

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

LOWER BUCKATABON LAKE

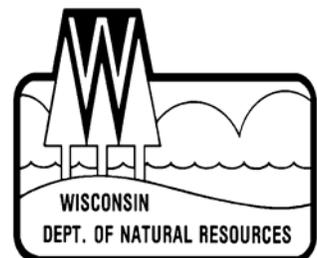
VILAS COUNTY

2010-11



Treaty Fisheries Publication

**Compiled by Tim Tobias
Treaty Fisheries Technician**



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Cover Art: Steve Hilt, Minocqua, WI

Fish Graphics: Virgil Beck, Stevens Point, WI

INTRODUCTION

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

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

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

A creel survey is an assessment tool used to sample the fishing activities of anglers on a body of water and make projections of harvest and other fishery parameters. Creel survey clerks work on randomly-selected

days and shifts, forty hours per week during the open season for gamefish from the first Saturday in May through the first Sunday in March, except during the month of November when fishing effort is low and ice conditions are often unsafe. The survey is run during daylight hours, and shift times change from month to month as day length changes.

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

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

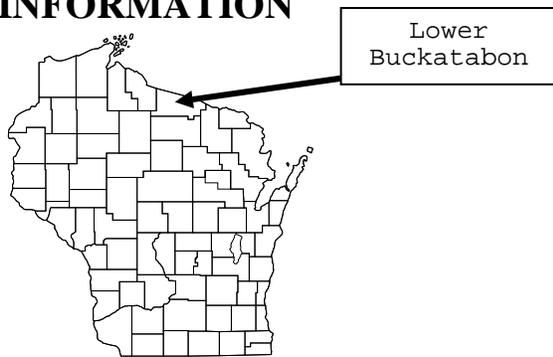
You may have encountered a DNR creel survey clerk on a recent fishing trip. We appreciate your cooperation during an interview. The survey only takes a moment of your time and it gives the Department valuable information needed for management of the fishery.

This report provides projections of:

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

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

GENERAL LAKE INFORMATION



Location

Lower Buckatabon Lake, which is connected to Upper Buckatabon, is located in Vilas County three miles southwest of the Town of Conover.

Physical Characteristics

Lower Buckatabon Lake is a 352-acre drainage lake with a maximum depth of 16 feet. Littoral substrate consists primarily of sand and muck. Lower Buckatabon Lake is a fertile drainage lake with alkaline, clear water of low transparency. There is a 5-foot high dam on the outlet which stores water for low flow augmentation of the Wisconsin River for power purposes.

Seasons Surveyed

The period referred to in this report as the 2010-11 fishing season ran from May 1, 2010 through March 6, 2011. The open

water creel survey ran from May 1 through October 31, 2010 and the ice fishing creel survey ran from December 1, 2010 through March 6, 2011.

Weather

Ice-out on Lower Buckatabon Lake was around March 30, 2010. Fishable-ice formed on Lower Buckatabon Lake in early December.

Sportfishing Regulations

The following seasons, daily bag limits, and length limits were in place on Lower Buckatabon Lake during the 2010-fishing season:

		Catch&Release	
Largemouth Bass&	5/01-6/18		
Smallmouth Bass	6/19-3/06	5	14"
Musky	5/29-11/30	1	34"
Northern Pike	5/01-3/06	5	none
Walleye	5/01-3/06	3*	15"
Panfish	year round	25	none
Rock Bass	year round	none	none

* The statewide bag limit was 5 walleye, but due to tribal declarations it was reduced on Lower Buckatabon 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 6 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 first time the department conducted a creel survey on Lower Buckatabon Lake.

General Angler Information

Anglers spent 12,071 hours or 34.3 hours per acre fishing Lower Buckatabon Lake during the 2010 season (Table 1). That was slightly less than the Vilas County average of 34.5 hours per acre. July was the most

heavily fished month (10.8 hours per acre). Fishing effort was lightest in January (0.1 hours per acre).

RESULTS BY SPECIES

Walleye (Table 2, Figure 1)

Walleyes received only 2.7 percent of the directed fishing effort or 644 hours during the 2010 season. Walleye fishing effort was greatest in August (256 hours).

Total catch of walleye was 55 fish with a harvest of 2 fish. Highest catch (53 fish) occurred in August and harvest (2 fish) occurred in March. Anglers fished 11.7 hours to catch a walleye during 2010.

Northern Pike (Table 2, Figure 2)

Fishing effort directed at northern pike was 3,075 hours during the 2010 season. Northern pike fishing effort was greatest in July (1,440 hours).

Total catch of northern pike was 1,925 fish with a harvest of 68 fish.

The mean length of harvested northern pike was 22.6 inches and the largest northern pike measured was a 31.5-inch fish.

Muskellunge (Table 2, Figure 3)

Muskellunge were the most sought after fish of any species by anglers during the 2010 season. Anglers spent 4,925 hours targeting muskellunge during the 2010 season. Muskellunge fishing effort was greatest in June (1,171 hours).

Total catch of muskellunge was 92 fish. Highest catch (74 fish) occurred in July. Anglers fished 58.5 hours to catch a muskellunge during 2010.

Smallmouth Bass (Table 2, Figure 4)

Fishing effort targeted at smallmouth bass was 1,210 hours during the 2010 season.

Smallmouth bass fishing effort was greatest in July (1,006 hours).

Total catch of smallmouth bass was 692 fish. Highest catch (429 fish) occurred in July. Anglers fished 3.2 hours to catch a smallmouth bass during 2010.

Largemouth Bass (Table 2, Figure 5) Fishing effort directed at largemouth bass was 4,140 hours during the 2010 season. Largemouth bass fishing effort was greatest in July (1,970 hours).

Total catch of largemouth bass was 3,543 fish with a harvest of 5 fish. Highest catch (1,292 fish) occurred in June. Anglers fished 1.6 hours to catch a largemouth bass during 2010.

Panfish (Table 2, Figures 6-10) **Bluegills** were the most sought after panfish species during the survey. Fishing effort directed at bluegills was 3,372 hours.

Total catch of bluegills was 7,671 fish with 1,516 harvested. The mean length of bluegills harvested was 6.4 inches.

Black crappies were the second most sought after panfish species during the survey. Fishing effort directed at black crappies was 3,096 hours.

Total caught of black crappies was 1,230 fish and harvested 667 fish. The mean length of black crappies harvested was 8.6 inches.

Yellow perch were the third most sought after panfish species during the survey. Fishing effort directed at yellow perch was 2,869 hours.

Total catch of yellow perch was 1,036 fish with 256 harvested. The mean length of

yellow perch harvested was 7.9 inches.

Pumpkinseeds and rock bass were also caught by Anglers during the 2010 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, Steve Kramer, Joelle Underwood, Marty Kiepke, Jason Halverson, and Tim Tobias. Fisheries management staff included Steve Gilbert, Wes Jahns. Lynn Robinson and Doug Day were the creel clerks on Lower Buckatabon Lake during the survey period.

We also thank Dave Coon, Cathy Wendt and Dan Plamann of the Wisconsin Valley Improvement Company who worked in conjunction with the creel survey performing in-water sampling of the fish community.

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, Karl Boehm of Buckatabon Lodge and Debra Kretsch and Robert Chrystler of Deer Path Resort, who generously allowed the department to keep a boat and snowmobile respectively on their property during this survey.

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

Table 1. Sportfishing effort summary, Lower Buckatabon Lake, 2010-11 season.

