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Fish Graphics: Virgil Beck, Stevens Point, WI

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

Stevens Lake

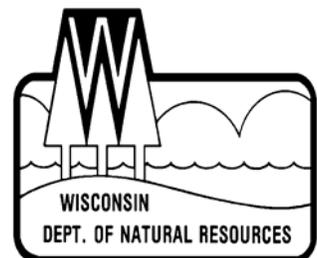
FOREST COUNTY

2008-09



Treaty Fisheries Publication

**Written by Tim Tobias
Treaty Fisheries Technician**



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.

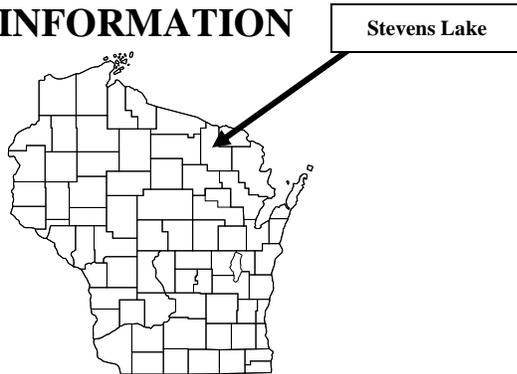
You may have encountered a DNR creel survey clerk on a recent fishing trip. We appreciate your cooperation during an interview. The survey only takes a moment of your time and it gives the Department valuable information needed for management of the fishery.

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

GENERAL LAKE INFORMATION



Location

Stevens Lake is located in north eastern Forest County approximately 28 miles east of the City of Eagle River.

Physical Characteristics

Stevens Lake is a 295-acre hard water drainage Lake having clear water and a maximum depth of 10 feet. Littoral substrate consists primarily of sand and gravel with smaller amounts of muck.

Seasons Surveyed

The period referred to in this report as the 2008-09 fishing season ran from May 3, 2008 through March 1, 2009. The open water creel survey ran from May 3 through October 31, 2008 and the ice fishing creel survey ran from December 1, 2008 through March 1, 2009.

Weather

Ice-out on Stevens Lake was around April

28th. Fishable-ice formed on Stevens Lake in December.

Sportfishing Regulations

The following seasons, daily bag limits, and length limits were in place on Stevens Lake during the 2008-09 fishing season:

Species	Season	Bag Limit	Min. Size
Largemouth Bass & Smallmouth Bass	5/03-6/20	Catch & Release	
	6/21-3/01	1	14"
Northern Pike	5/03-3/01	2	26"
Walleye	5/05-3/02	2	15"
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 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 10,337 hours or 34.8 hours per acre fishing Stevens Lake during the 2008 season (Table 1). That was more than the Forest County average of 28.8 hours per acre. August was the most heavily fished month (7.5 hours per acre). Fishing effort was lightest in October (0.5 hours per acre).

SPECIES INFORMATION

Walleye (Table 2, Figure 1)

Fishing effort targeted at walleye was 4,964 hours. Walleye fishing effort was greatest in May (1,653 hours). October had the least amount of walleye fishing effort (107 hours).

Catch was 427 fish with a harvest of 317 fish. Highest catch (212 fish) occurred in May and harvest (179 fish) also occurred in

May. Anglers fished 12.4 hours to catch a walleye and 15.6 hours to harvest during 2008.

The mean length of harvested walleye was 18.2 inches and the largest walleye measured was a 28.2-inch fish harvested in December.

Northern Pike (Table 2, Figure 2)

Stevens Lake is one of very few lakes in northern Wisconsin that have special northern pike regulations. The regulations allows for the harvest of two northern pike 26" or greater.

There were 3,537 angler hours of directed effort for northern pike on Stevens Lake during the 2008 season. This directed effort in 2008 was almost identical to the 1999-00 effort of 3,524 hours

Catch was 1,155 northern pike with a harvest of 162 fish. Highest catch (277 fish) occurred in July. Anglers fished 4.1 hours to catch a northern pike and 21.8 hours to harvest a fish during the 2008 season. During the 1999 season anglers fished 1.8 hours longer or 5.9 hours to catch and over twice as long or 44.4 hours to harvest a northern pike.

The mean length of harvested northern pike was 27.6 inches and the largest northern pike measured was a trophy 40.0-inch fish harvested in February.

Smallmouth Bass (Table 2, Figure 4)

There were 0 hours of directed effort for smallmouth bass on Stevens Lake during the 2008 season.

Catch was 12 fish with a harvest of 12 fish.

Largemouth Bass (Table 2, Figure 5)

There were 324 hours directed effort for Largemouth Bass on Stevens Lake during

the 2008 season.

Catch was 145 fish with a harvest of 32 fish. Highest catch (39 fish) occurred in September. Anglers fished 3.7 hours to catch a Largemouth Bass during the 2008 season.

Panfish (Table 2, Figures 6-10)

Panfish accounted for almost 50 percent of the total directed effort or 8,631 angler hours during the 2008 season.

Bluegill (Table 2, Figure 7)

Bluegill was the most sought after panfish species with about 24 percent of the directed effort. Bluegill fishing effort was greatest in August (1,134 hours). October had the least amount of bluegill effort (9 hours).

Catch was 5,023 fish with a harvest of 1,891 fish. Highest catch (1,593 fish) occurred in August. Anglers fished 48 minutes to catch a bluegill and 2.2 hours to harvest during the 2008 season.

The mean length of harvested bluegill was 7.4 inches and the largest bluegill measured was a whopping 11.2 inch fish harvested in July.

Black Crappie (Table 2, Figure 10)

Black crappie was the second most sought after panfish species with 16 percent or 2,773 hours of directed effort. Black crappie effort peaked in August (742 hours).

The total estimated catch of black crappie was 2,306 with an estimated harvest of 1,919 fish.

The mean length of harvested black crappie was 9.8 inches and the largest measured was 13.2 inches caught in October.

Yellow Perch (Table 2, Figure 6)

Yellow perch was the third most sought after panfish species with about 10 percent of the directed effort.

Catch was 3,196 fish with a harvest of 532 fish. Anglers fished 54 minutes to catch a yellow perch and 3.8 hours to harvest during the 2008 season.

The mean length of harvested yellow perch was 8.6 inches and the largest yellow perch measured was a 12.2 inch fish harvested in September.

Pumpkinseed and rock bass were also caught, but in lower numbers.

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 the completion of this survey includes, Steve Kramer, Joelle Underwood, Marty Kiepke, Tim Tobias, Jason Halverson and Jeff Blonski. Rich Cechal, Don Morrell and Paul Weber were the creel clerks on Stevens Lake during the survey period.

The department thanks the cooperator, Doucette's Resort, who generously allowed the department to keep a boat and snowmobile on their property during this survey.

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.

This creel report was reviewed by Mike Coshun 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. Requests should be directed to:

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Table 1. Sportfishing effort summary, Stevens Lake, 2008-09 season.

