

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
CREEL SURVEY REPORT

SPARKLING LAKE

VILAS COUNTY

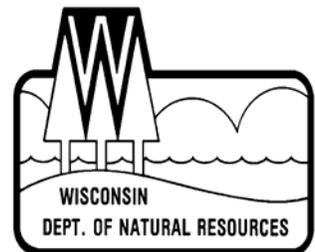
2006-07



Treaty Fisheries Publication

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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.

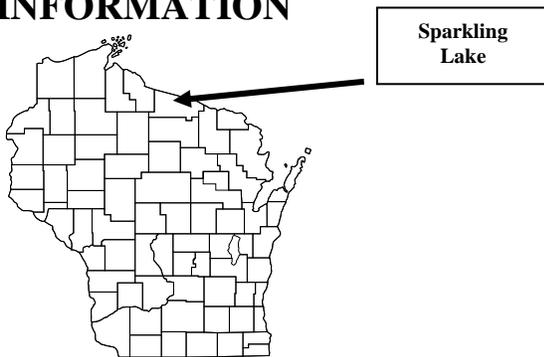
You may have encountered a DNR creel survey clerk on a recent fishing trip. We appreciate your cooperation during an interview. The survey only takes a moment of your time and it gives the Department valuable information needed for management of the fishery.

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

GENERAL LAKE INFORMATION



Location

Sparkling Lake is located in Vilas County just north of the town of Woodruff.

Physical Characteristics

Sparkling Lake is an 154-acre drainage lake of moderate fertility with a maximum depth of 67 feet. Littoral substrate consists primarily of sand, with some gravel and muck present.

Seasons Surveyed

The period referred to in this report as the 2006-fishing season ran from May 6, 2006 through March 4, 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 4, 2007.

Weather

Ice-out on Sparkling Lake was around April 14, 2006 which is considered normal for

northern Wisconsin. Spring, summer and fall weather was normal. Fishable-ice formed on Sparkling Lake in early December.

Sportfishing Regulations

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

Species	Season	Bag Limit	Min. Size
Largemouth Bass& Smallmouth Bass	5/07-6/17	Catch & Release	
	6/18-3/05	1	18"
Musky	5/28-11/30	1	40"
Northern Pike	5/07-3/05	5	none
Walleye	5/07-3/05	1	28"
Panfish	year round	25	none
Rock Bass	year round	none	none

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 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.

General Angler Information

Anglers spent 2,022 hours or 13.1 hours per acre fishing Sparkling Lake during the 2006 season (Table 1). That was considerably less than the statewide average of 33.6 hours per acre and the Vilas County average of 36.2 hours per acre. August was the most heavily fished month (4.2 hours per acre). Fishing effort was lightest in December and February (0.0 hours per acre).

SPECIES INFORMATION

Walleye (Table 2, Figure 1)

Fishing effort targeted at walleye was 442 hours targeting walleye. Walleye fishing effort was greatest in May (199 hours).

December had the least amount of walleye fishing effort (5 hours).

Catch was 132 fish and harvest 3 fish. Highest catch (98 fish) occurred in May and harvest (3 fish) occurred in July. Anglers fished 3.8 hours to catch a walleye during 2006.

The mean length of harvested walleye was 28 inches and the largest walleye measured was a 28-inch fish harvested in June.

Muskellunge (Table 2, Figure 3)

Anglers spent 249 hours targeting muskellunge during the 2006 season. Muskellunge fishing effort was greatest in July (79 hours).

Catch was 8 fish and harvest 0 fish. Highest catch (4 fish) occurred in September.

Anglers fished 45.7 hours to catch a muskellunge during 2006.

Smallmouth Bass (Table 2, Figure 4)

Smallmouth bass received the most fishing pressure in Sparkling Lake during the 2006 season. Anglers spent 1,406 hours during the 2006 season. Smallmouth bass fishing effort was greatest in August (518 hours). 1,985 smallmouth bass were caught with 21 fish harvested. Highest catch (1,116 fish) occurred in August. Anglers fished 0.7 hours to catch a smallmouth bass during 2006.

Largemouth Bass (Table 2, Figure 5)

Sparkling Lake has a low density largemouth bass population. Fishing effort directed at largemouth bass was 0 hours during the 2006 season. Catch was 12 fish and harvest 0 fish.

Panfish (Table 2, Figures 6-10)

Panfish effort was 14 hours during the 2006 season.

Anglers directed 14 hours fishing for rock bass. Total catch was 76 fish, and harvest was 16 fish.

Black crappies were the only other panfish caught during the 2006 survey (11 caught).

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, Joelle Underwood, Marty Kiepke, Tim Tobias, and Jason Halverson. Chuck Janov and Jeff Gize were the creel clerks on Sparkling 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.

