest catch (4,999 fish) occurred in July. Anglers fished on average 6.2 hours to catch and 27.2 hours to harvest a walleye during 2006.

The mean length of harvested walleye was 17.3 inches and the largest walleye measured was a 27.1-inch fish harvested in December.

Northern Pike (Table 2, Figure 2)

Fishing effort directed at northern pike was 64,537 hours during the 2006 season. Northern pike fishing effort was greatest in January (19,247 hours).

Catch was 39,672 fish and harvest 8,938 fish. Anglers fished 2.5 hours to catch a northern pike and 9.0 hours to harvest during 2006.

The mean length of harvested northern pike was 21.6 inches and the largest northern pike measured was a 35.5-inch fish harvested in February.

Muskellunge (Table 2, Figure 3)
Anglers spent 53,404 hours targeting muskellunge during the 2006 season. Muskellunge fishing effort was greatest in June (13,311 hours).

Catch was 1,956 fish and harvest was 0 fish. Highest catch (555 fish) occurred in June. Anglers fished 30.5 hours to catch a muskellunge during 2006.

Smallmouth Bass (Table 2, Figure 4)
Fishing effort targeted at smallmouth bass was 241 hours during the 2006 season.

Catch was 450 fish. Highest catch (363 fish) occurred in July. No smallmouth bass were reported harvested by anglers.

Largemouth Bass (Table 2, Figure 5)
Fishing effort directed at largemouth bass was 1097 hours during the 2006 season. Largemouth bass catch was highest in June (192 fish).

The 2006 season anglers fished an average of 19.8 hours to catch a Largemouth Bass. Based on this survey we estimated that only 23 largemouth bass were harvested by anglers. No largemouth bass were measured by the clerk.

Panfish (Table 2, Figures 6-10)

Yellow Perch was the most sought after panfish during the survey. Fishing effort directed at yellow perch was 69,977 hours during the 2006 season. Catch was 239,914 fish and harvest 63,825 fish. The mean length of harvested yellow perch was 8.2 inches.

Anglers caught 27,621 and harvested 11,922 bluegills. The mean length of harvested bluegill was 7.4 inches.

Fishing effort directed at Black Crappie was 12,663 hours during the 2006 season. Total catch was 5,452 and harvest 4,499 fish. The mean length of Black Crappie harvested was 10.3 inches.

Other panfish caught were Rock Bass (8,179 fish) and Pumpkinseed (67,066 fish).

ACKNOWLEDGMENTS

Completion of this survey was possible because of the efforts of the technical staff of the Treaty Fisheries Unit. Treaty staff responsible for ensuring completion of this survey includes Steve Kramer, Tim Tobias, Joelle Underwood, Marty Kiepke, and Jason Halverson. Marty Kiepke was the creel clerk on Lac Vieux Desert Lake during the entire 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.

Additional copies of this report and those covering other local lakes can be obtained from the Woodruff DNR. Requests should be directed to:

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Table 1. Sportfishing effort summary, Lac Vieux Desert Lake, 2006-07 season.

Month	Total Angler Hours	Total Angler Hours/Acre	Vias County Average Hours/Acre	Statewide Average Hours/Acre
May	34524	8.0	5.4	5.8
June	33429	7.8	7.1	6.1
July	29933	7.0	7.7	6.4
August	21739	5.1	6.7	5.4
September	19502	4.5	4.2	3.8
October	8073	1.9	2.0	1.6
December	10824	2.5	0.5	1.7
January	21184	4.9	0.7	1.5
February	13702	3.2	0.9	1.3
March			0.1	**
*Summer Total	147200	34.2	34.1	29.1
*Winter Total	45710	10.6	2.1	4.5
Grand Total	192910	44.9	36.2	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 Lac Vieux Desert 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 Lac Vieux Desert 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 Lac Vieux Desert Lake to other lakes statewide.

Table 2. Creel survey synopses, Lac Vieux Desert Lake, 2006-07 fishing season.

CREEL YEAR: 2006-07

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	79989	23.94%	13501	6.2	3061	27.2	17.3
Northern Pike	64537	19.31%	39672	2.5	8938	9.0	21.6
Muskellunge	53404	15.98%	1956	30.5	0		
Smallmouth Bass	241	0.07%	450	8.7	0		
Largemouth Bass	1097	0.33%	685	19.8	23		
Yellow Perch	69977	20.94%	239914	0.3	63825	1.1	8.2
Bluegill	29848	8.93%	27621	1.2	11922	2.8	7.4
Pumpkinseed	22365	6.69%	67066	0.5	24325	1.1	6.9
Rock Bass	49	0.01%	8179		1633		8.2
Black Crappie	12663	3.79%	5452	2.6	4499	3.1	10.3

* 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.

Figure 1. Walleye sportfishing effort, catch, and length distribution, Lac Vieux Desert Lake, during 2006-07.