Month	Total Angler Hours	Total Angler Hours/Acre	Forest County Average Hours/Acre	Statewide Average Hours/Acre
May	2068	7.0	4.3	5.8
June	1557	5.2	5.2	6.1
July	2012	6.8	6.0	6.4
August	2221	7.5	5.0	5.4
September	857	2.9	2.5	3.8
October	160	0.5	0.8	1.6
December	687	2.3	1.3	1.7
January	367	1.2	1.9	1.5
February	368	1.2	1.7	1.3
March	40	0.1	0.1	**
*Summer Total	8875	29.9	23.8	29.1
*Winter Total	1462	4.9	5.0	4.5
Grand Total	10337	34.8	28.8	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 Stevens 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 Stevens 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 Stevens Lake to other lakes statewide.

Table 2. Comparison of creel survey synopses, Stevens Lake, 2008-09 and 1999-00 fishing seasons.

CREEL YEAR: 2008-09

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	4964	28.44%	427	12.4	317	15.6	18.2
Northern Pike	3537	20.26%	1155	4.1	162	21.8	27.6
Muskellunge	0	0.00%					
Smallmouth Bass	0	0.00%	12		12		16.5
Largemouth Bass	324	1.86%	145	3.7	32	21.1	17.7
Yellow Perch	1695	9.71%	3196	0.9	532	3.8	8.6
Bluegill	4127	23.64%	5023	0.8	1891	2.2	7.4
Pumpkinseed	36	0.21%	80	2.6	59	2.6	6.1
Rock Bass	0	0.00%	8		0		
Black Crappie	2774	15.89%	2306	1.2	1919	1.4	9.8

* 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: 1999-00

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	6875	30.81%	1756	4.3	390	18.2	18.9
Northern Pike	3524	15.79%	1067	5.9	97	44.4	28.6
Muskellunge	0	0.00%	0		0		0.0
Smallmouth Bass	116	0.52%	17	8.1	0	0.0	0.0
Largemouth Bass	543	2.43%	149	10.2	22	40.2	17.3
Yellow Perch	990	4.44%	1509	1.6	825	2.2	8.6
Bluegill	4722	21.16%	1795	2.8	1314	3.8	8.7
Pumpkinseed	0	0.00%	0		0		0.0
Rock Bass	0	0.00%	0		0		0.0
Black Crappie	5542	24.84%	2306	2.5	1473	3.9	10.6