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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Woodruff, WI 54568
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Michael.Coshun@dnr.state.wi.us

Table 1. Sportfishing effort summary, Sparkling Lake, 2006-07 season.

Month	Total Angler Hours	Total Angler Hours/Acre	Vilas County Average Hours/Acre	Statewide Average Hours/Acre
May	306	2.0	5.4	5.8
June	315	2.0	7.1	6.1
July	401	2.6	7.7	6.4
August	646	4.2	6.7	5.4
September	276	1.8	4.2	3.8
October	40	0.3	2.0	1.6
December	5	0.0	0.5	1.7
January	28	0.2	0.7	1.5
February	6	0.0	0.9	1.3
March			0.1	**
*Summer Total	1983	12.9	34.1	29.1
*Winter Total	39	0.3	2.1	4.5
Grand Total	2022	13.1	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 Sparkling 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 Sparkling 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 Sparkling Lake to other lakes statewide.

Table 2. Comparison of creel survey synopses, Sparkling Lake, 1996-97 and 2006-07 fishing seasons.

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	442	20.94%	132	3.8	3		28.0
Northern Pike	0	0.00%	0		0		
Muskellunge	249	11.80%	8	45.7	0		
Smallmouth Bass	1406	66.60%	1985	0.7	21	67.6	19.3
Largemouth Bass	0	0.00%	12		0		
Yellow Perch	0	0.00%	0		0		
Bluegill	0	0.00%	0		0		
Pumpkinseed	0	0.00%	0		0		
Rock Bass	14	0.66%	76	0.3	16	0.9	
Black Crappie	0	0.00%	11		0		
extra	0	0.00%	0		0		

* 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: 1996-97

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	487	26.28%	0		0		
Northern Pike	74	3.99%	0		0		
Muskellunge	250	13.49%	11	22.0	0		
Smallmouth Bass	505	27.25%	552	0.9	10	52.4	14.0
Largemouth Bass	275	14.84%	0		0		
Yellow Perch	125	6.75%	242	0.5	151	0.8	9.7
Bluegill	71	3.83%	78	0.9	0		
Pumpkinseed	0	0.00%	0		0		
Rock Bass	34	1.83%	224	4.0	0		
Black Crappie	32	1.73%	0		0		
extra	0	0.00%	0		0		