Month	Total Angler Hours	Total Angler Hours/Acre	Vilas County Average Hours/Acre	Statewide Average Hours/Acre
May	989	2.8	5.3	5.8
June	2617	7.4	6.8	6.1
July	3806	10.8	7.4	6.4
August	2097	6.0	6.4	5.4
September	1249	3.5	4.1	3.8
October	769	2.2	2.0	1.6
December	184	0.5	0.5	1.7
January	43	0.1	0.8	1.5
February	214	0.6	1.0	1.3
March	104	0.3	0.2	**
*Summer Total	11526	32.7	32.1	29.1
*Winter Total	545	1.5	2.4	4.5
Grand Total	12071	34.3	34.5	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 Lower Buckatabon 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 Lower Buckatabon 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 Lower Buckatabon Lake to other lakes statewide.

Table 2. Comparison of creel survey synopses, Lower Buckatabon Lake, 2010-11 fishing seasons.

CREEL YEAR: 2010-11

SPECIES	DIRECTED EFFORT (Hours)	PERCENT OF TOTAL	TOTAL CATCH	SPECIFIC CATCH RATE (Hrs/Fish) *	TOTAL HARVEST	SPECIFIC HARVEST RATE (Hrs/Fish) **	MEAN LENGTH OF HARVESTED FISH
Walleye	644	2.66%	55	11.7	2	270.3	21.0
Northern Pike	3075	12.69%	1925	3.1	68	50.3	22.6
Muskellunge	4925	20.33%	92	58.5	31	161.3	42.3
Smallmouth Bass	1210	4.99%	692	3.2	0		
Largemouth Bass	4140	17.09%	3543	1.6	5		16.3
Yellow Perch	2869	11.84%	1036	3.7	256	16.4	7.9
Bluegill	3372	13.92%	7671	0.5	1516	2.2	6.4
Pumpkinseed	895	3.69%	110	21.7	79	85.5	6.1
Rock Bass	0	0.00%	288		11		7.0
Black Crappie	3096	12.78%	1230	2.5	667	4.6	8.6

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.

WALLEYE

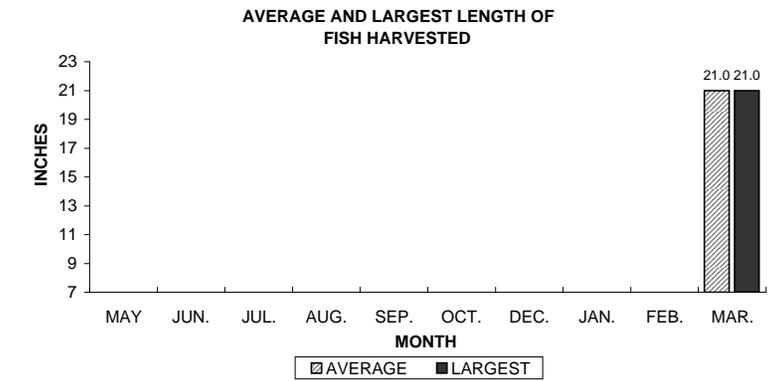
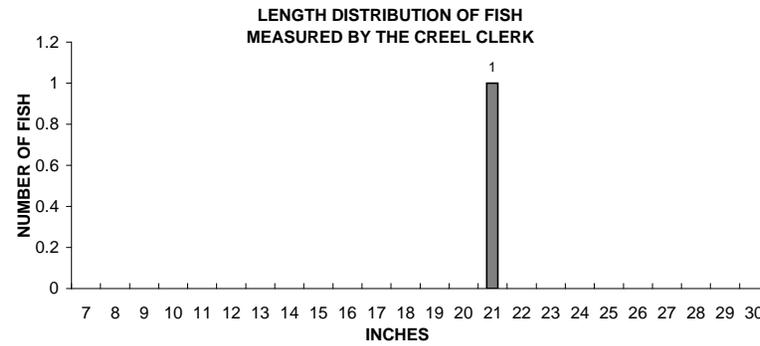
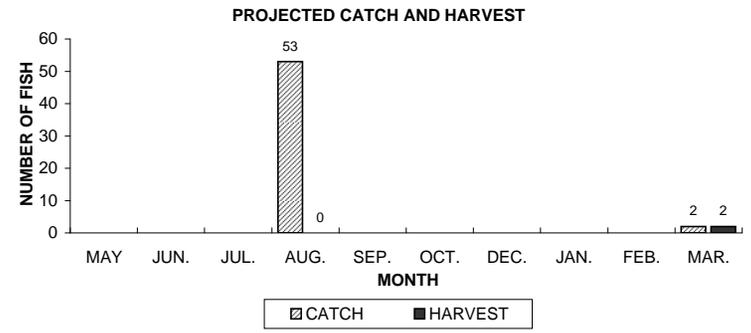
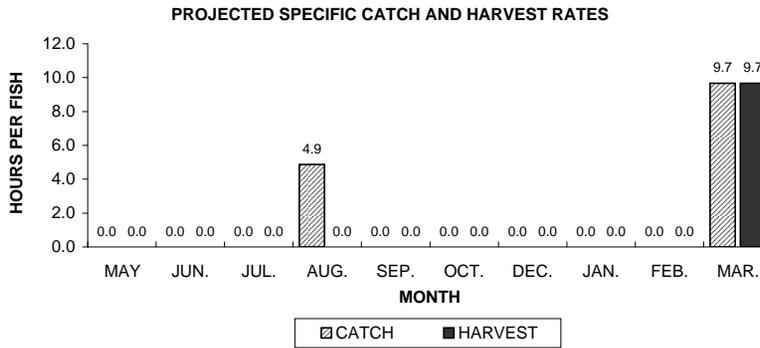
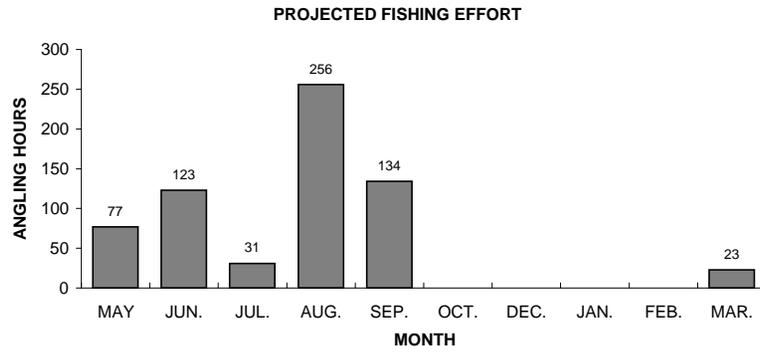
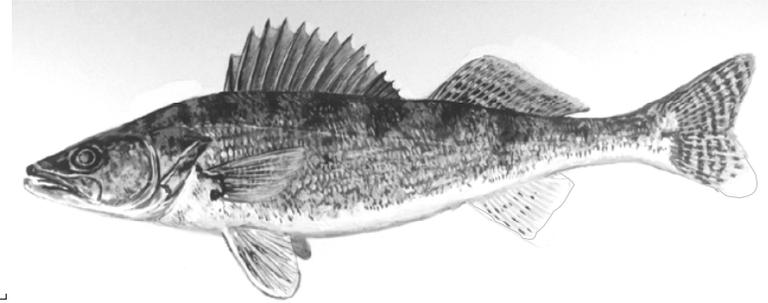


Figure 1. Walleye sportfishing effort, catch, harvest, and length distribution, Lower Buckatabon Lake, during 2010-11.