WALLEYE

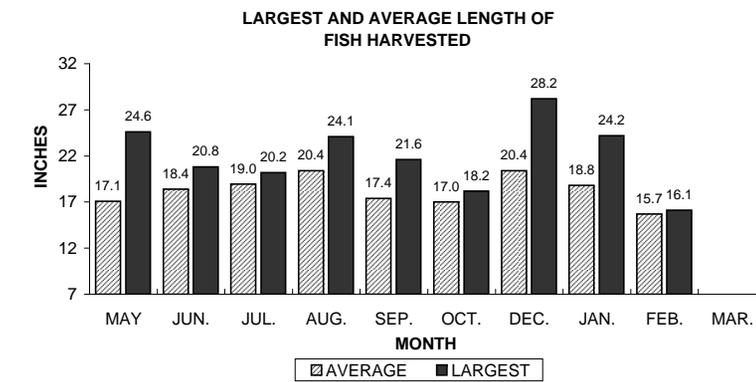
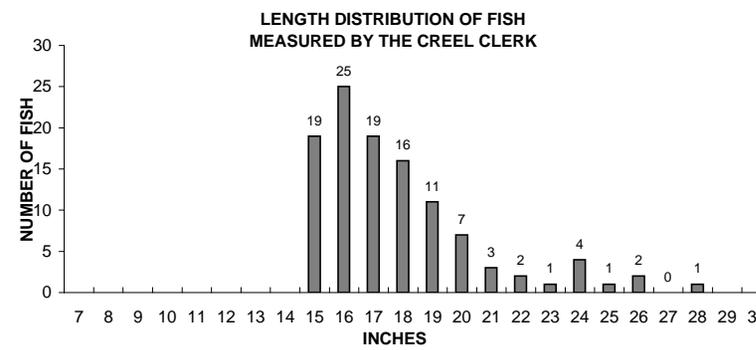
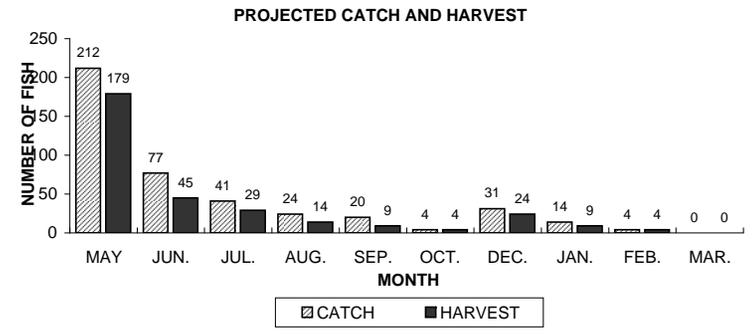
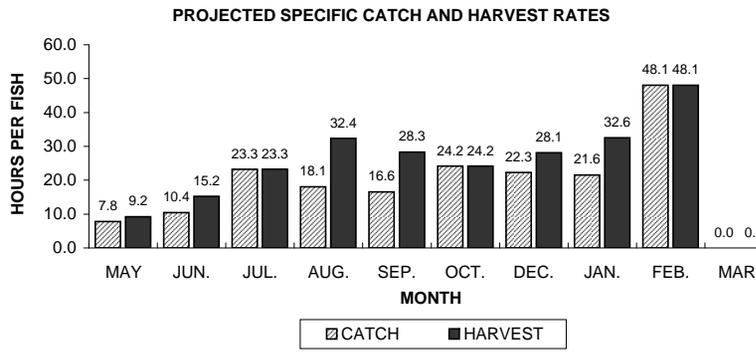
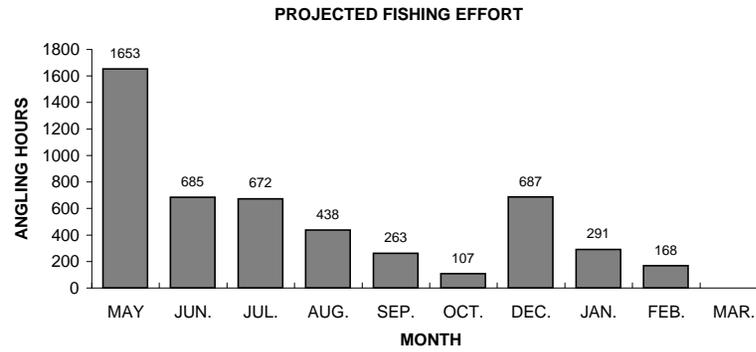
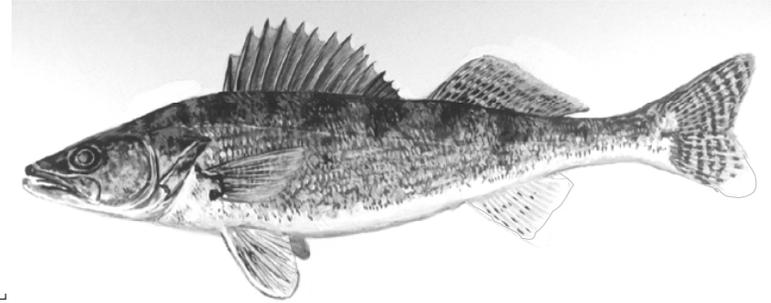
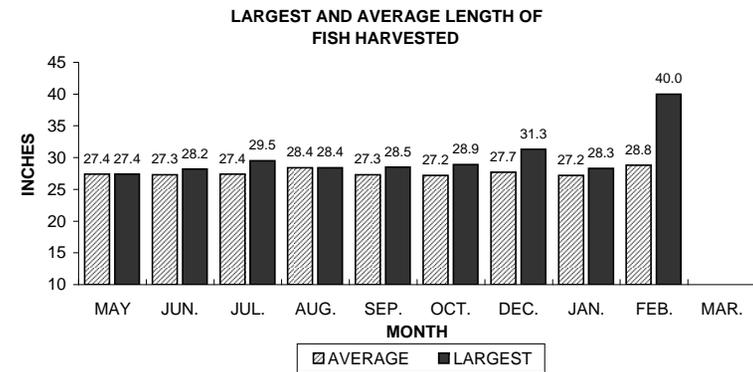
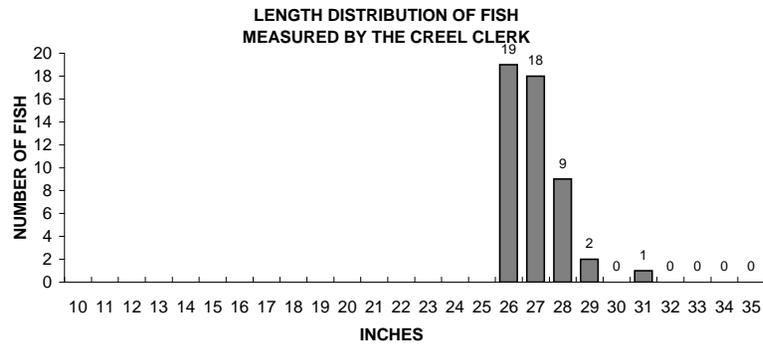
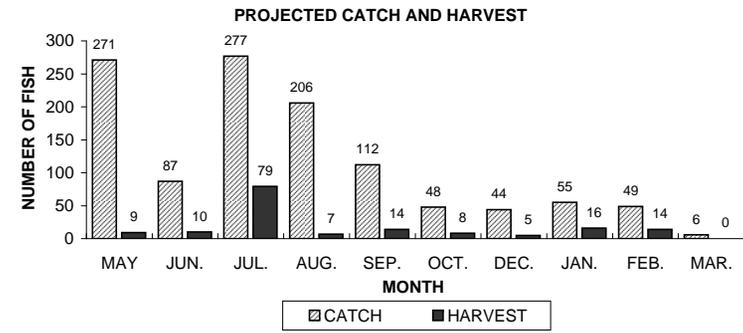
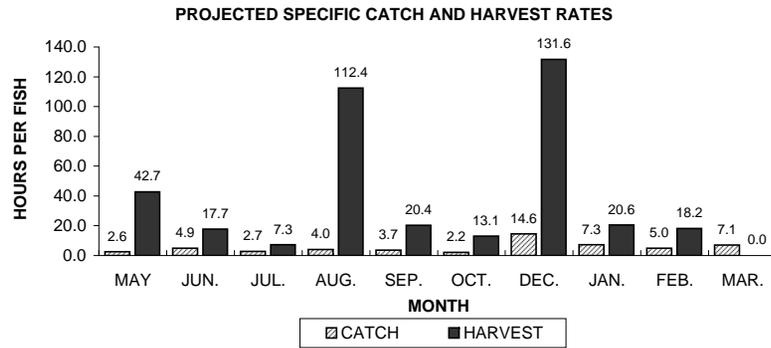
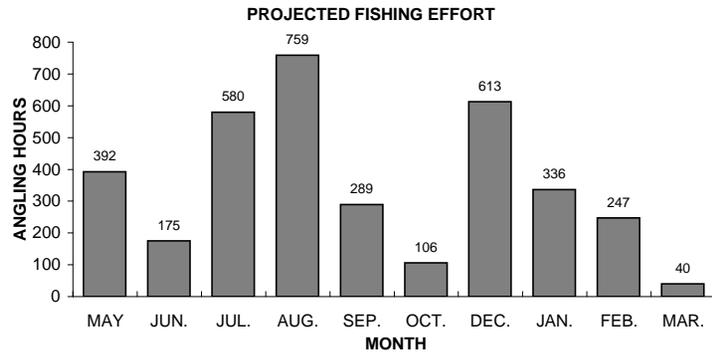
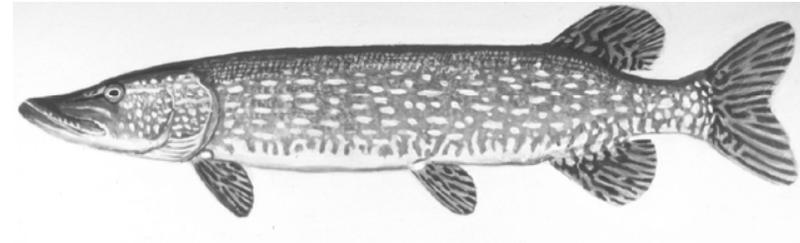


Figure 1. Walleye sportfishing effort, catch, harvest, and length distribution, Stevens Lake, during 2008-09.

NORTHERN PIKE



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Figure 2. Northern pike sportfishing effort, catch, harvest, and length distribution, Stevens Lake, during 2008-09.