WALLEYE

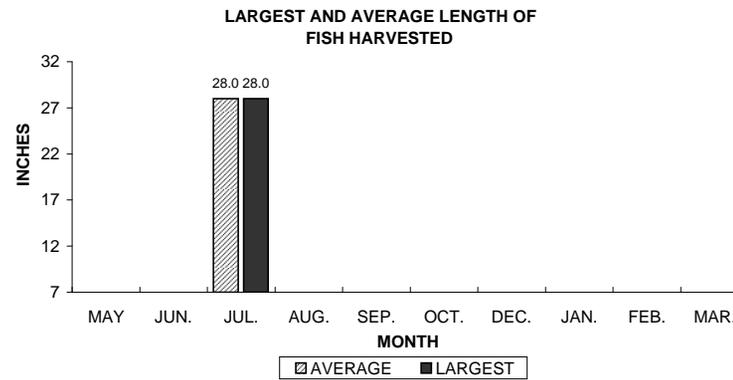
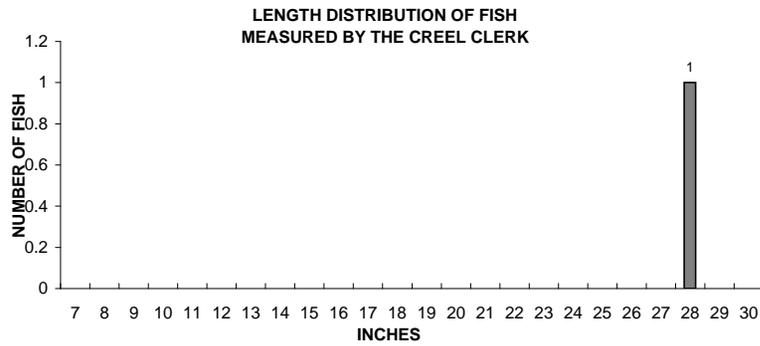
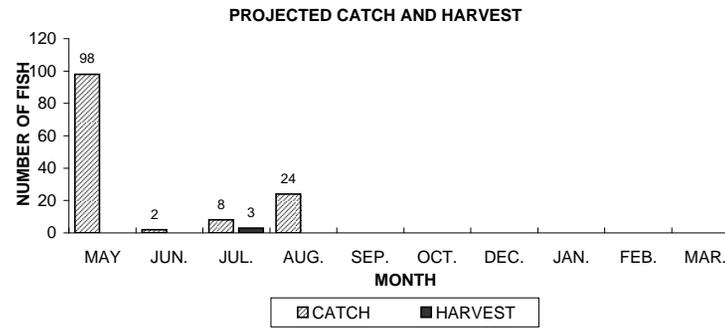
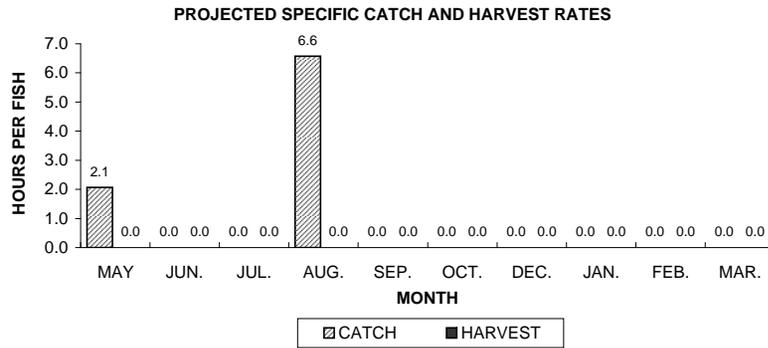
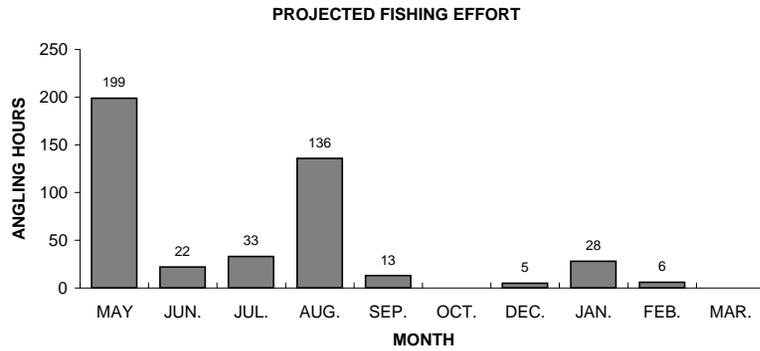
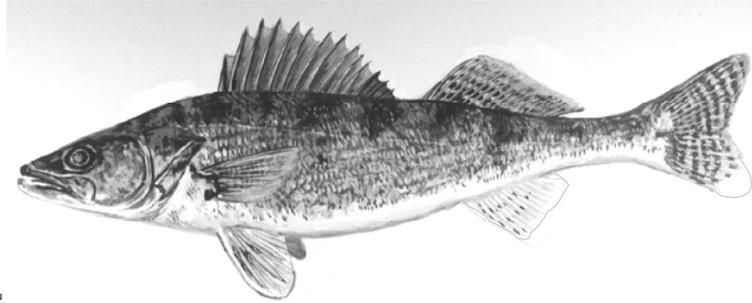


Figure 1. Walleye sportfishing effort, catch, harvest, and length distribution, Sparkling Lake, during 2006-07.