NORTHERN PIKE

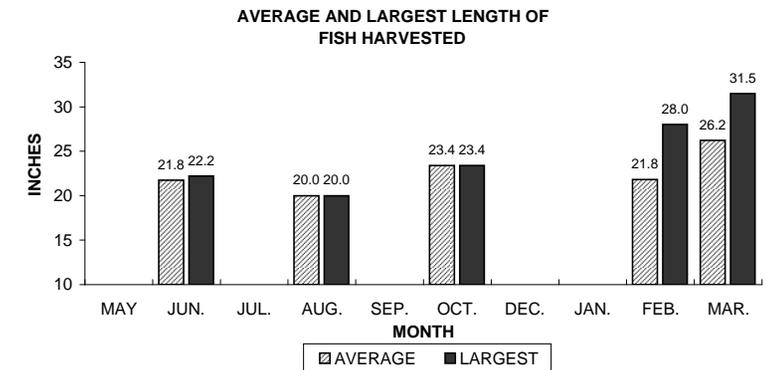
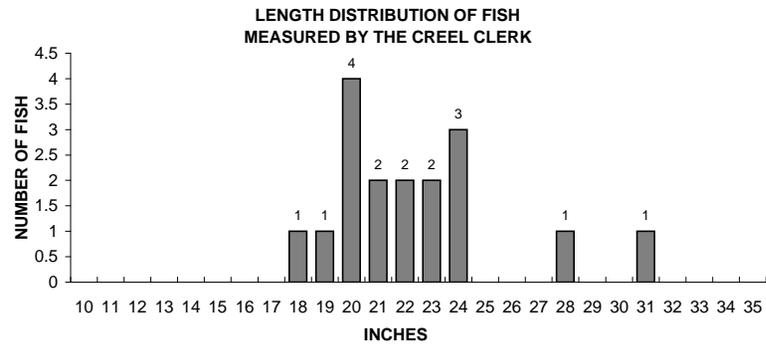
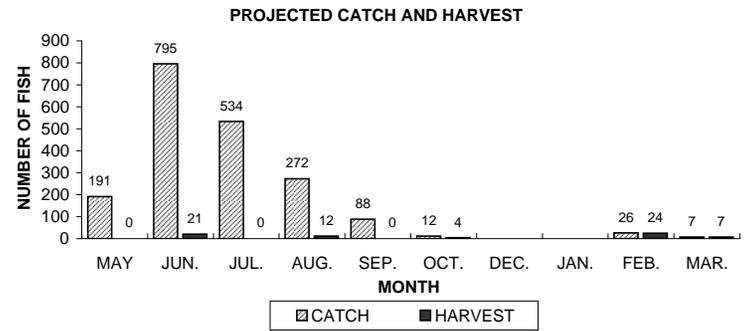
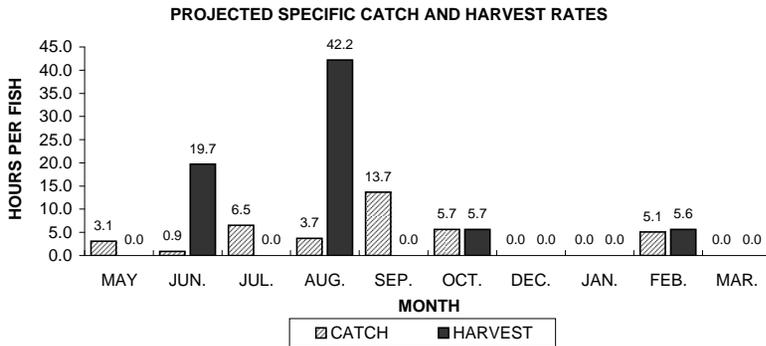
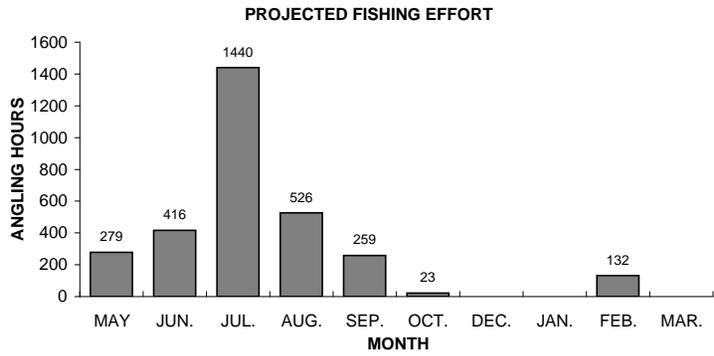
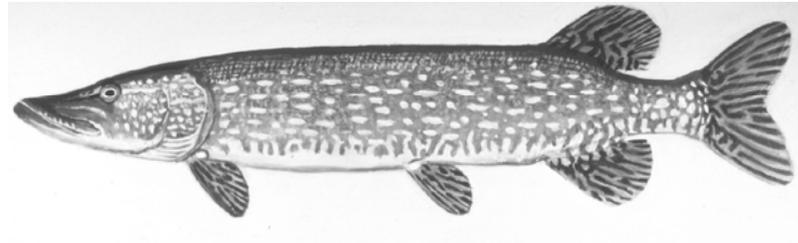
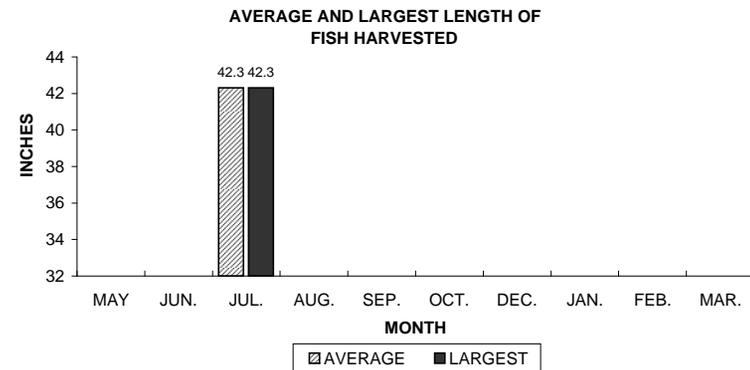
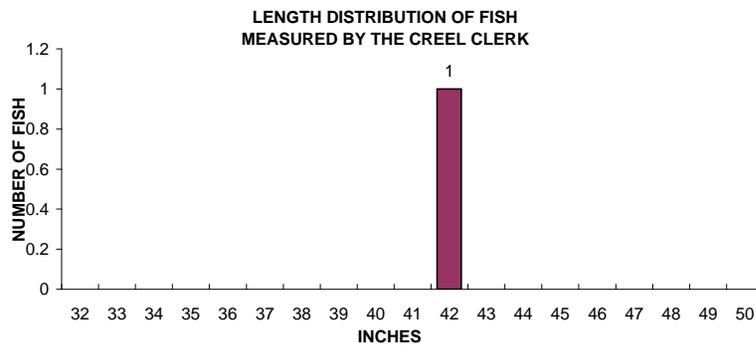
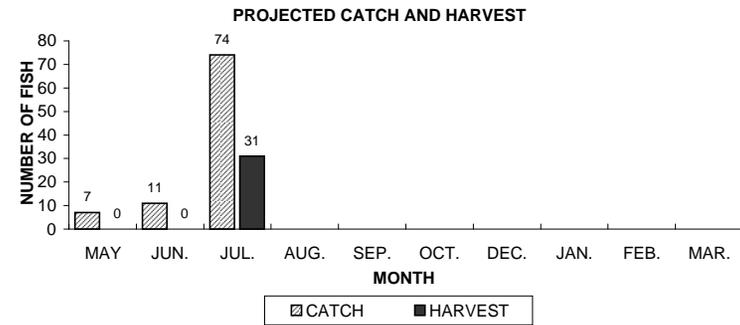
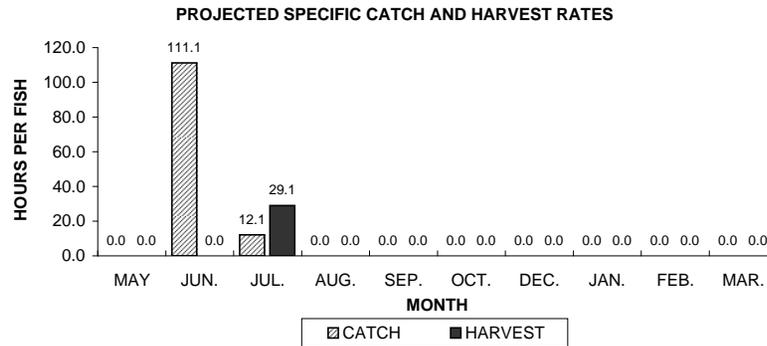
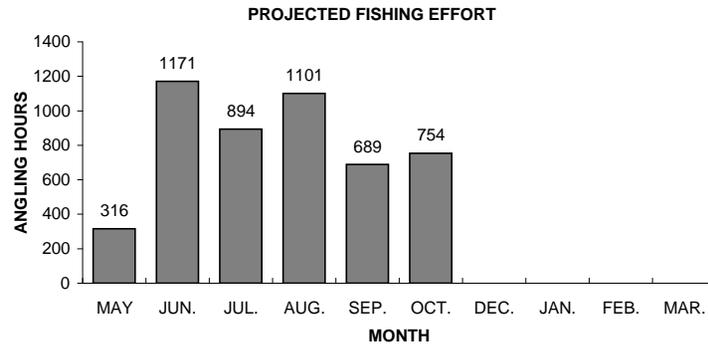
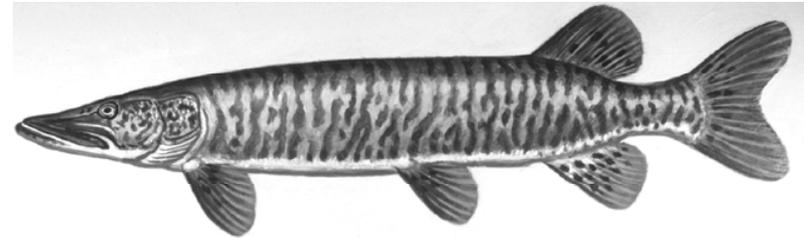