SMALLMOUTH BASS

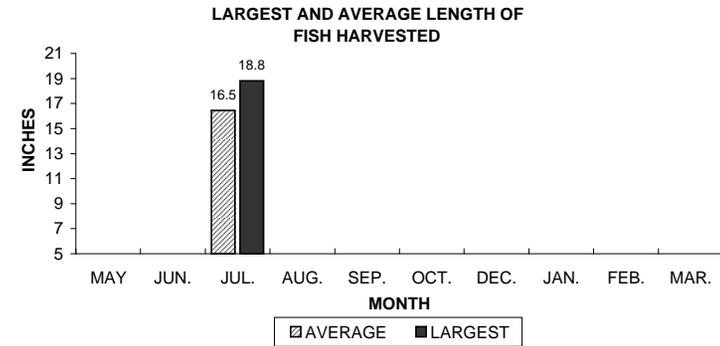
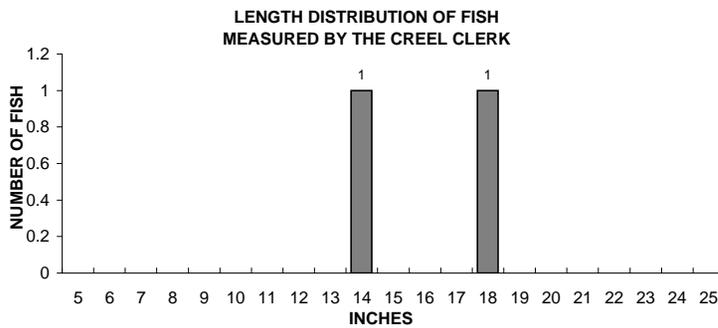
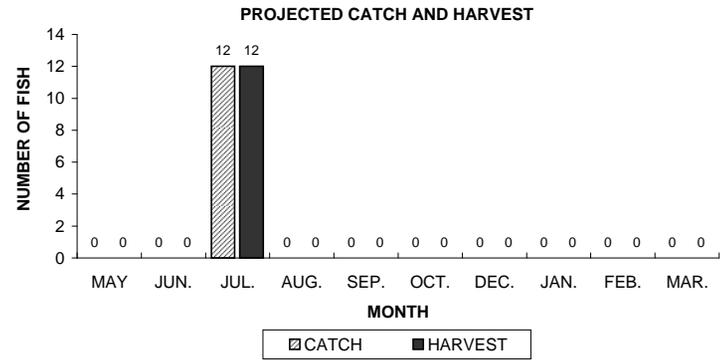
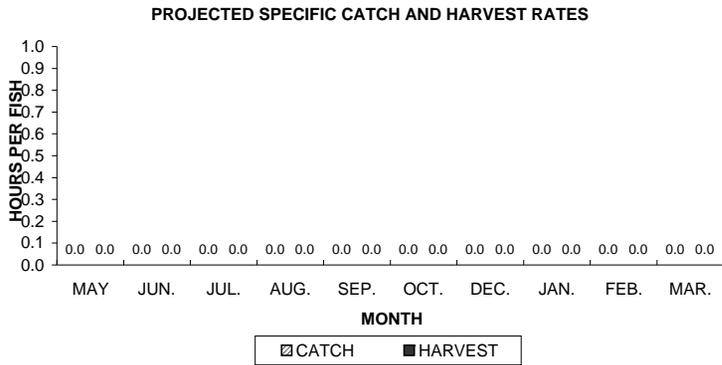
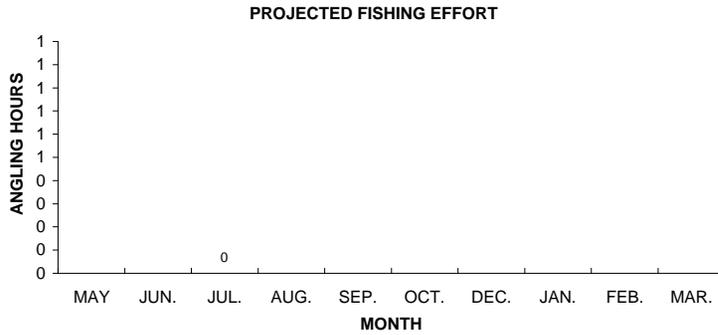
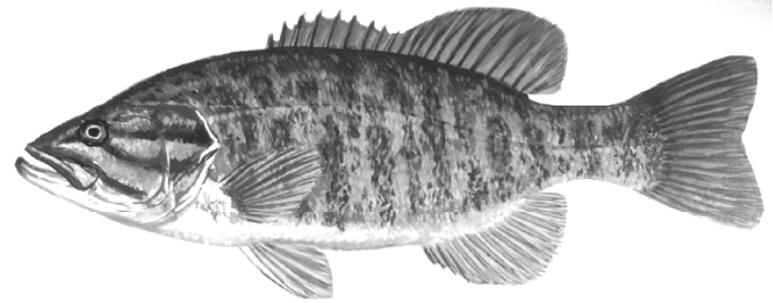


Figure 4. Smallmouth bass sportfishing effort, catch, harvest, and length distribution, Stevens Lake, during 2008-09.

LARGEMOUTH BASS

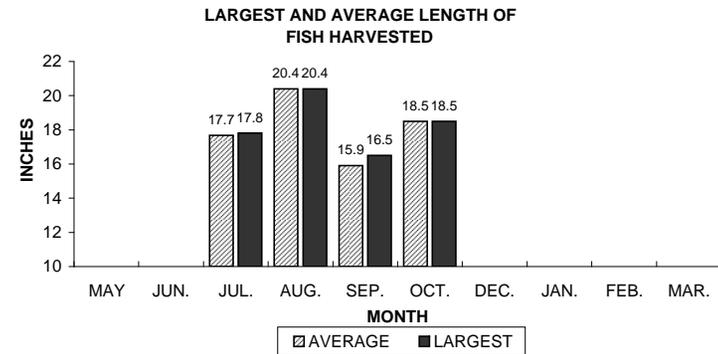
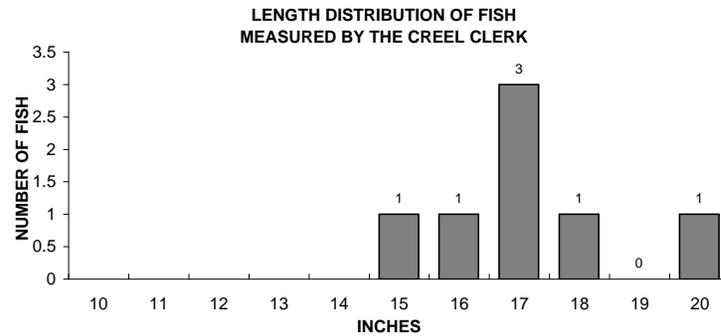
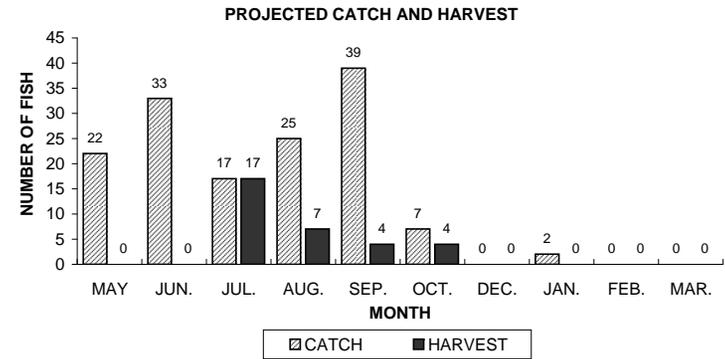
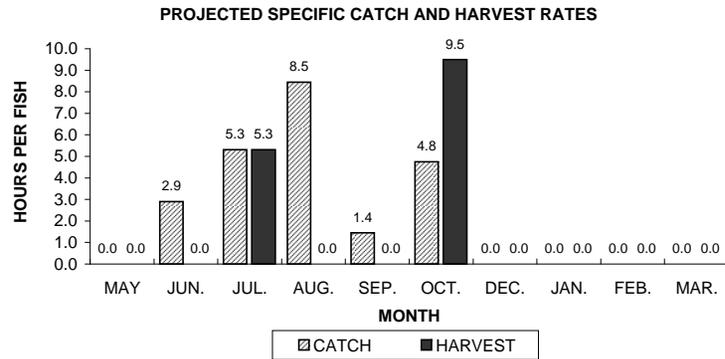
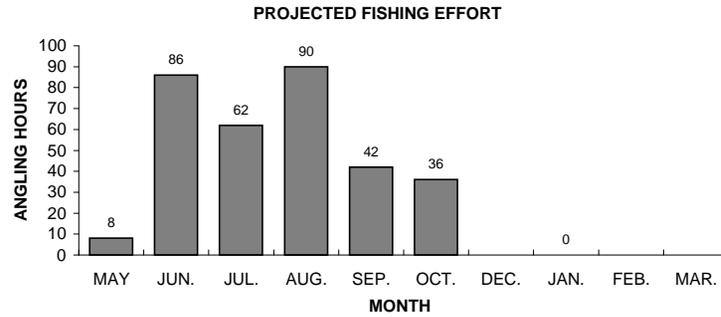
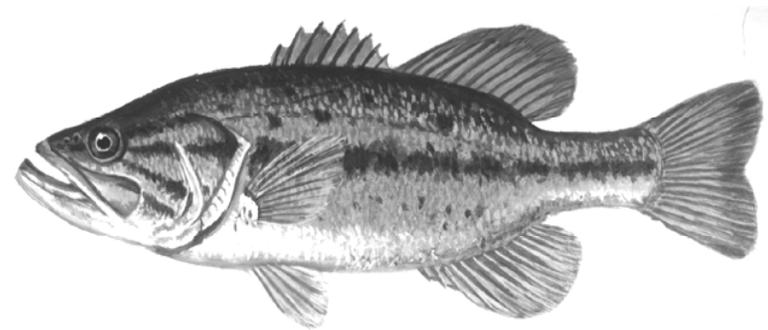