MUSKELLUNGE

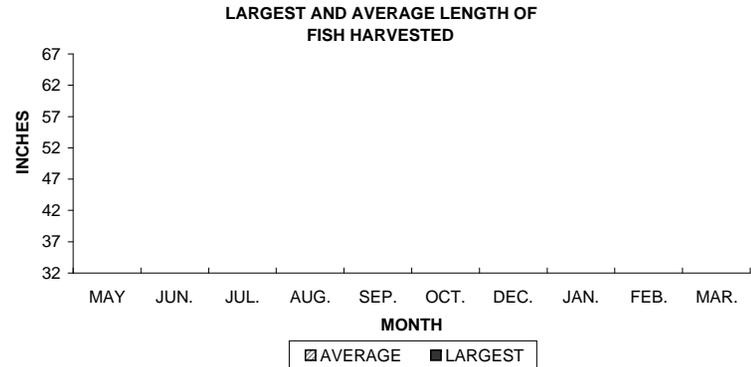
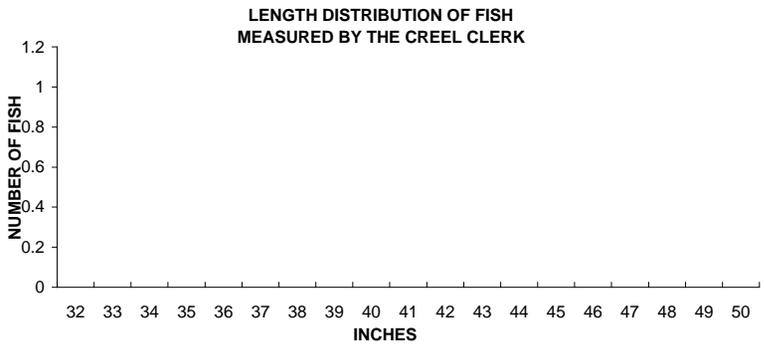
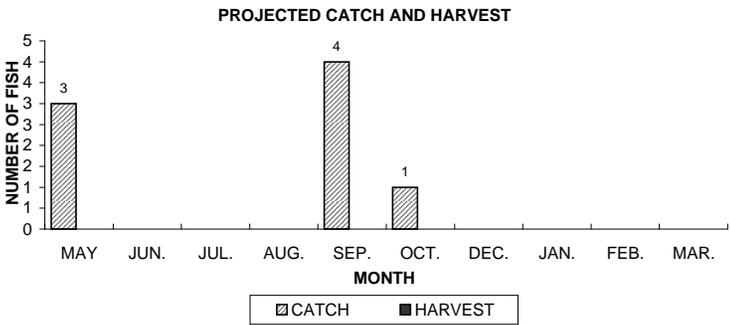
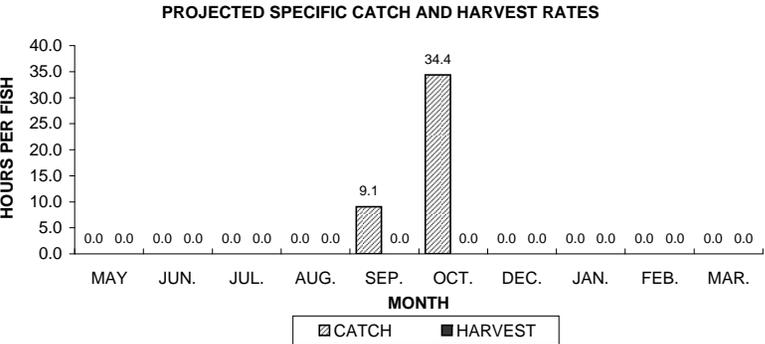
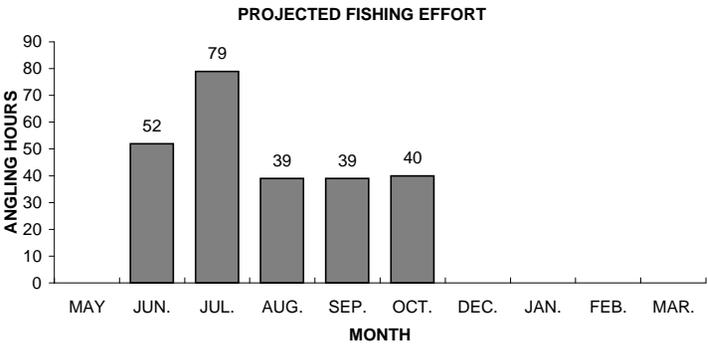
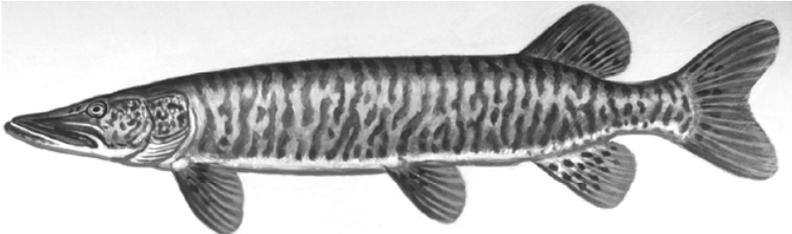


Figure 3. Muskellunge sportfishing effort, catch, harvest, and length distribution, Sparkling Lake, during 2006-07.