Figure 2. Northern pike sportfishing effort, catch, harvest, and length distribution, Lower Buckatabon Lake, during 2010-11.

MUSKELLUNGE



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Figure 3. Muskellunge sportfishing effort, catch, harvest, and length distribution, Lower Buckatabon Lake, during 2010-11.

SMALLMOUTH BASS

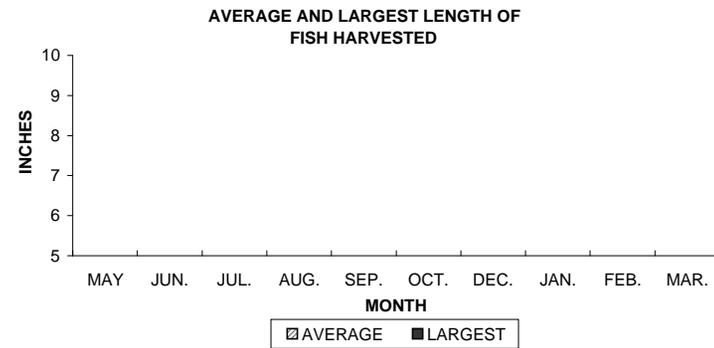
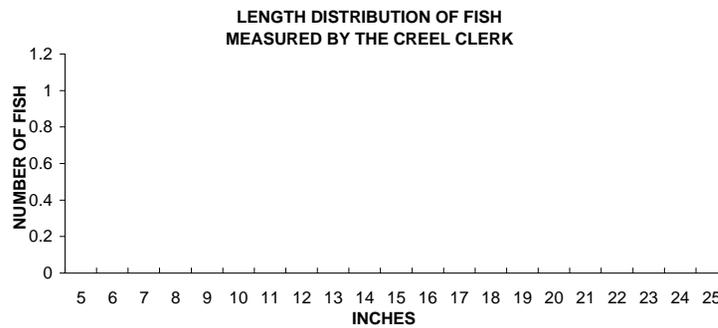
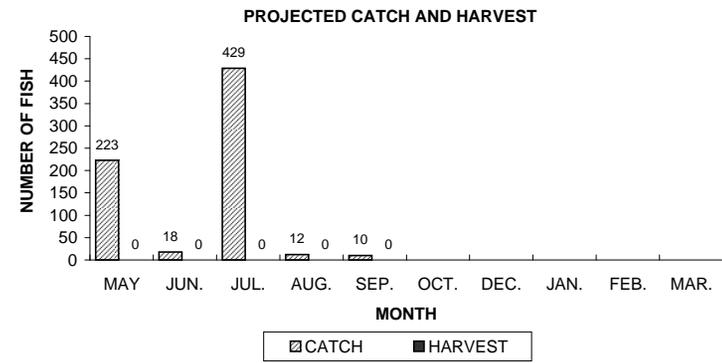
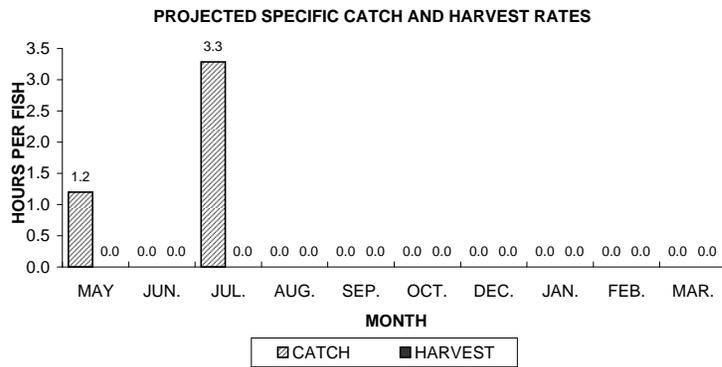
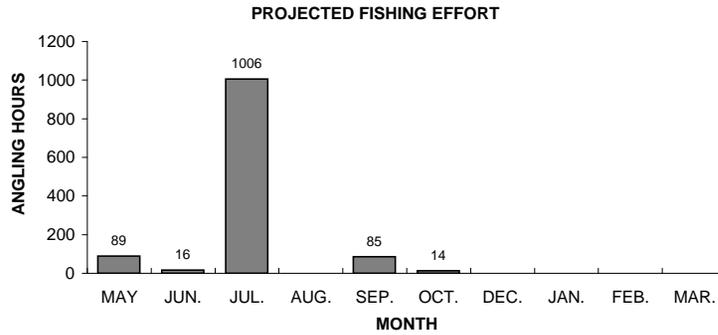
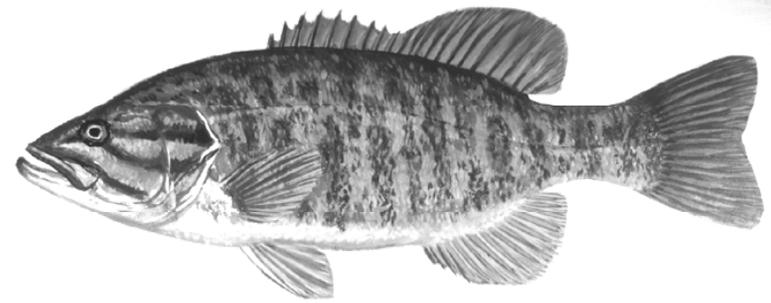


Figure 4. Smallmouth bass sportfishing effort, catch, harvest, and length distribution, Lower Buckatapon Lake, during 2010-11.