Figure 5. Largemouth bass sportfishing effort, catch, harvest, and length distribution, Stevens Lake, during 2008-09.

YELLOW PERCH

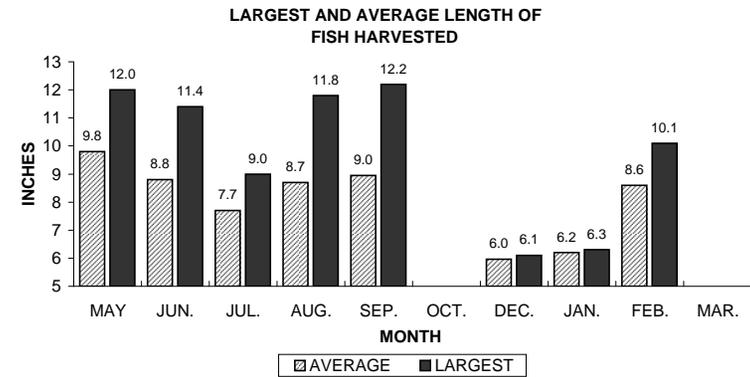
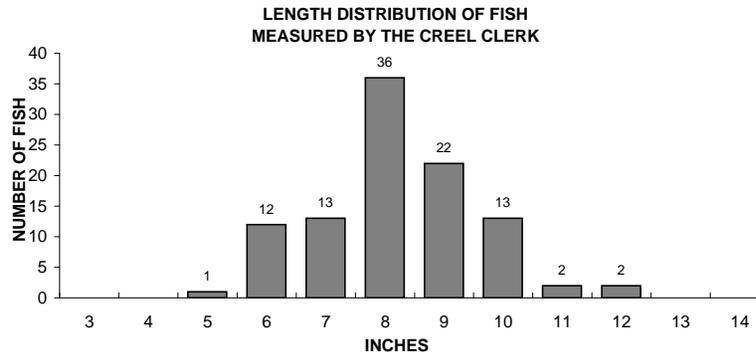
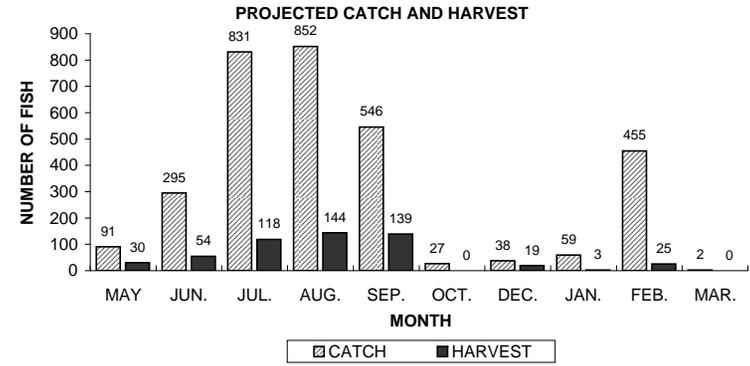
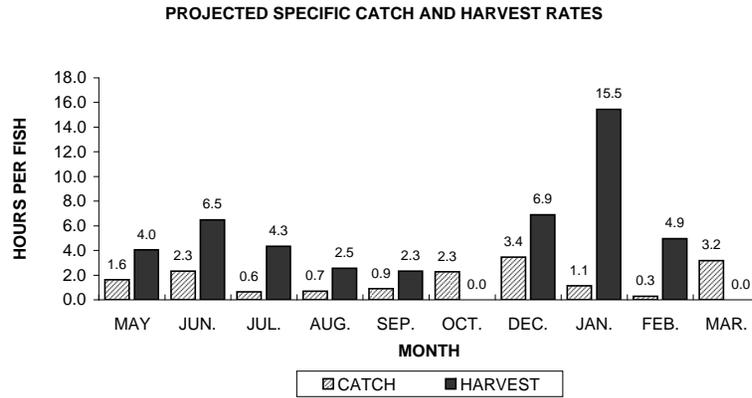
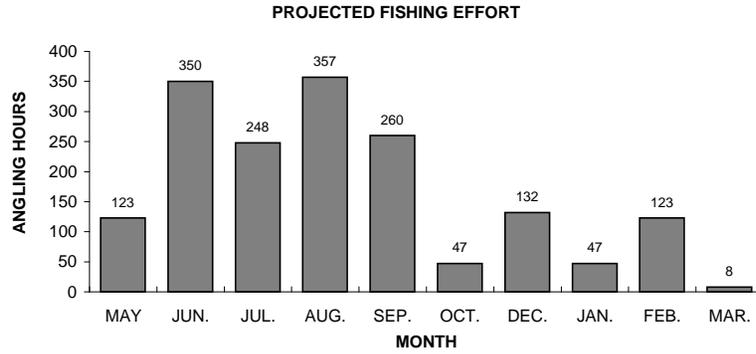
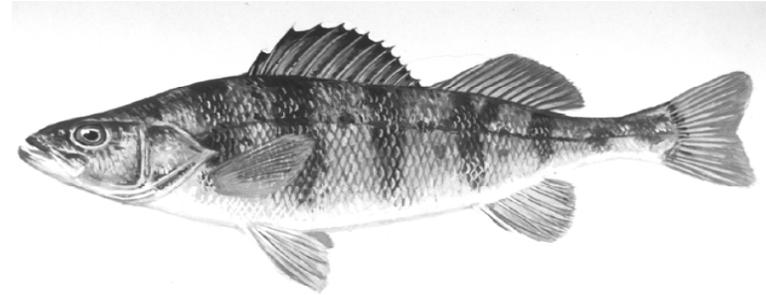


Figure 6. Yellow perch sportfishing effort, catch, harvest, and length distribution, Stevens Lake, during 2008-09.