WALLEYE

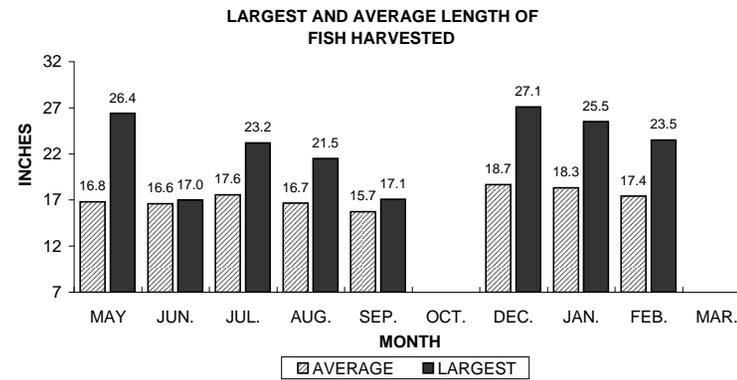
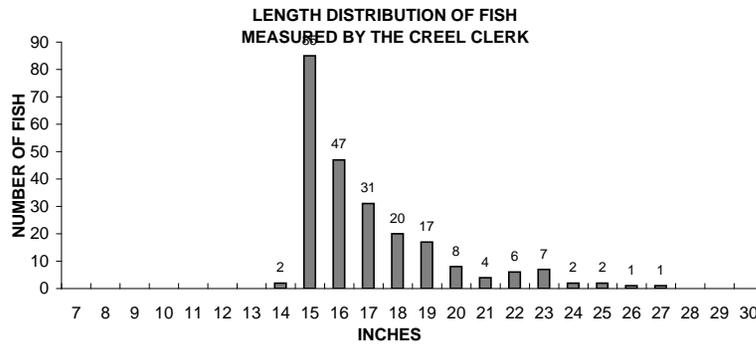
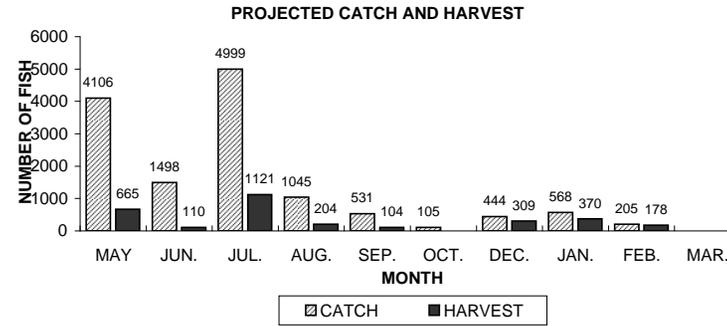
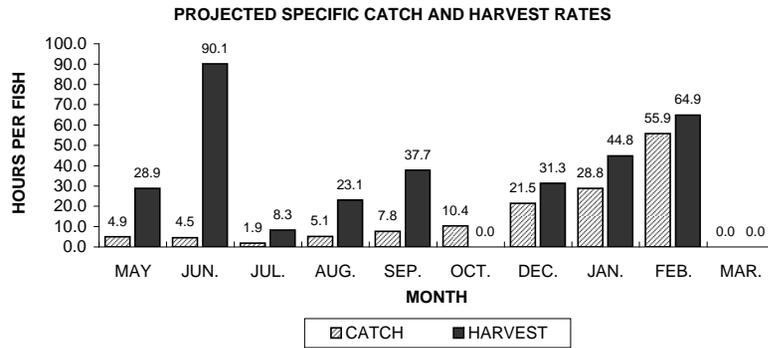
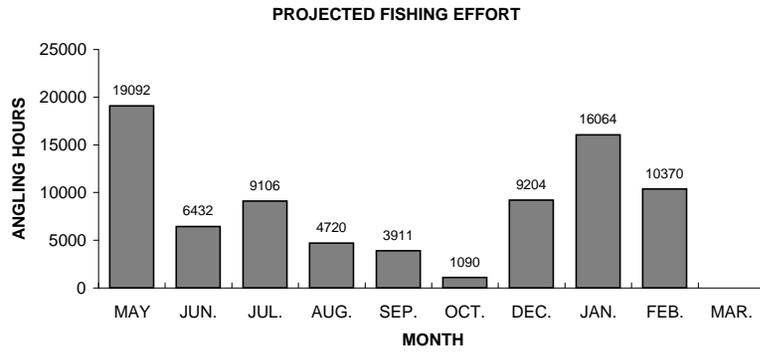
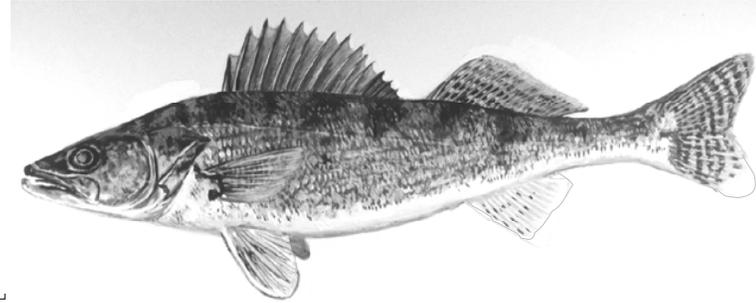


Figure 2. Northern pike sportfishing effort, catch, and length distribution, Lac Vieux Desert Lake, during 2006-07.

NORTHERN PIKE

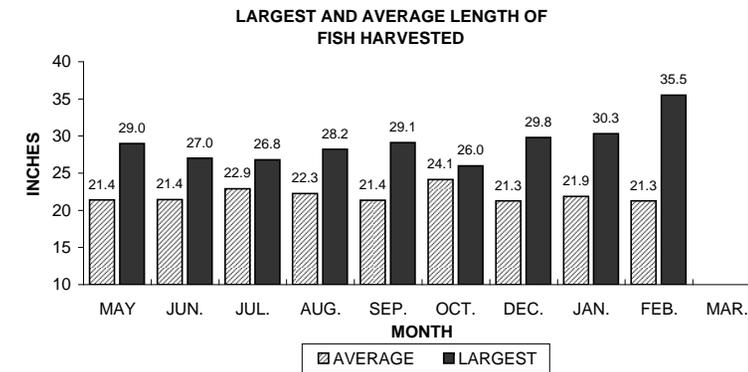
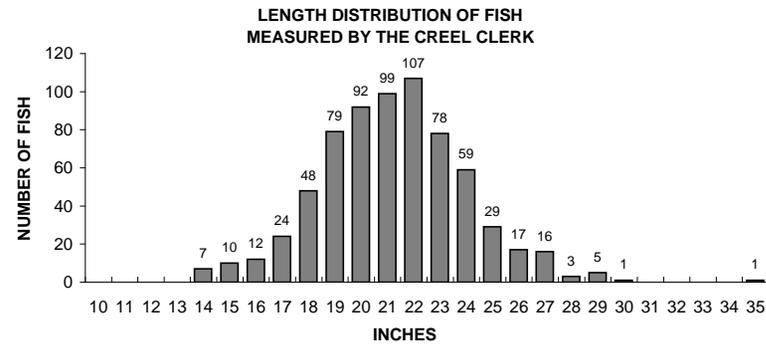
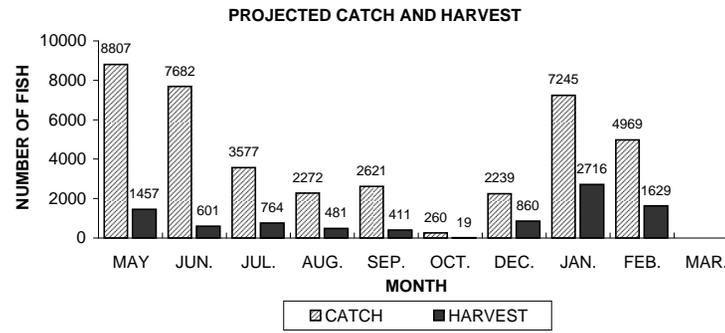
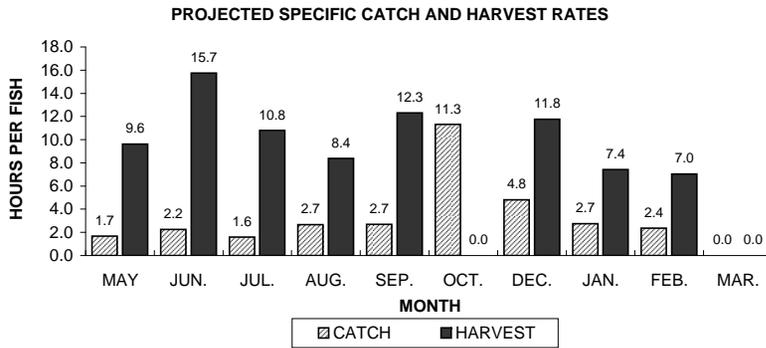
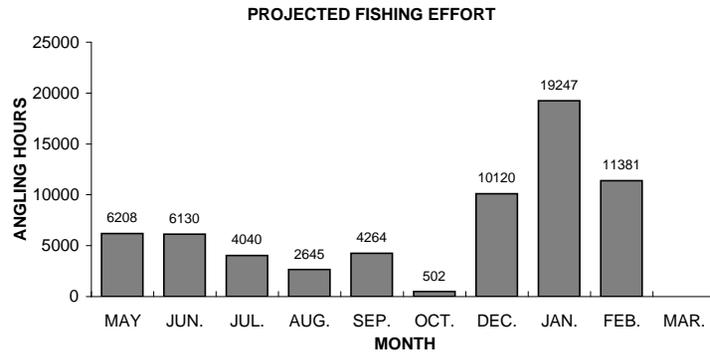
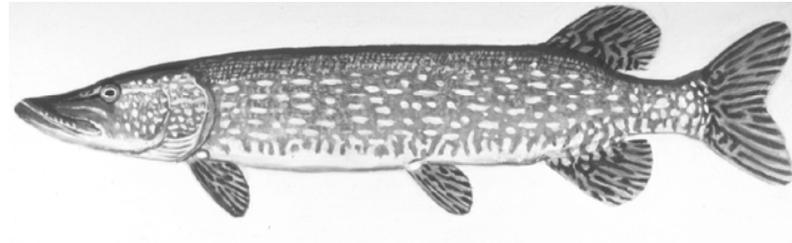
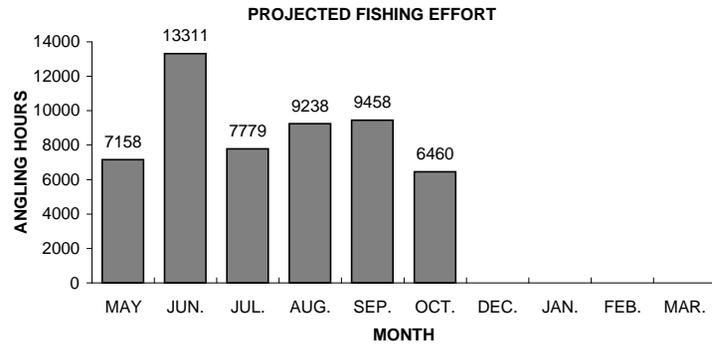