LARGEMOUTH BASS

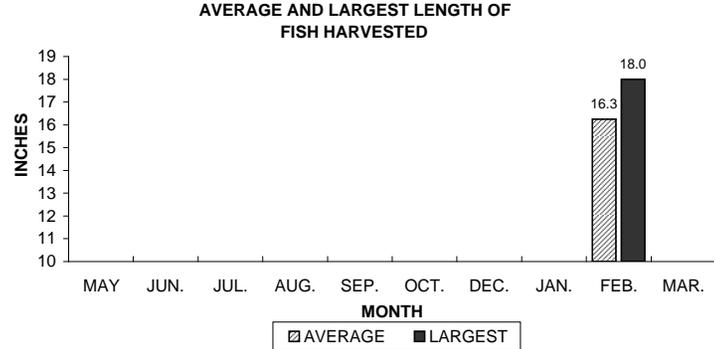
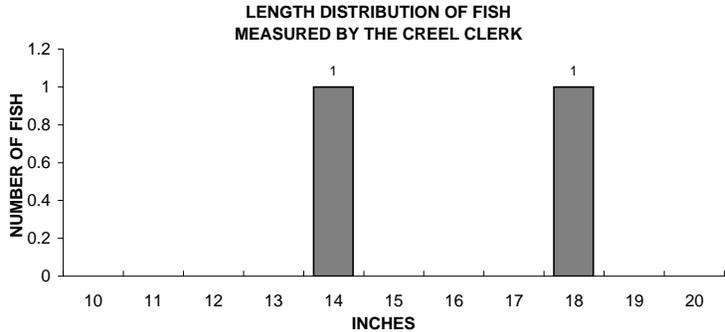
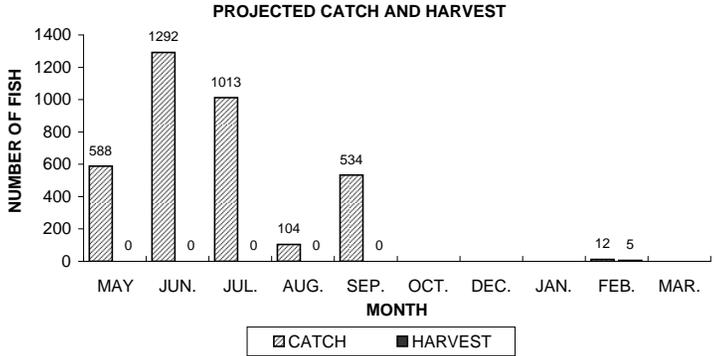
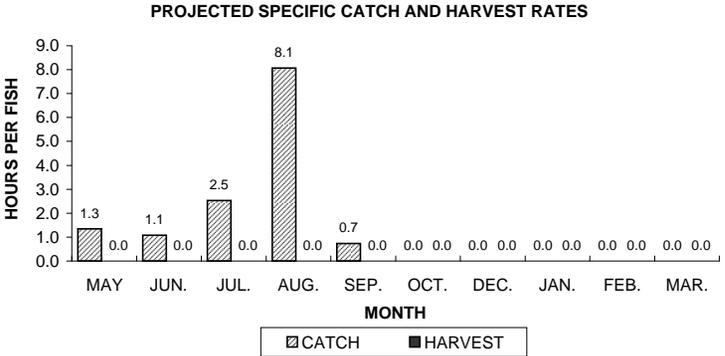
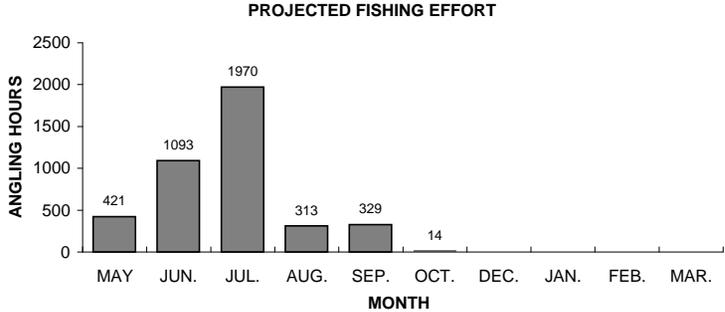
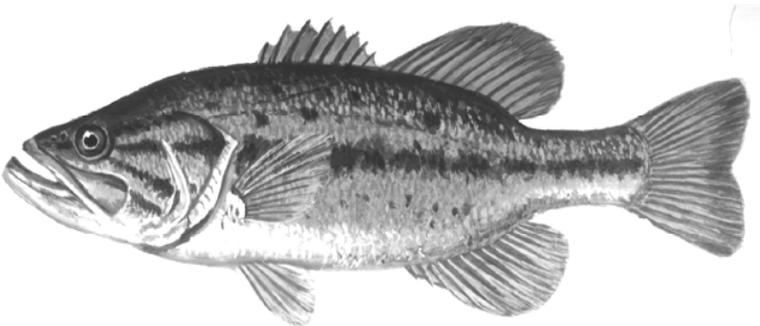


Figure 5. Largemouth bass sportfishing effort, catch, harvest, and length distribution, Lower Buckatabon Lake, during 2010-11.

YELLOW PERCH

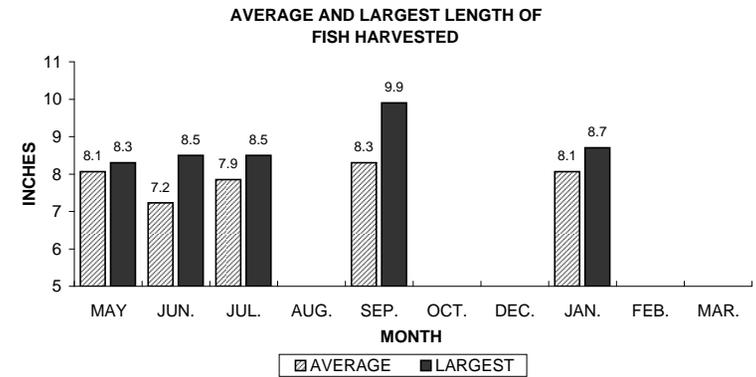
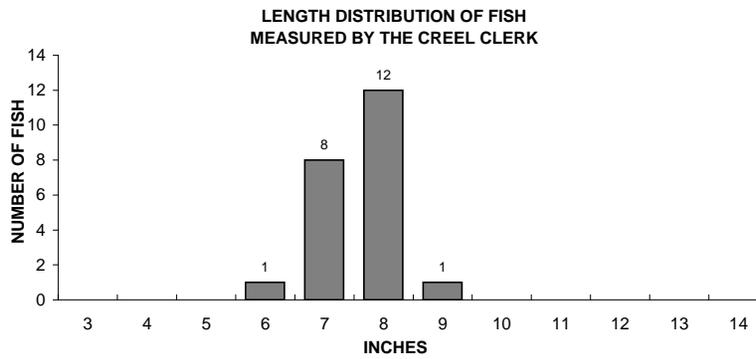
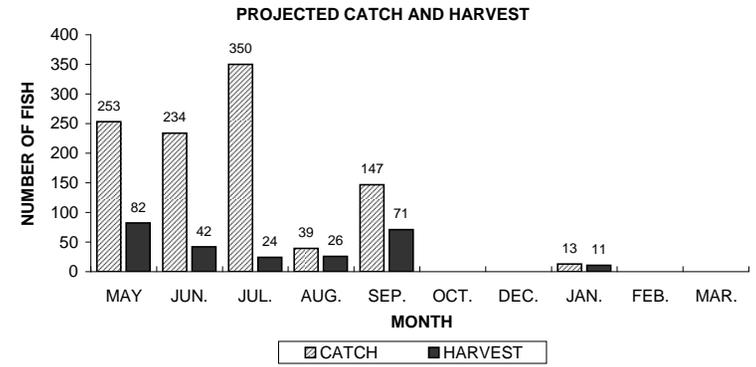
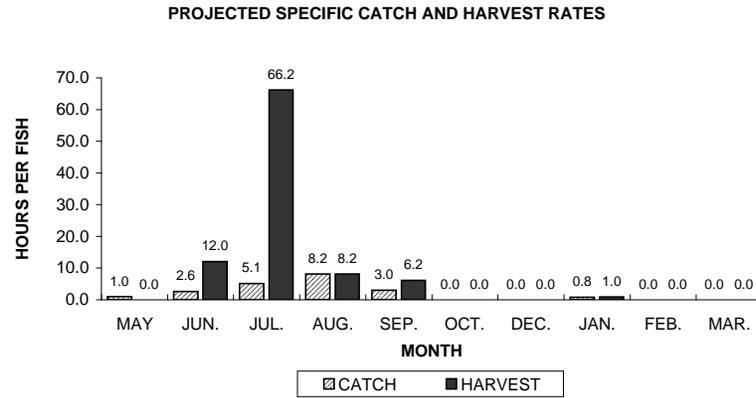
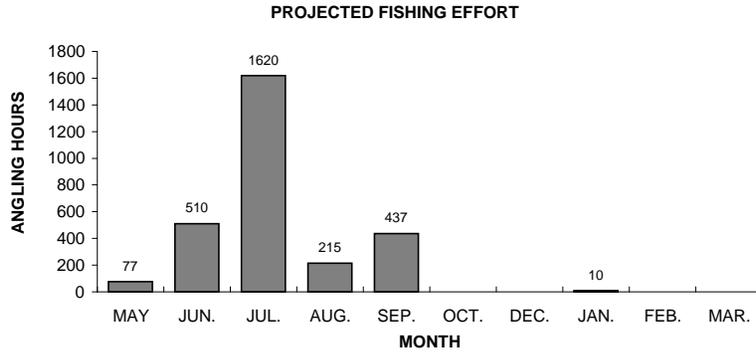