BLUEGILL

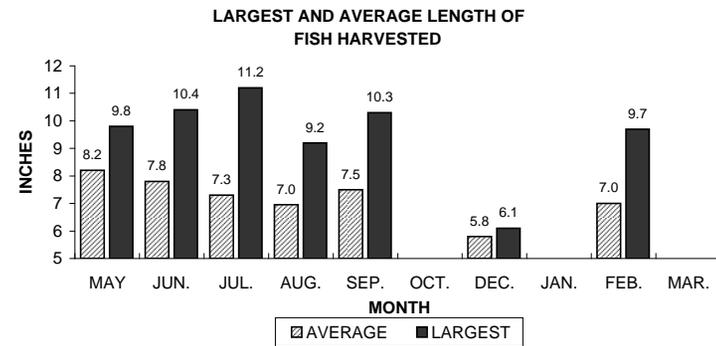
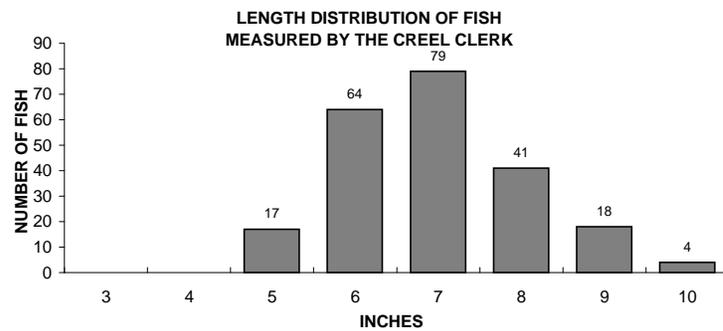
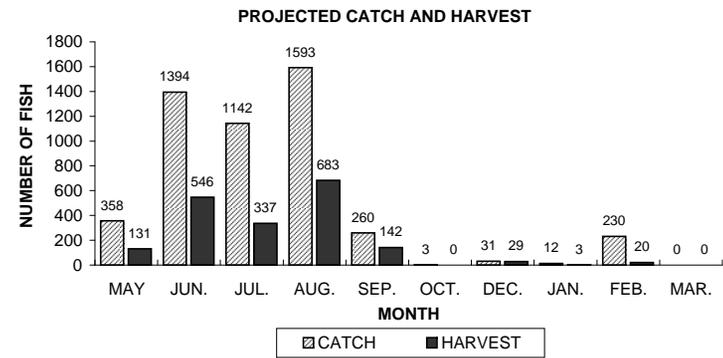
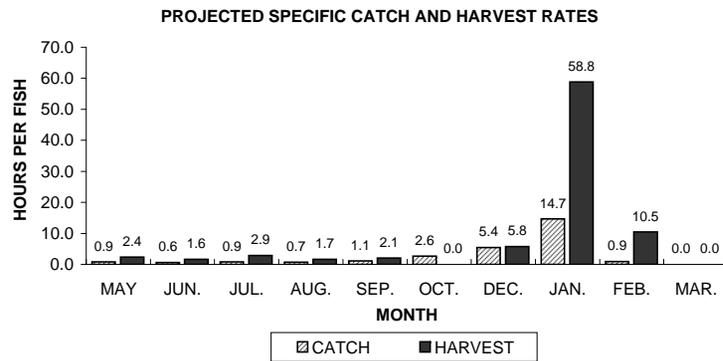
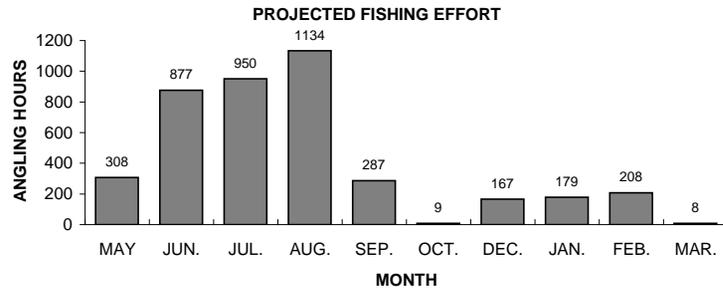
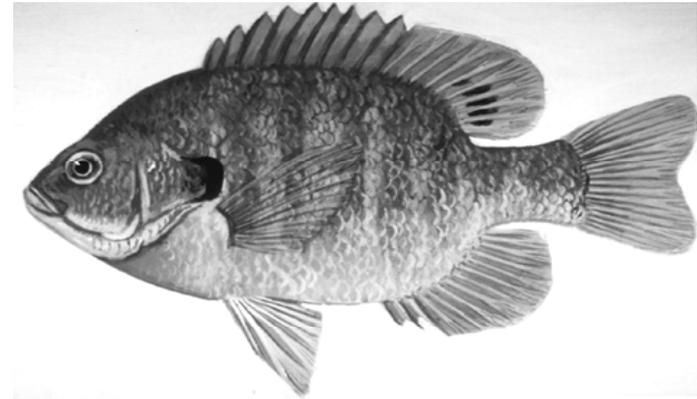


Figure 7. Bluegill sportfishing effort, catch, harvest, and length distribution, Stevens Lake, during 2008-09.