Figure 3. Muskellunge sportfishing effort, catch, harvest, and length distribution, Lac Vieux Desert Lake, during 2006-07.



MUSKELLUNGE

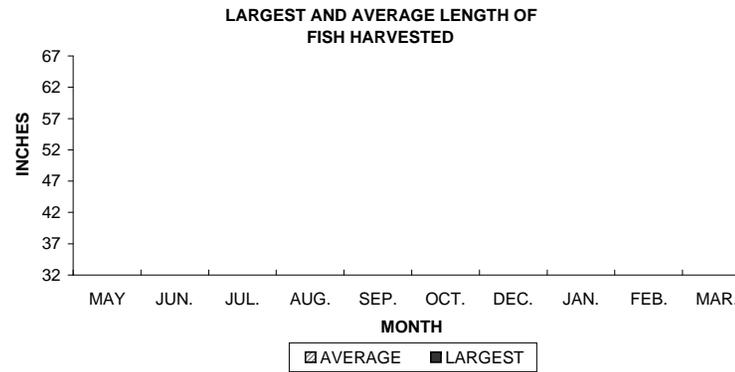
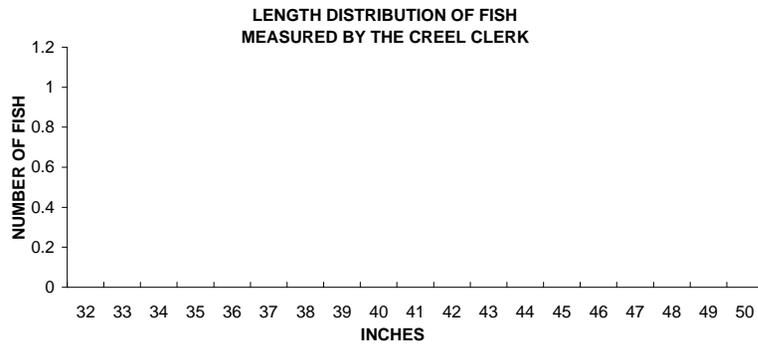
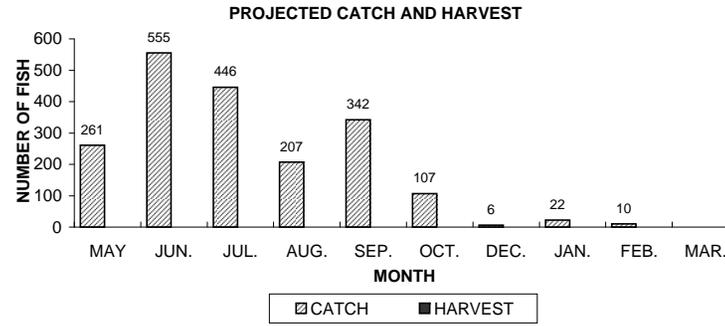
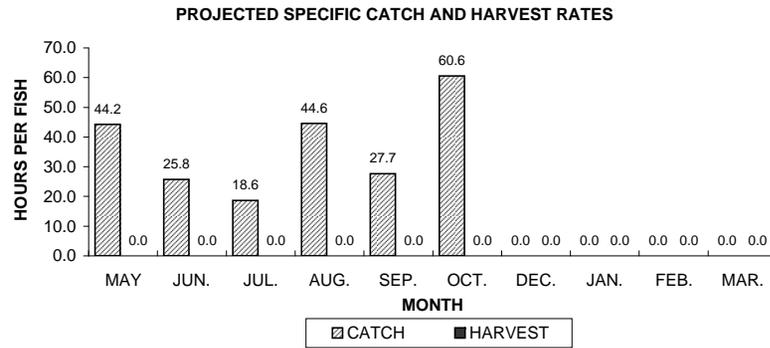
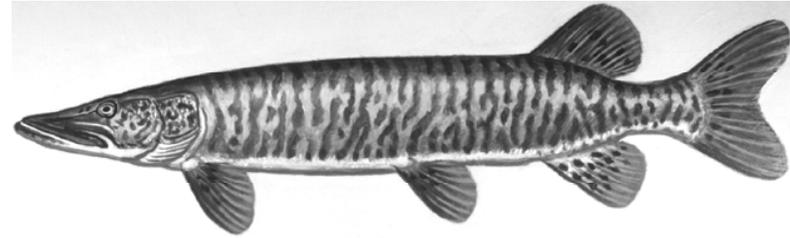


Figure 4. Smallmouth bass sportfishing effort, catch, harvest, and length distribution, Lac Vieux Desert Lake, during 2006-07.