Figure 6. Yellow perch sportfishing effort, catch, harvest, and length distribution, Lower Buckatabon Lake, during 2010-11.

BLUEGILL

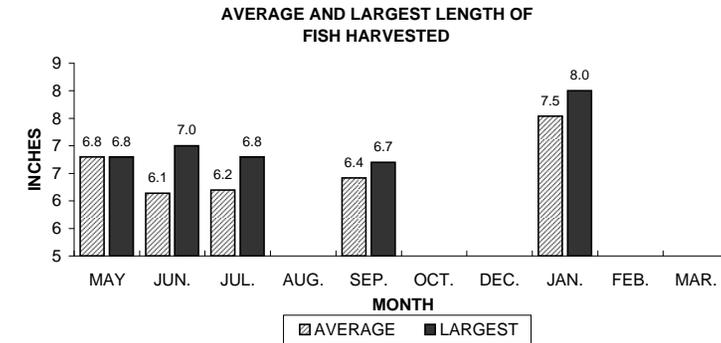
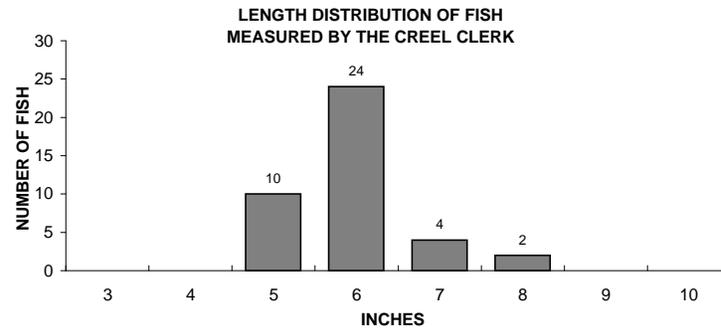
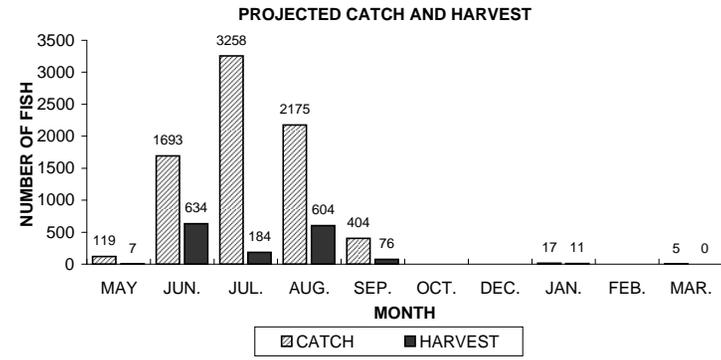
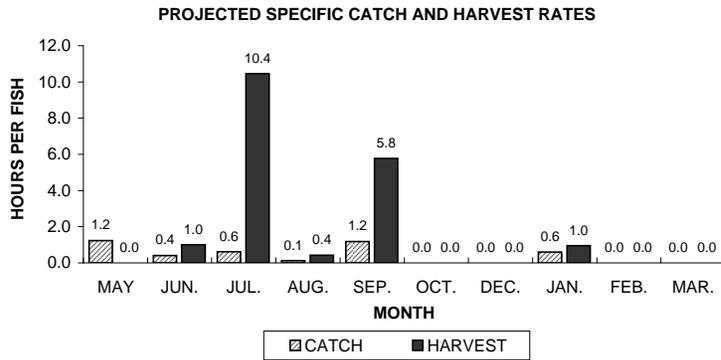
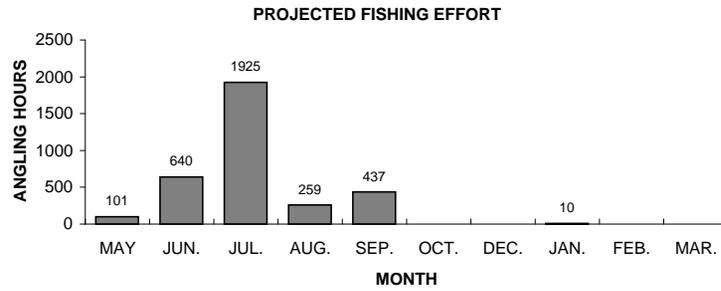
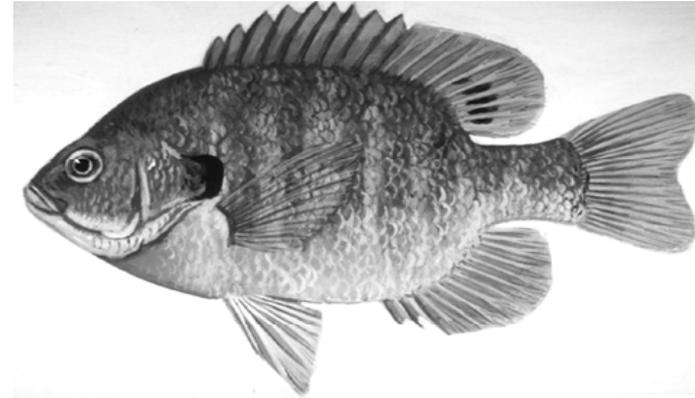


Figure 7. Bluegill sportfishing effort, catch, harvest, and length distribution, Lower Buckatabon Lake, during 2010-11.