SMALLMOUTH BASS

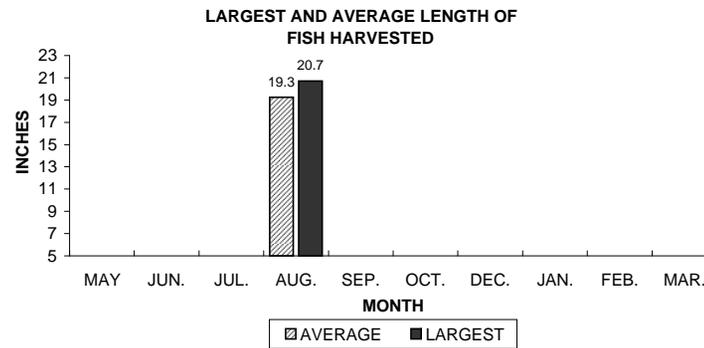
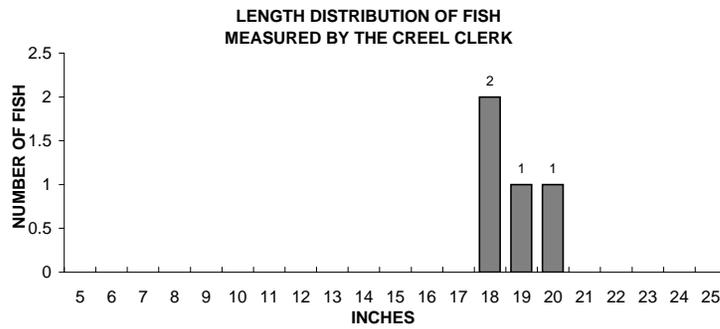
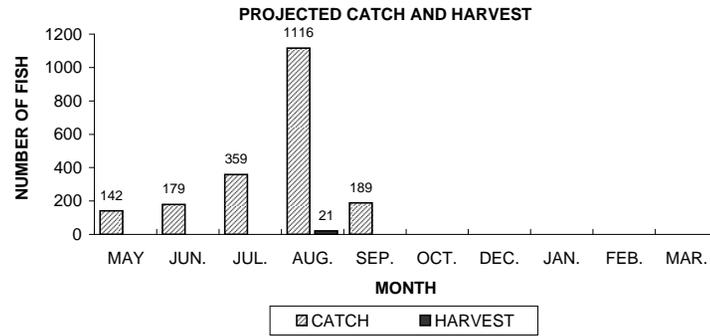
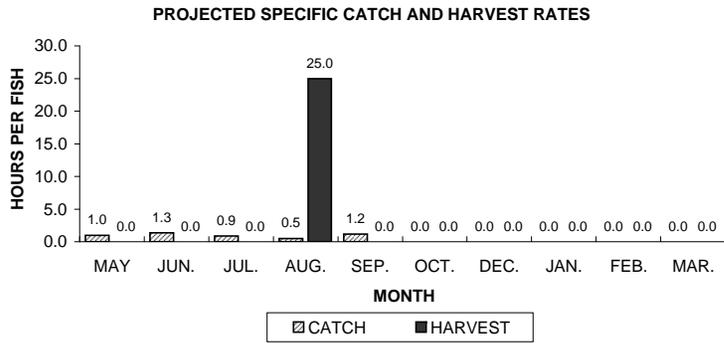
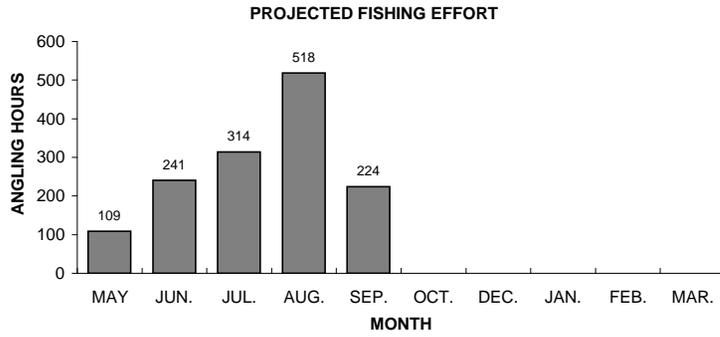
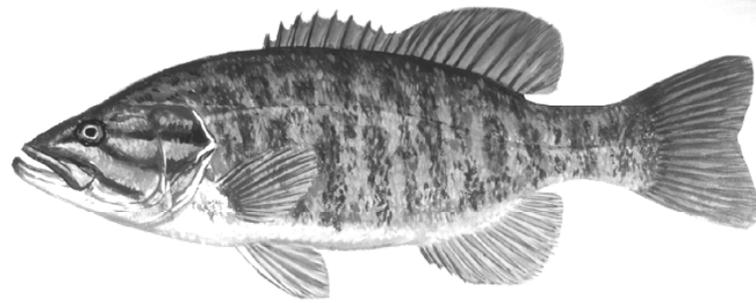


Figure 4. Smallmouth bass sportfishing effort, catch, harvest, and length distribution, Sparkling Lake, during 2006-07.