SMALLMOUTH BASS

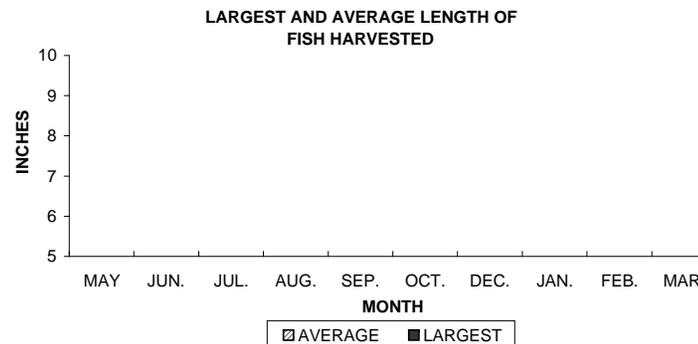
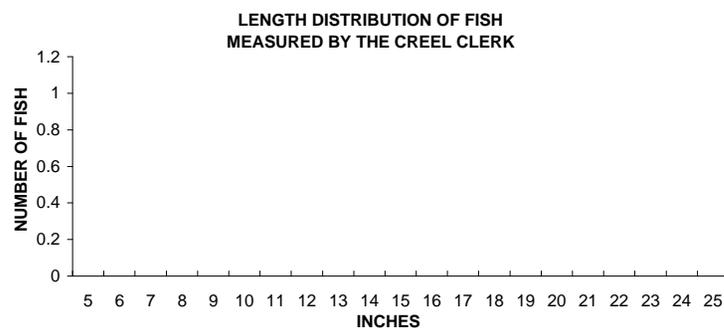
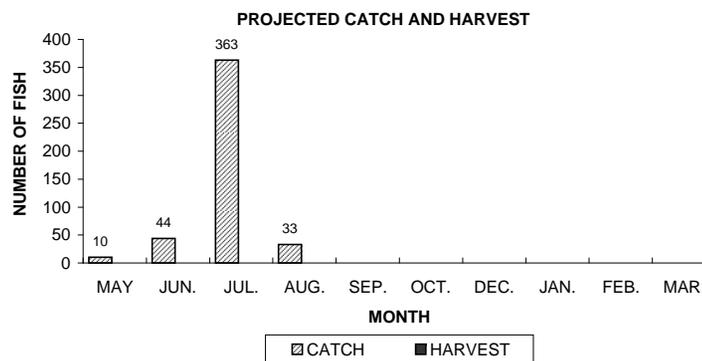
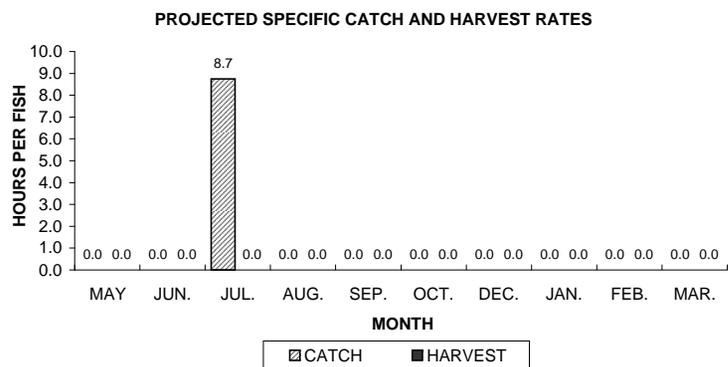
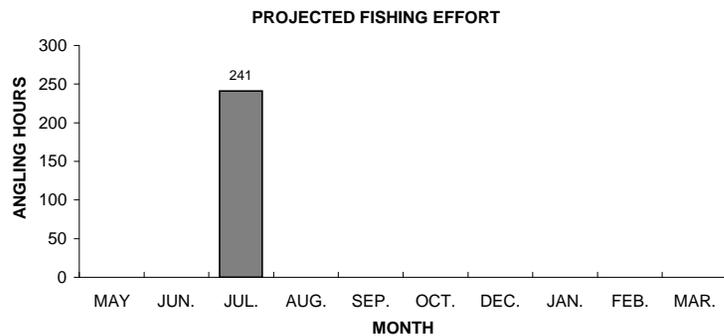
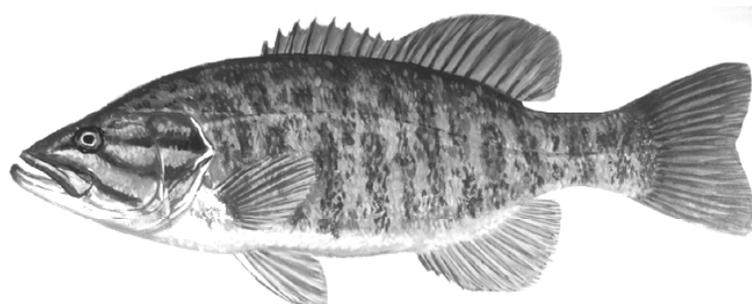


Figure 5. Largemouth bass sportfishing effort, catch, harvest, and length distribution, Vac Vieux Desert Lake, during 2006-07.