PUMPKINSEED

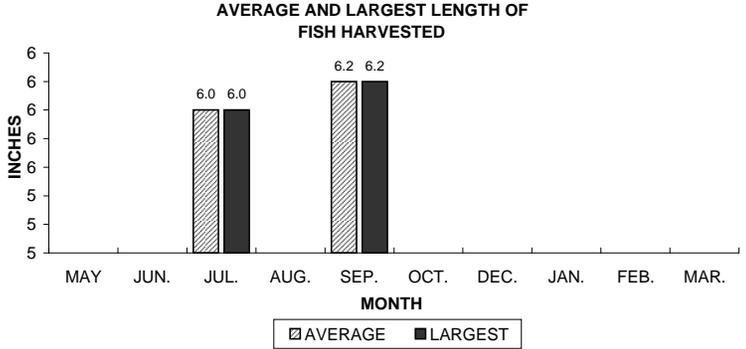
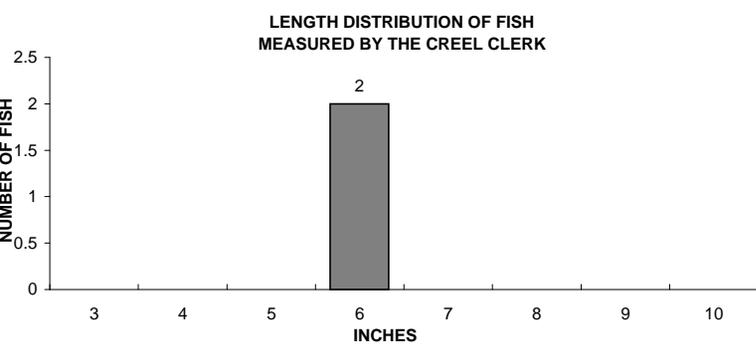
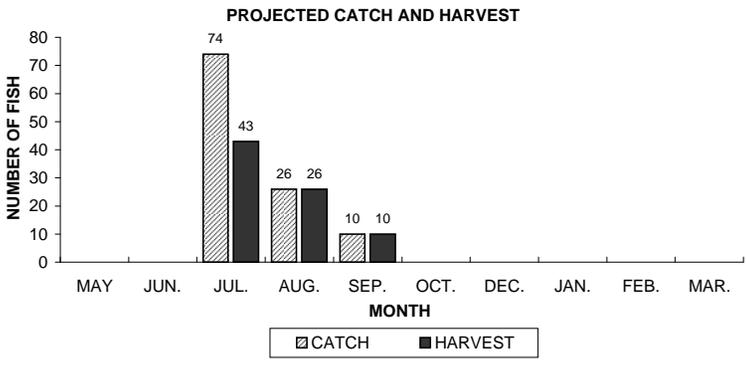
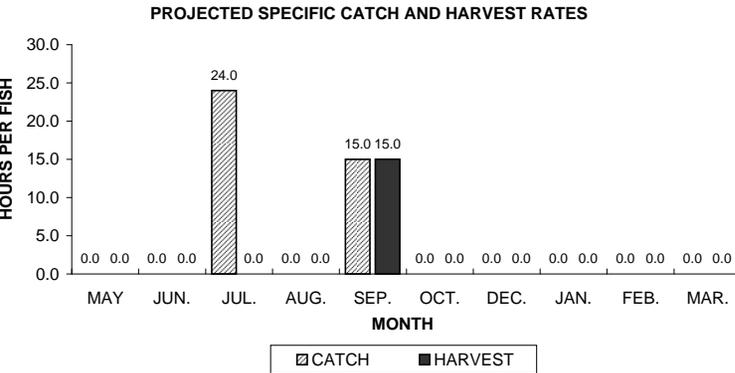
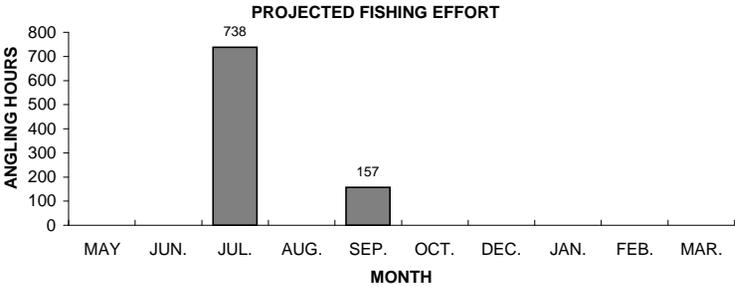
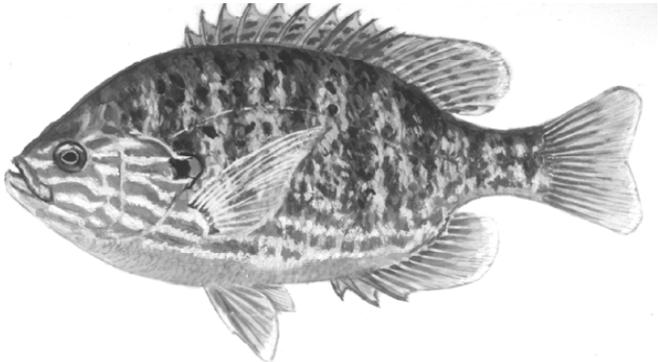


Figure 8. Pumpkinseed sportfishing effort, catch, harvest, and length distribution, Lower Buckatabon Lake, during 2010-11.

ROCK BASS

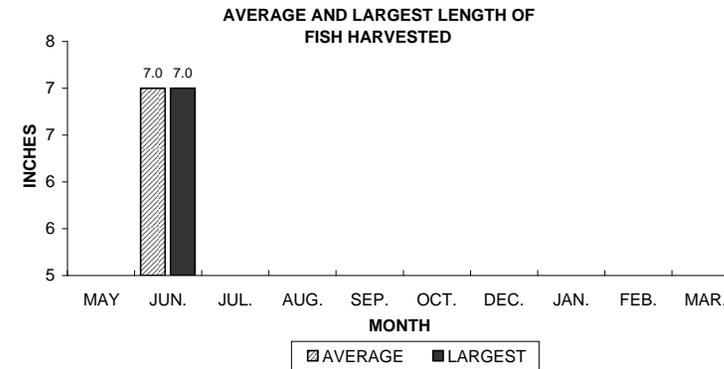
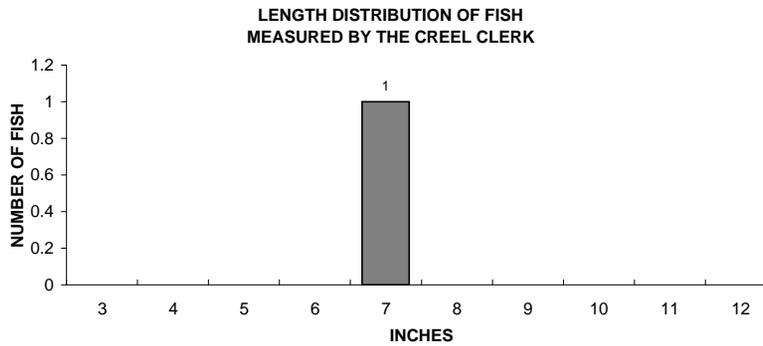
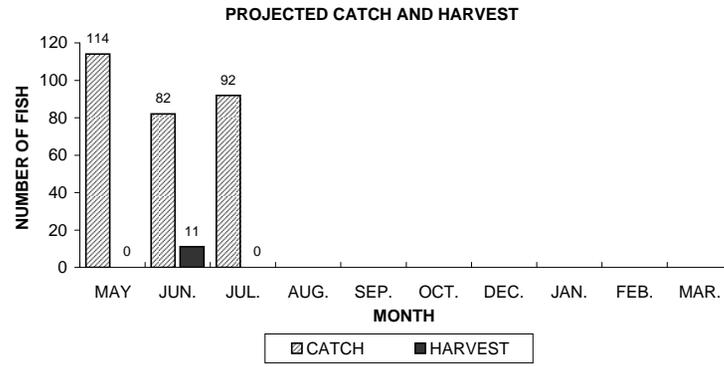
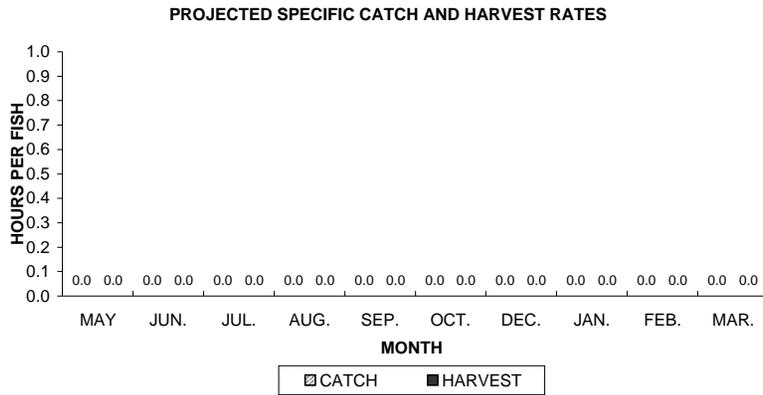
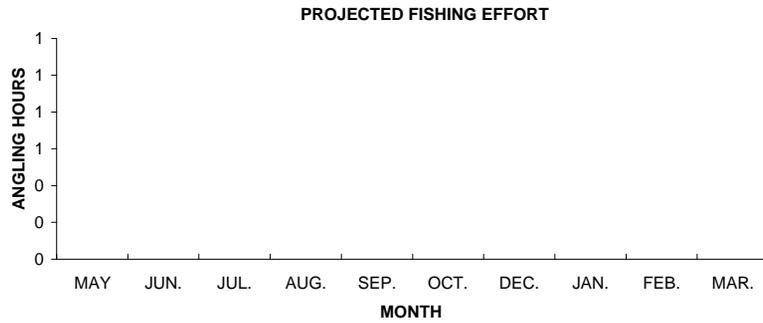
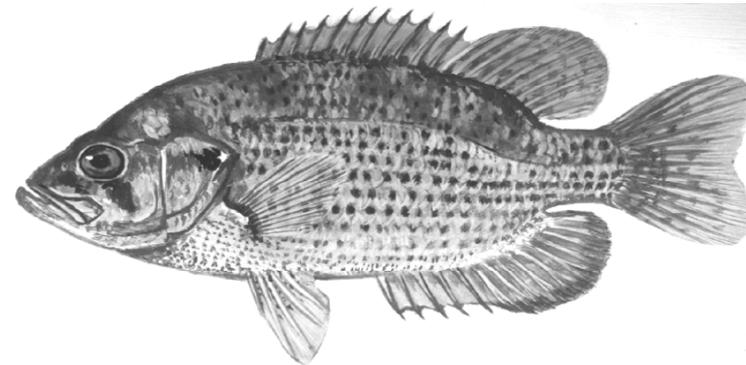