LARGEMOUTH BASS

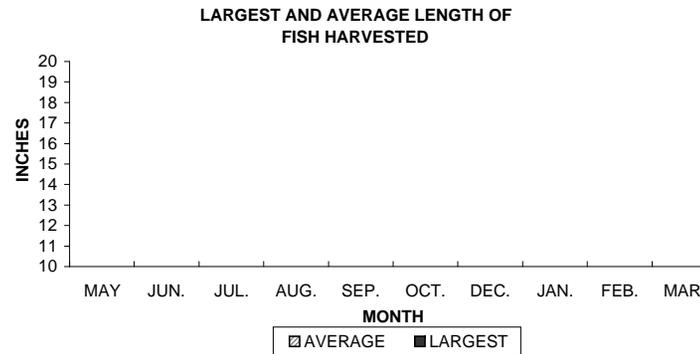
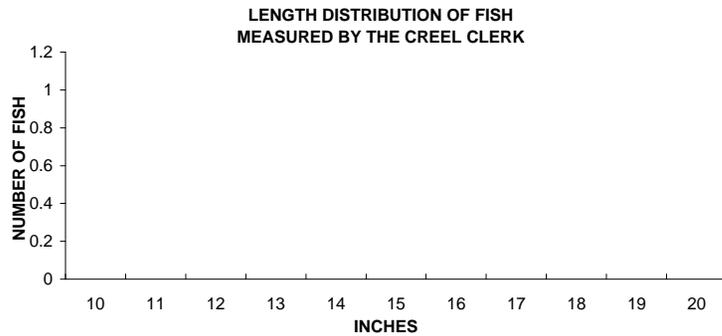
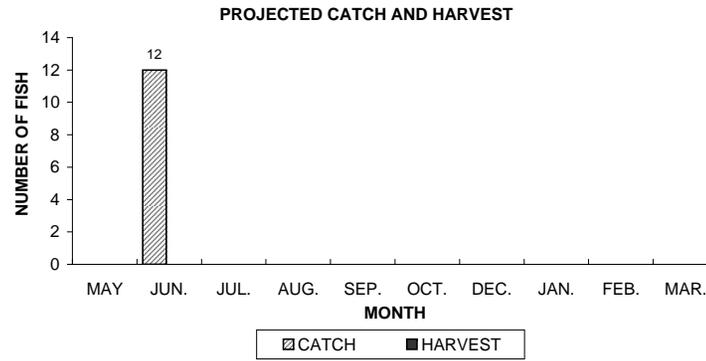
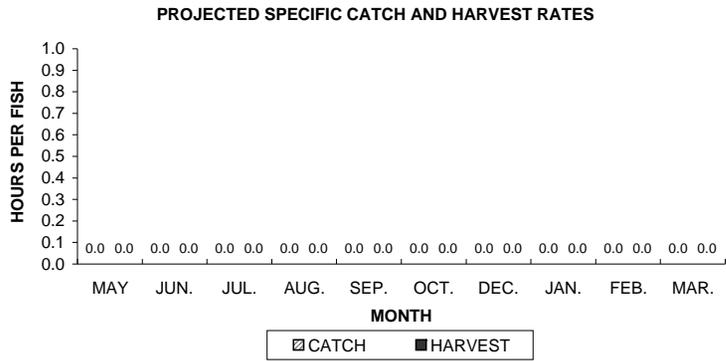
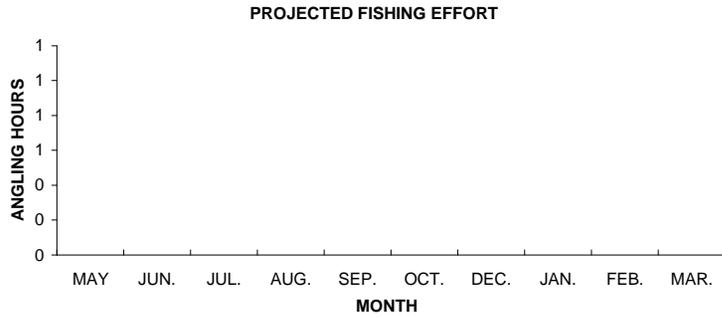
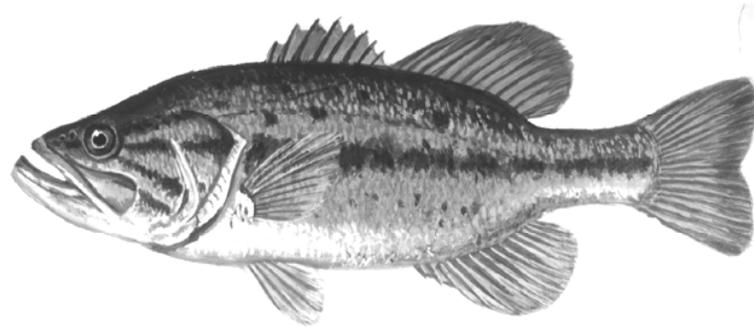


Figure 5. Largemouth bass sportfishing effort, catch, harvest, and length distribution, Sparkling Lake, during 2006-07.