LARGEMOUTH BASS

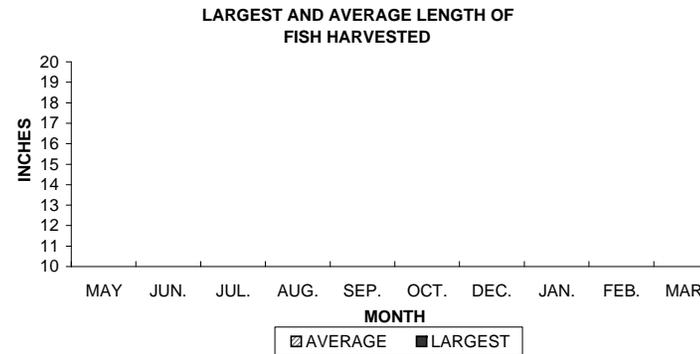
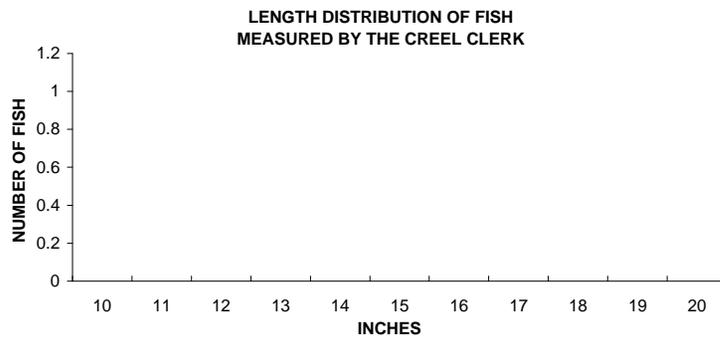
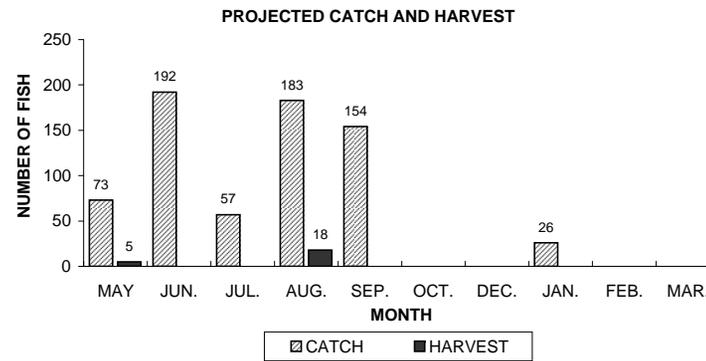
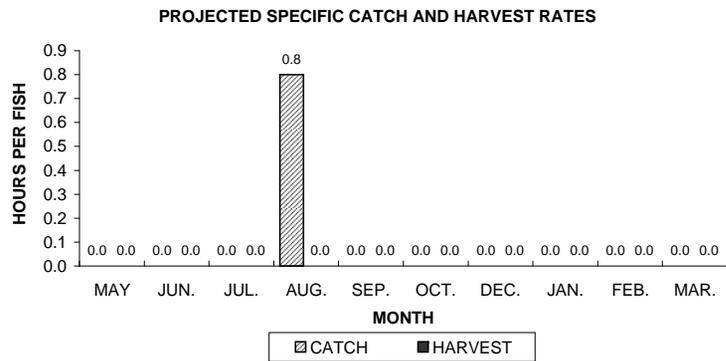
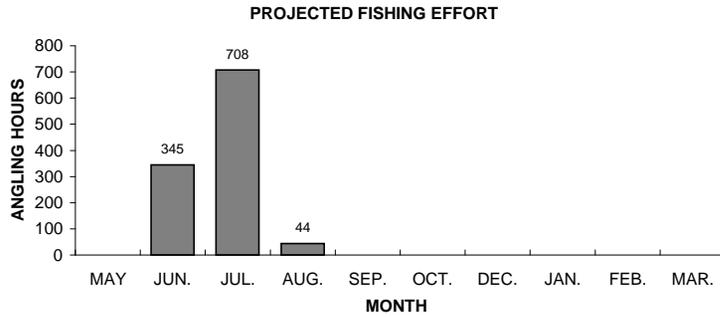
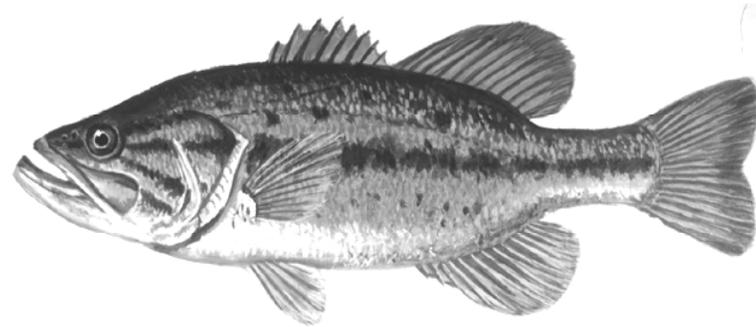


Figure 6. Yellow perch sportfishing effort, catch, harvest, and length distribution, Vac Vieux Desert Lake, during 2006-07.