Figure 9. Rock bass sportfishing effort, catch, harvest, and length distribution, Lower Buckatabon Lake, during 2010-11.

BLACK CRAPPIE

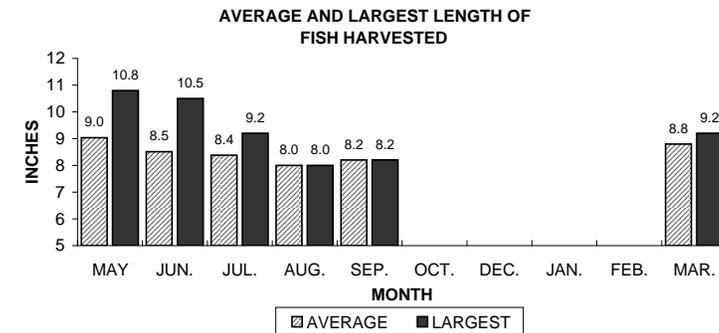
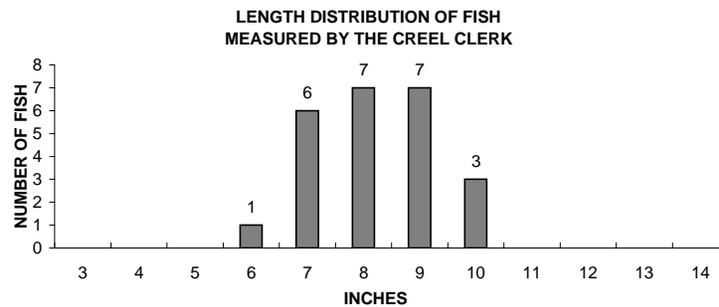
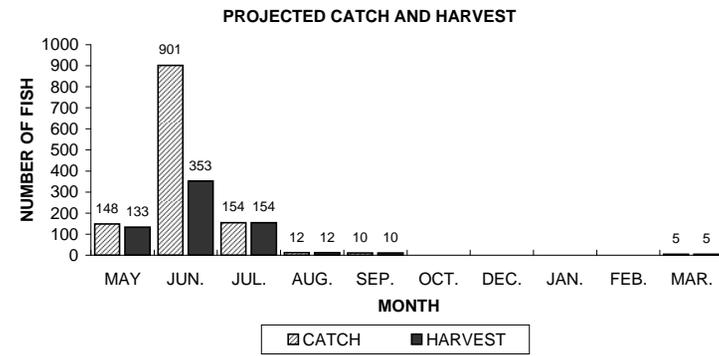
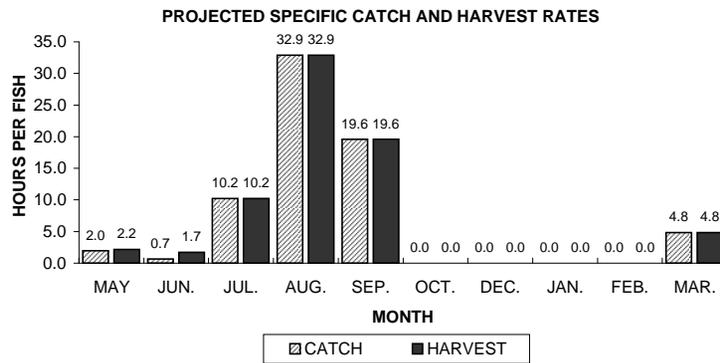
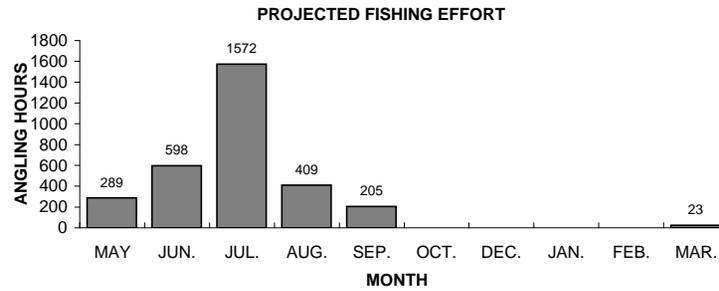
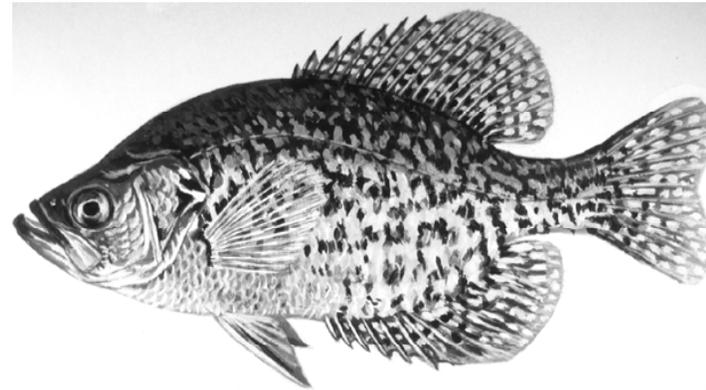


Figure 10. Black crappie sportfishing effort, catch, harvest, and length distribution, Lower Buckatabon Lake, during 2010-11.