PUMPKINSEED

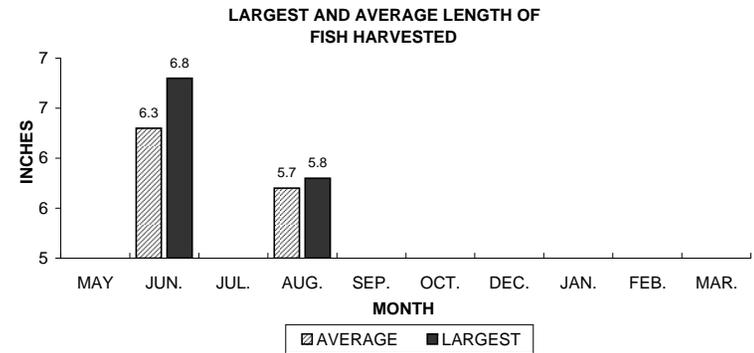
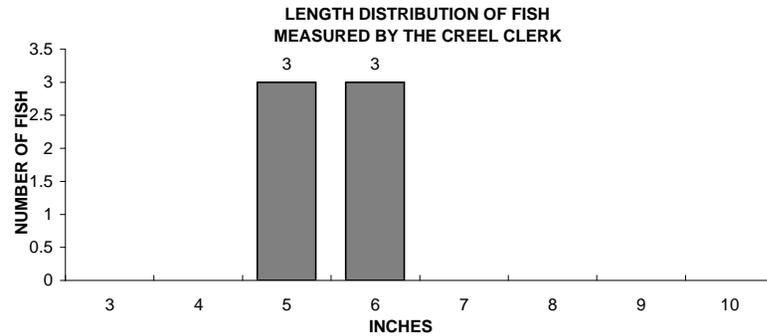
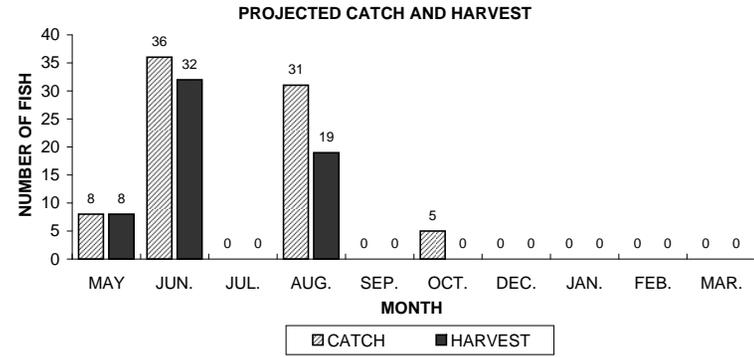
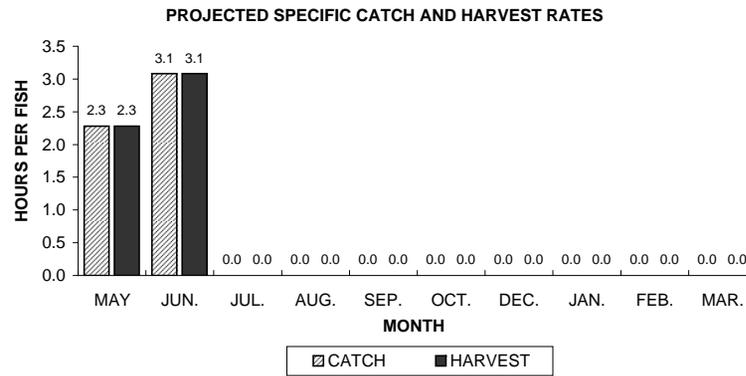
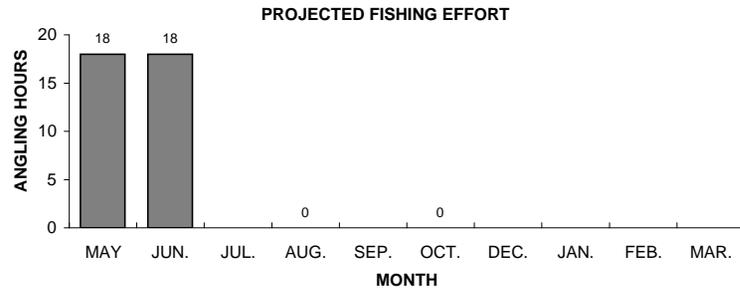
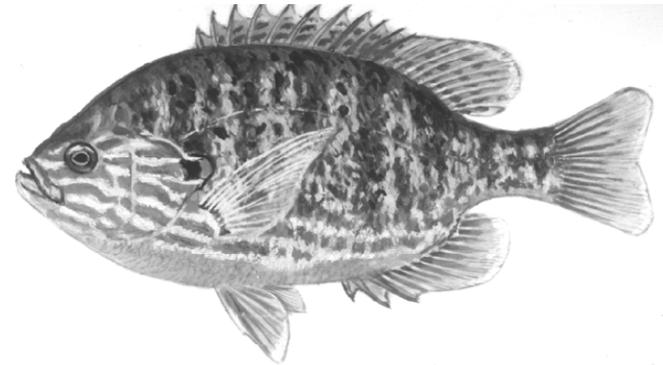


Figure 8. Pumpkinseed sportfishing effort, catch, harvest, and length distribution, Stevens Lake, during 2008-09.

ROCK BASS

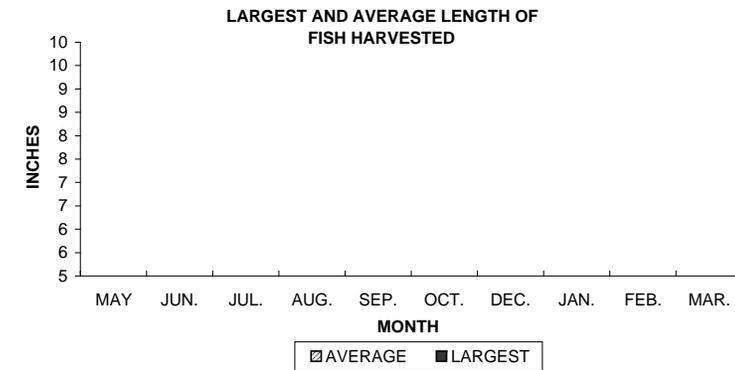
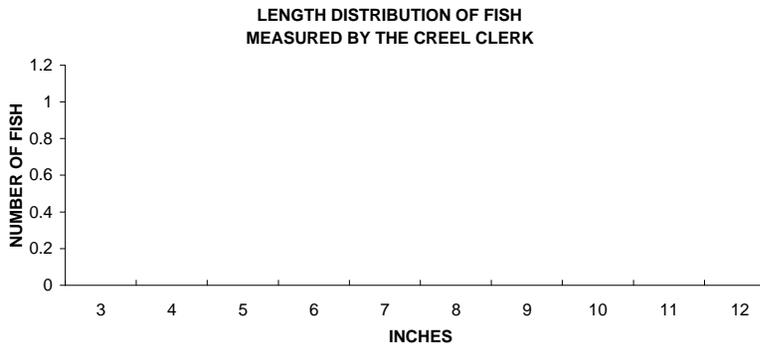
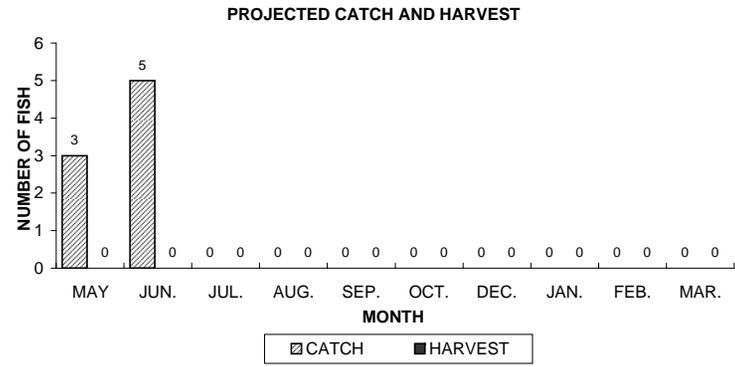
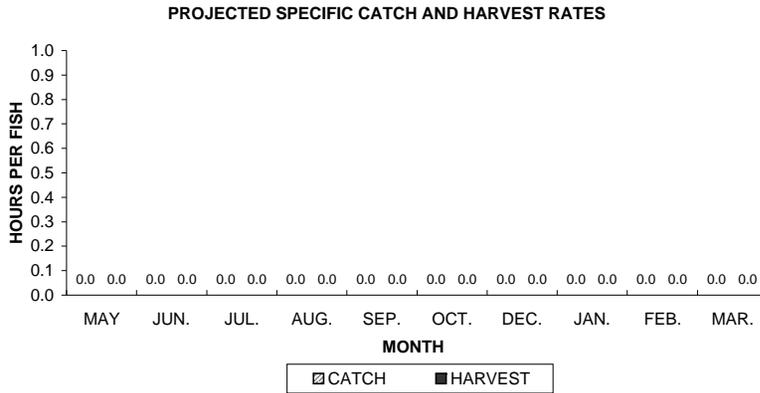
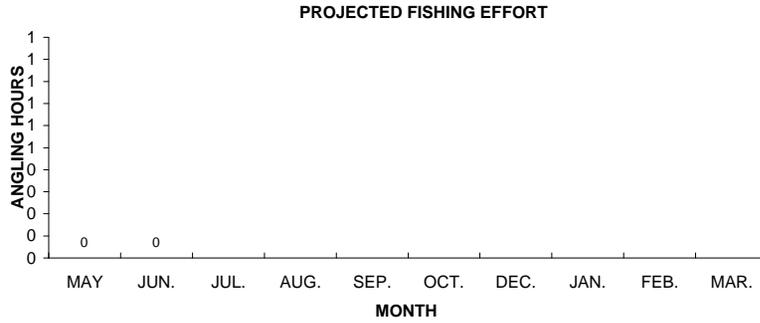
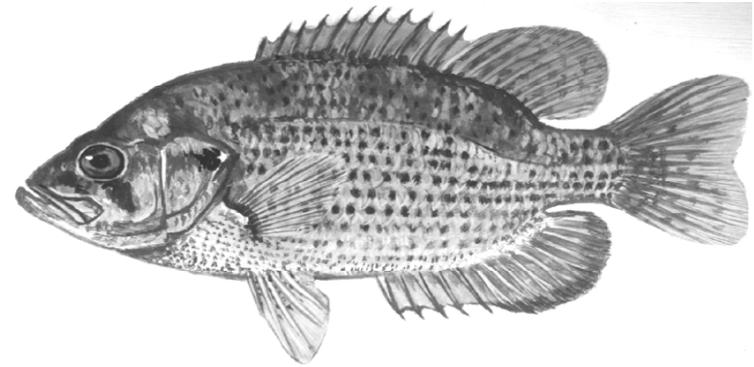