ROCK BASS

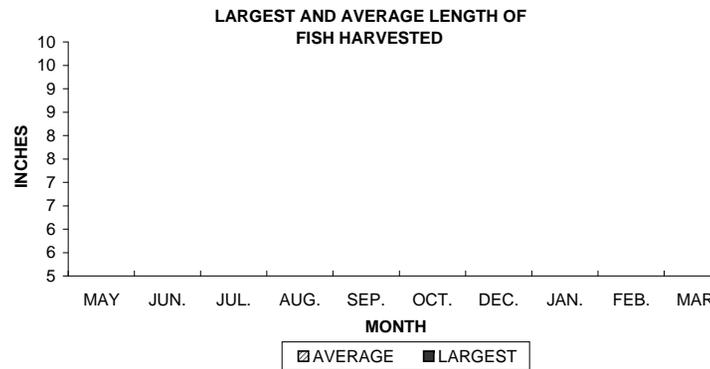
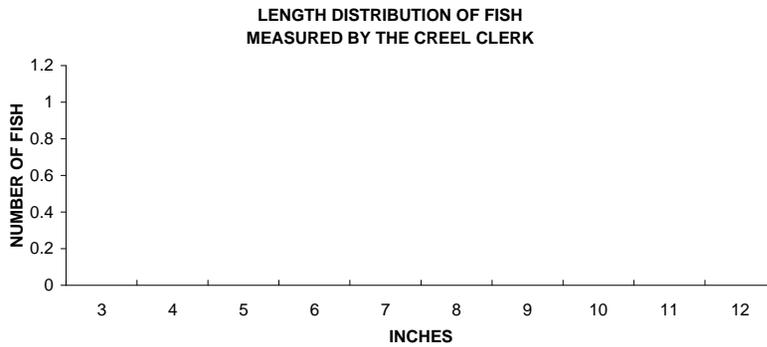
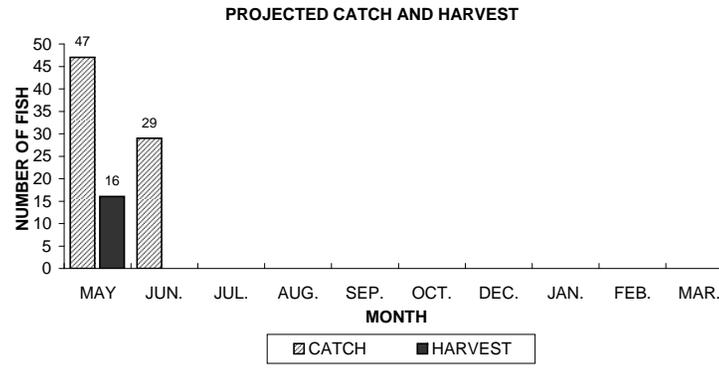
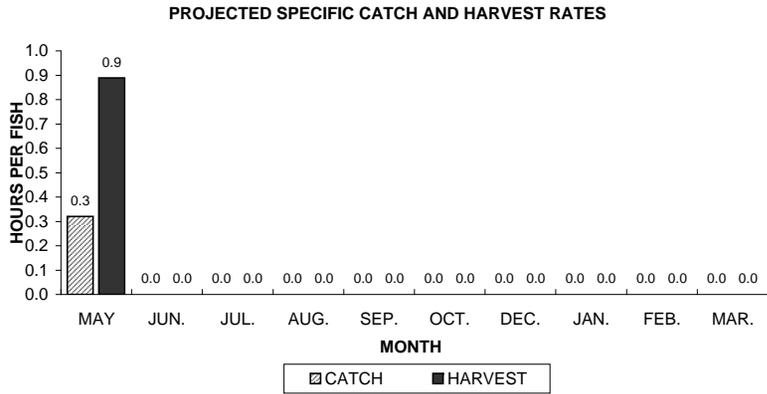
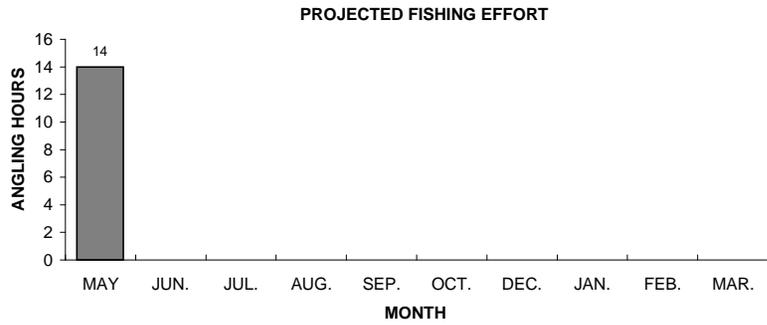
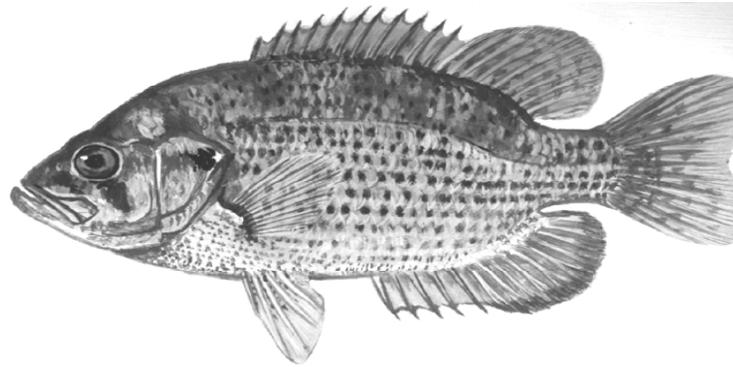


Figure 9. Rock bass sportfishing effort, catch, harvest, and length distribution, Sparkling Lake, during 2006-07.