YELLOW PERCH

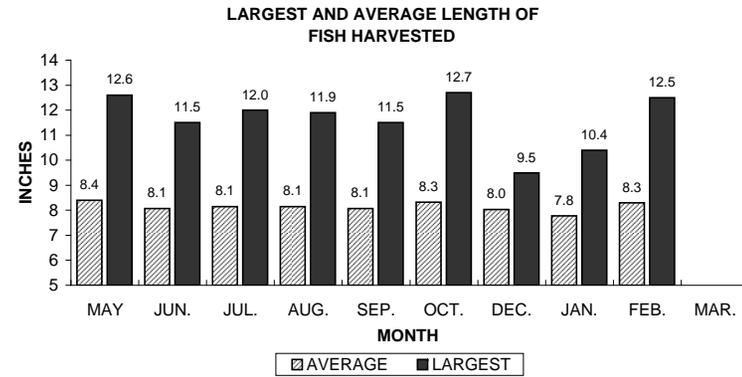
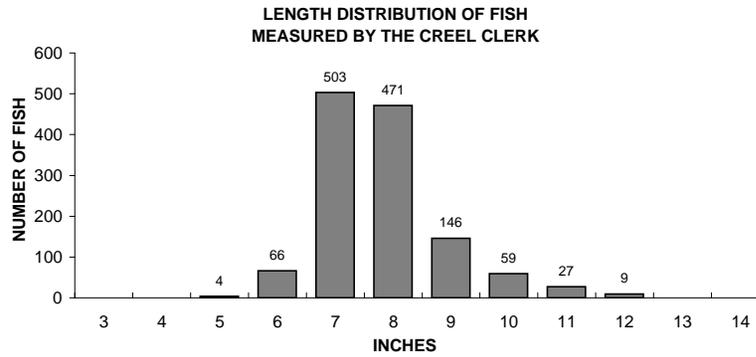
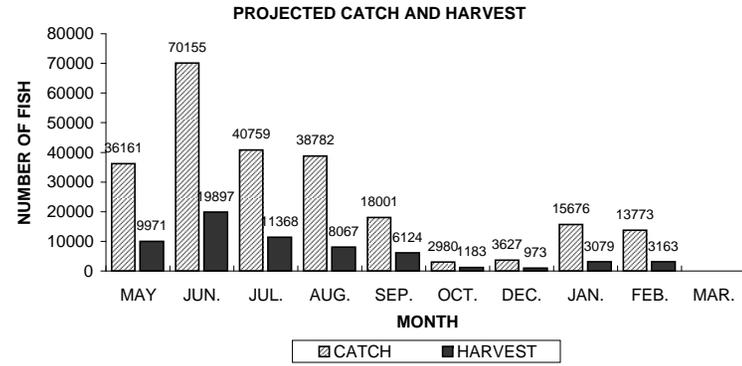
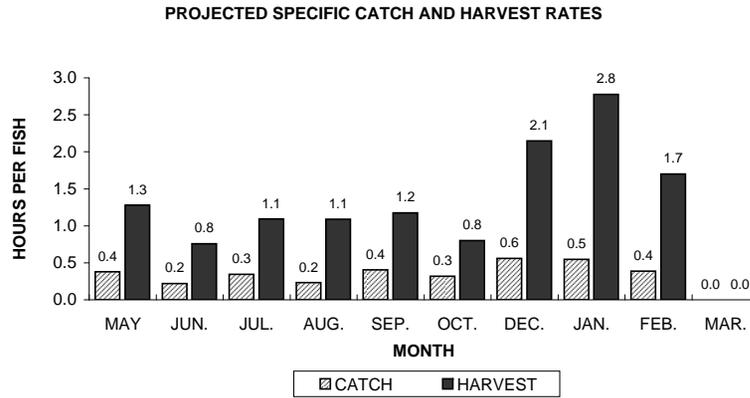
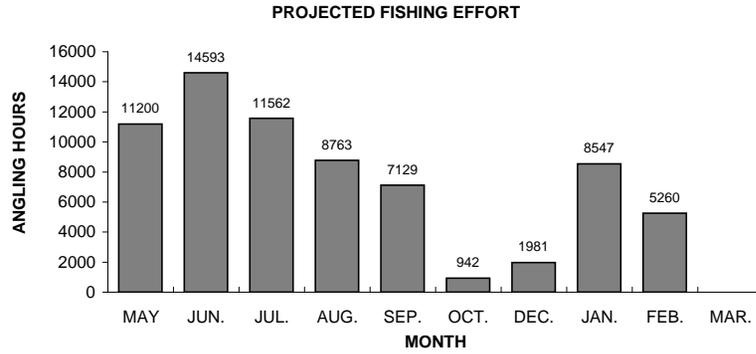
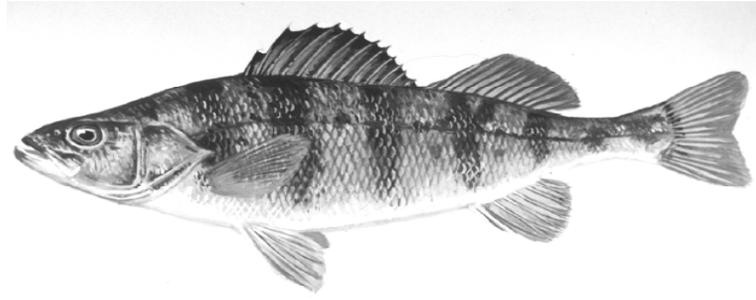


Figure 7. Bluegill sportfishing effort, catch, harvest, and length distribution, Lac Vieux Lake, during 2006-07.

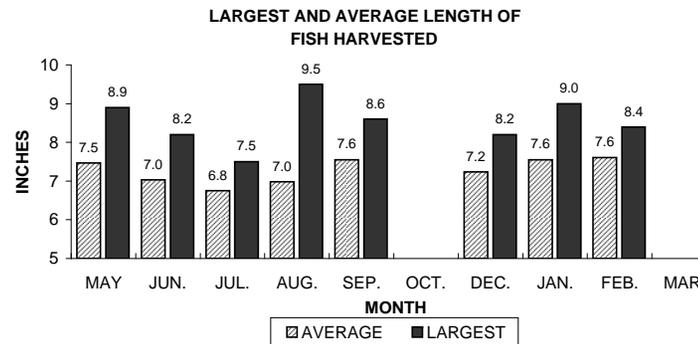
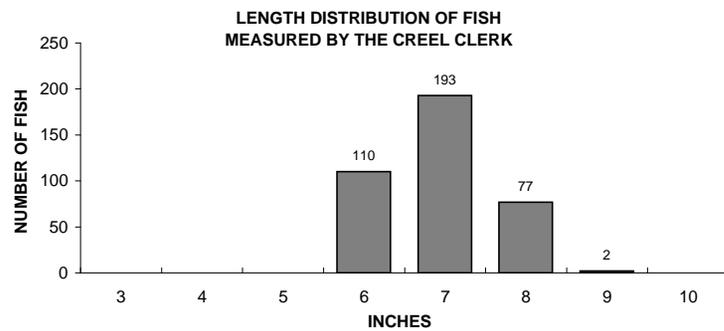
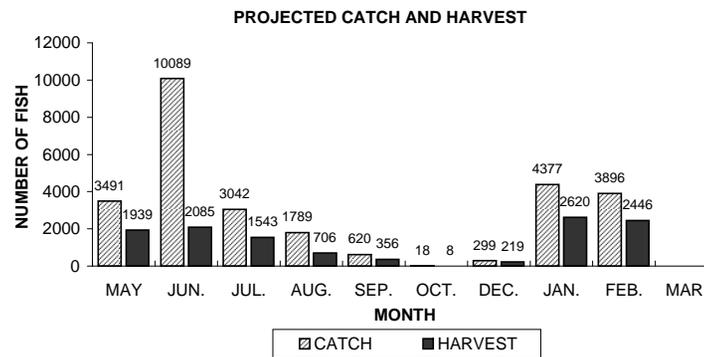
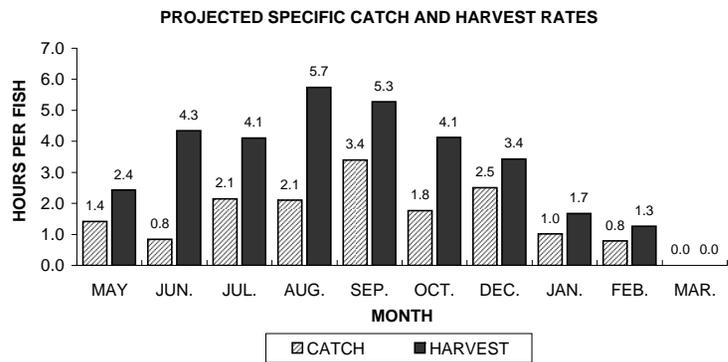
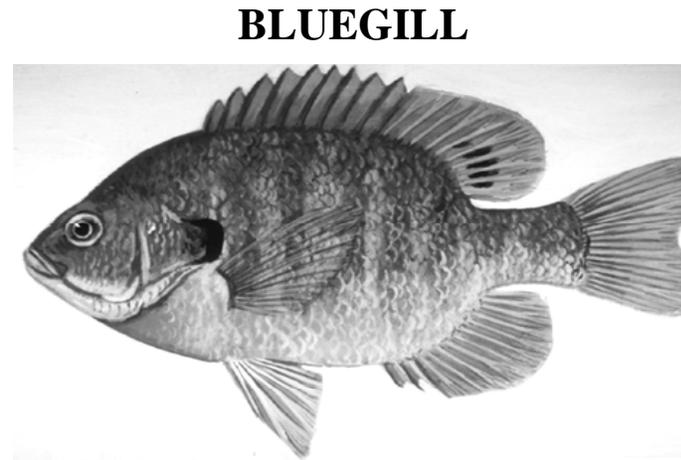
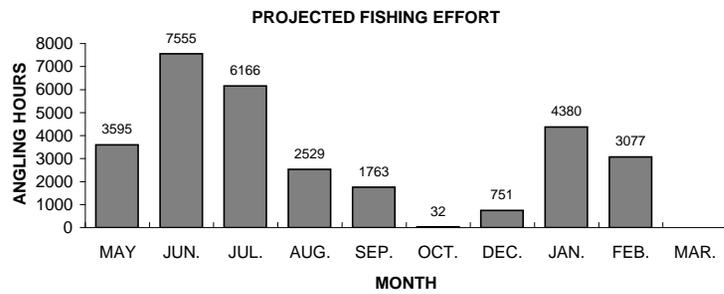