Figure 9. Rock bass sportfishing effort, catch, harvest, and length distribution, Stevens Lake, during 2008-09.

BLACK CRAPPIE

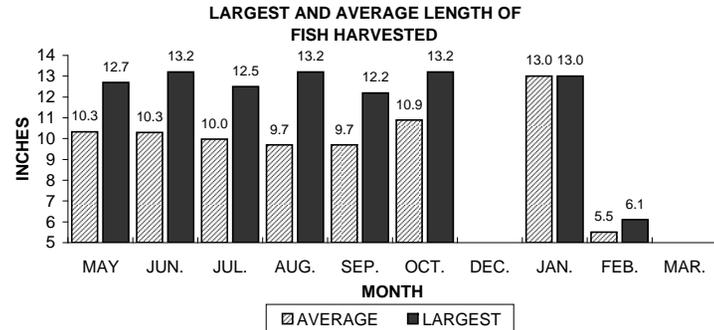
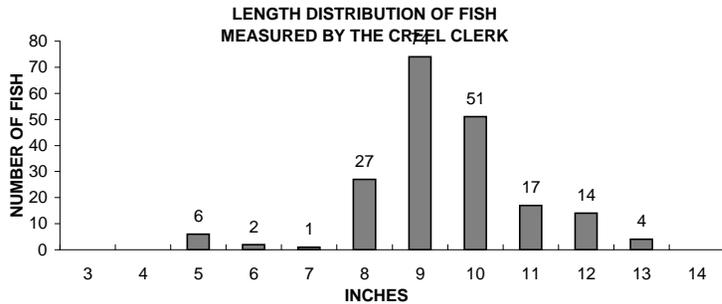
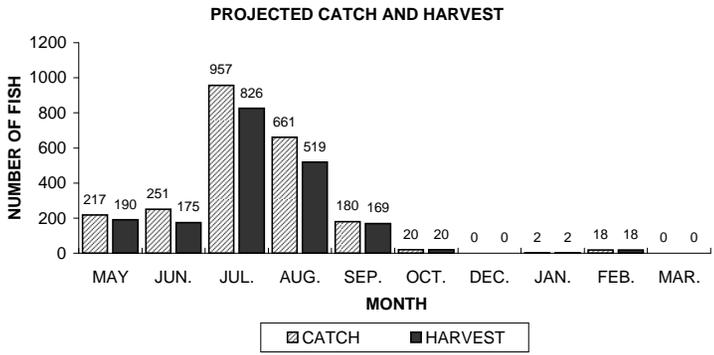
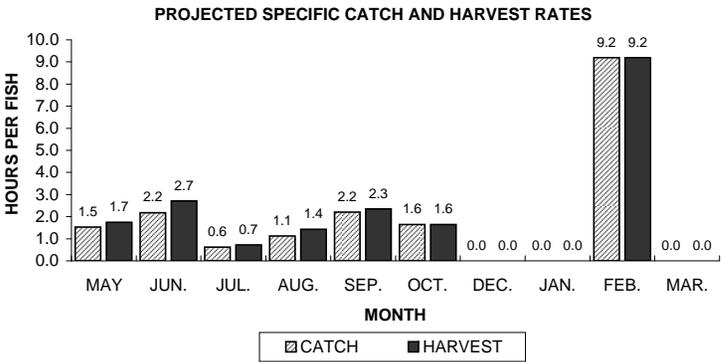
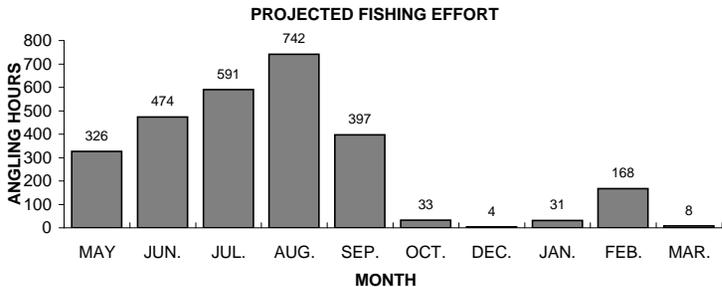
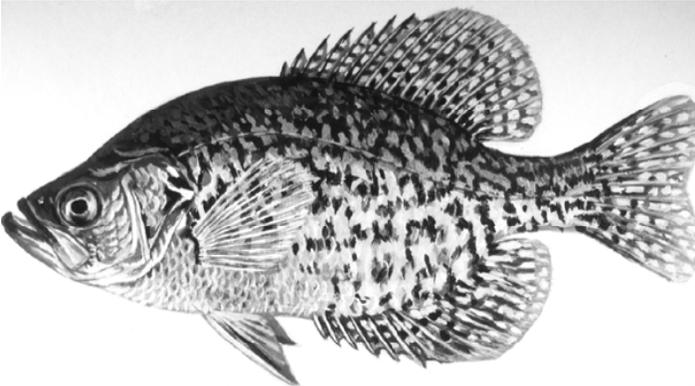


Figure 10. Black crappie sportfishing effort, catch, harvest, and length distribution, Stevens Lake, during 2008-09.