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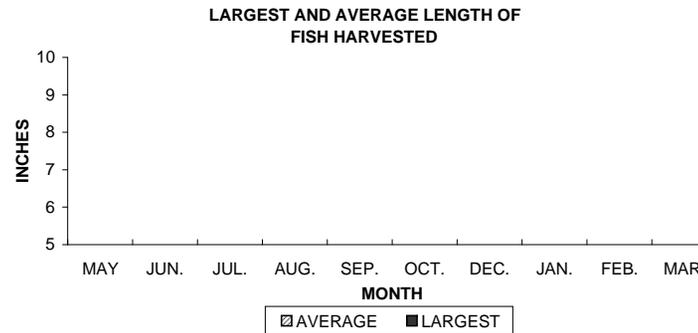
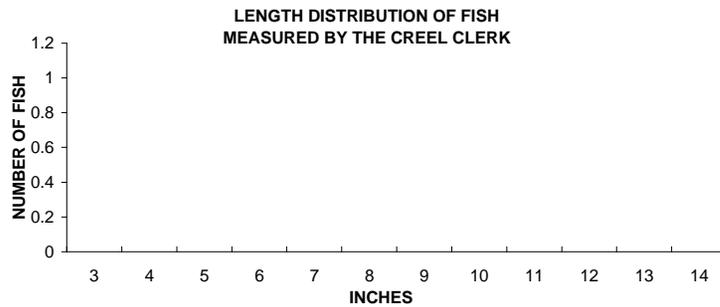
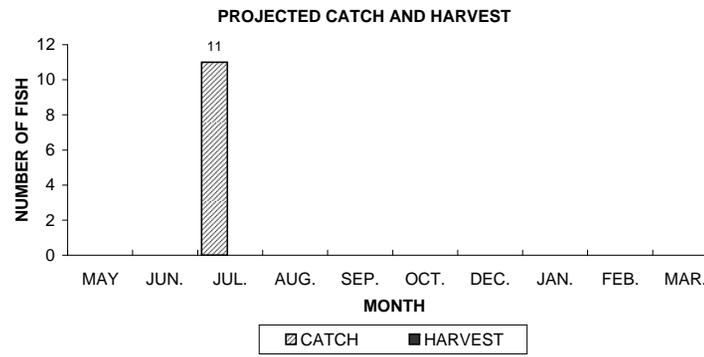
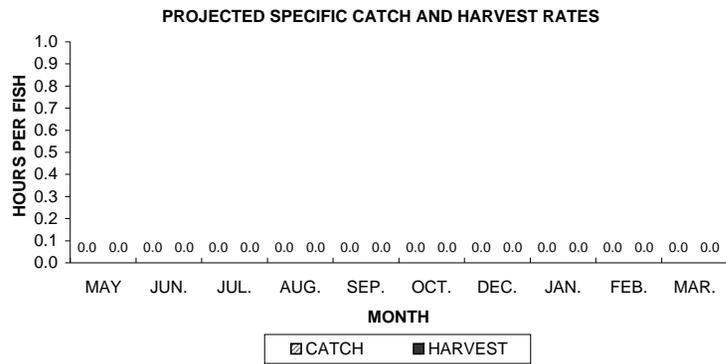
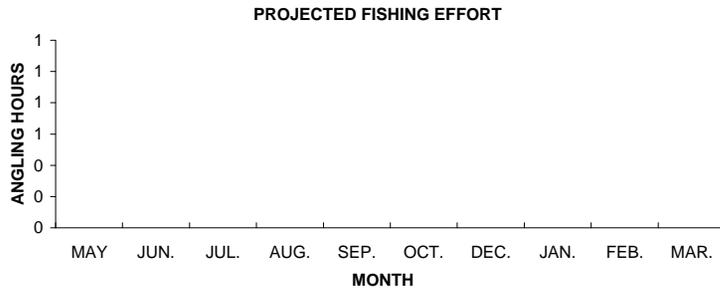
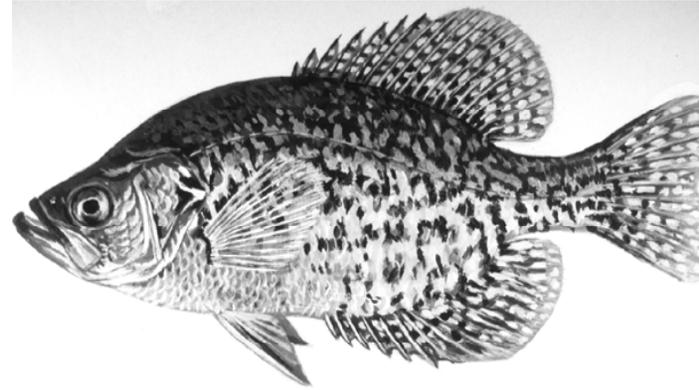


Figure 10. Black crappie sportfishing effort, catch, harvest, and length distribution, Sparkling Lake, during 2006-07.