Figure 8. Pumpkinseed sportfishing effort, catch, harvest, and length distribution, Vac Vieux DesertLake, during 2006-07.

PUMPKINSEED

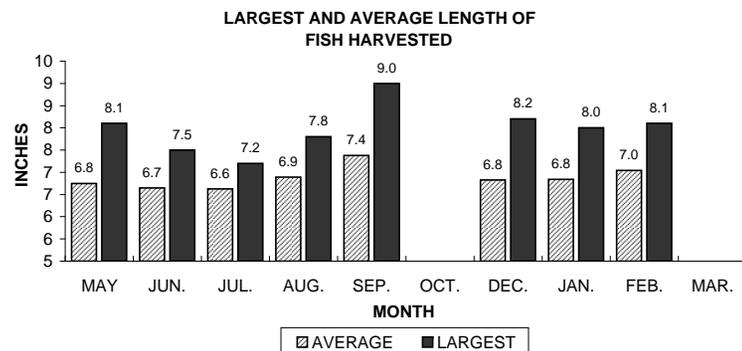
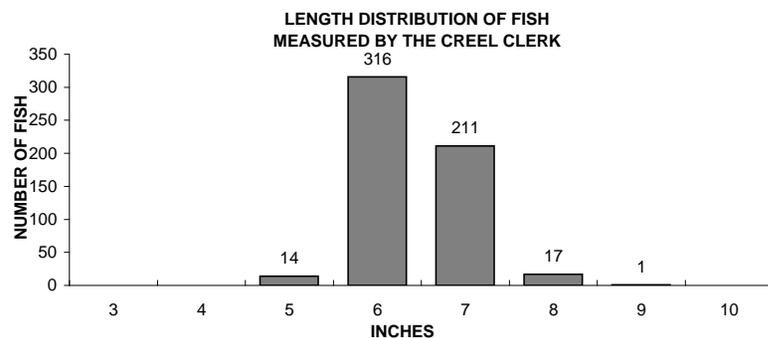
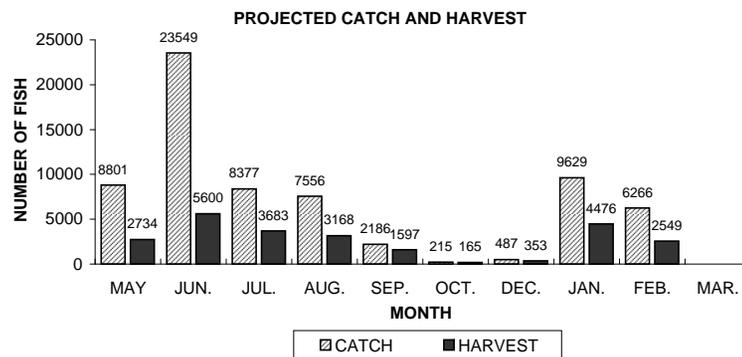
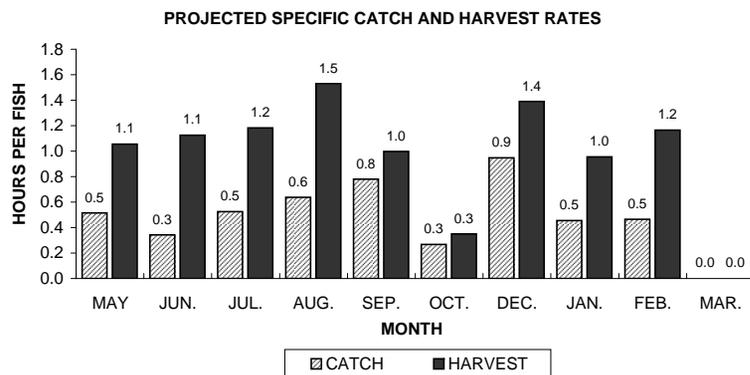
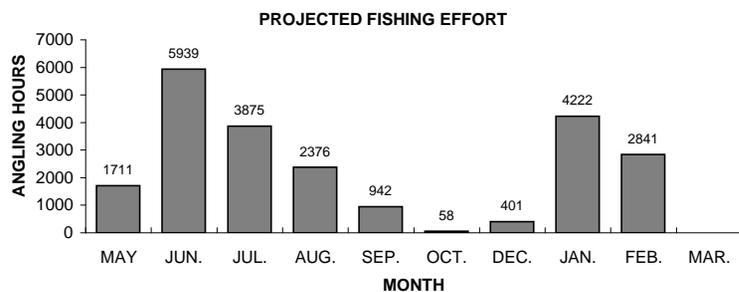
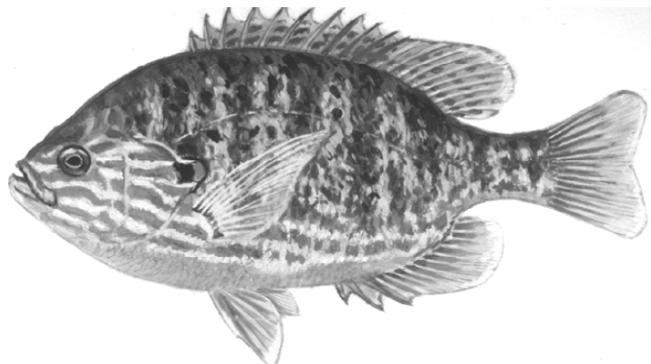


Figure 9. Rock bass sportfishing effort, catch, and length distribution, Lac Vieux Desert Lake, during 2006-07.

ROCK BASS

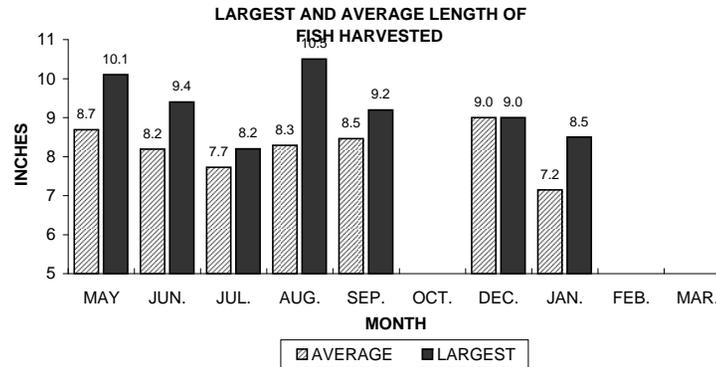
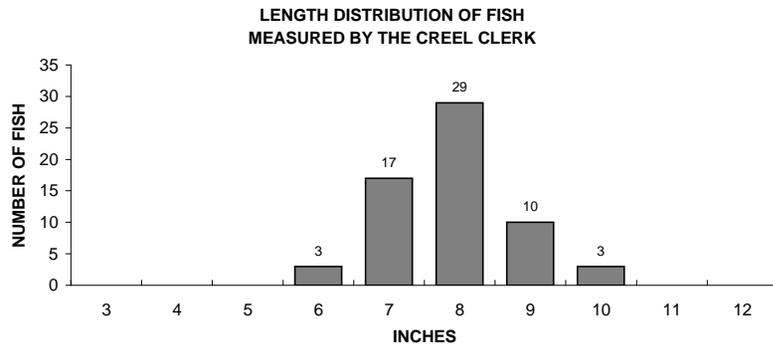
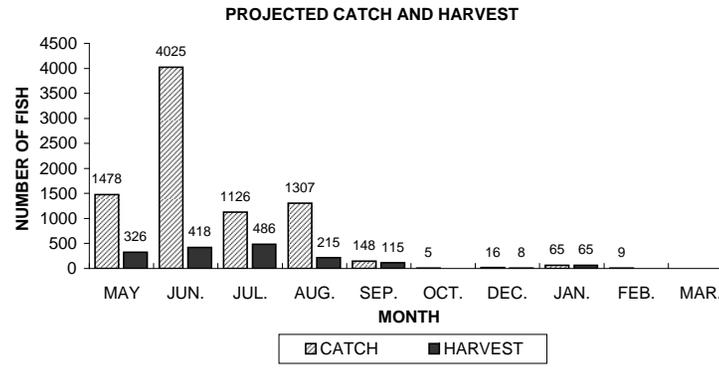
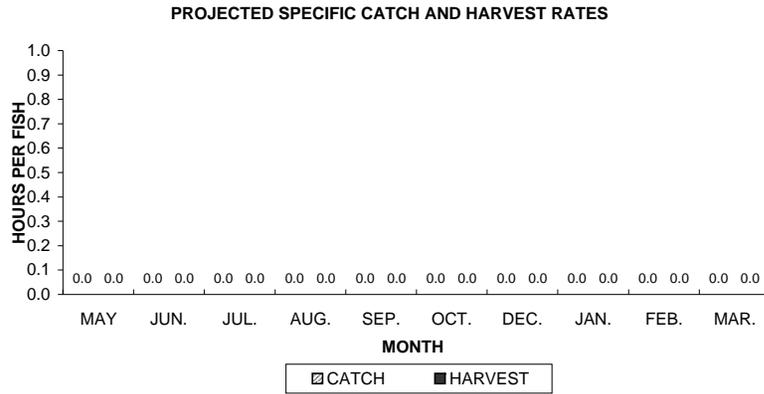
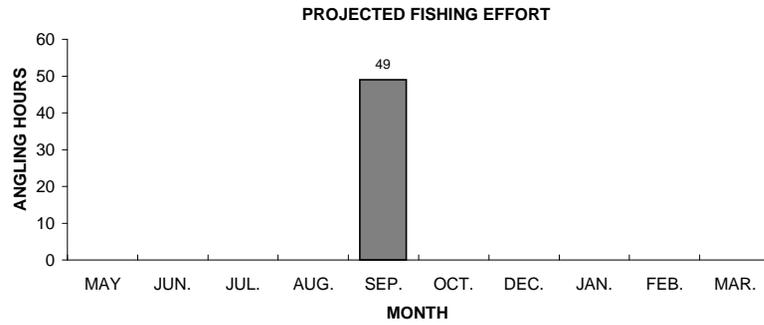
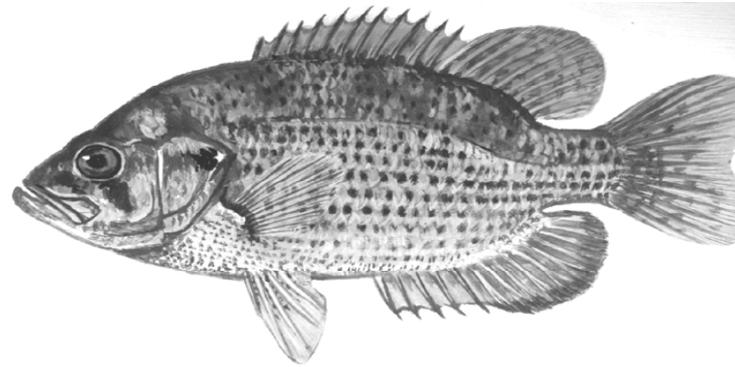


Figure 10. Black crappie sportfishing effort, catch, harvest, and length distribution, Lac Vieux Desert Lake, during 2006-07.

BLACK CRAPPIE

