

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

MOEN LAKE

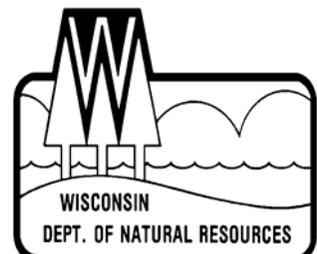
ONEIDA COUNTY

2007-08



Treaty Fisheries Publication

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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.

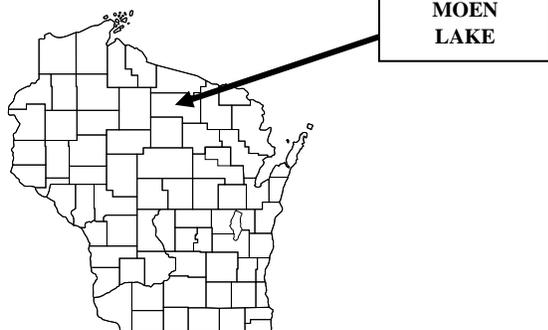
You may have encountered a DNR creel survey clerk on a recent fishing trip. We appreciate your cooperation during an interview. The survey only takes a moment of your time and it gives the Department valuable information needed for management of the fishery.

This report provides projections of:

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

GENERAL LAKE INFORMATION



Location

Moen Lake is located in Oneida County approximately five miles east of the city of Rhinelander.

Physical Characteristics

Moen Lake is a 460-acre drainage lake with low fertility, slightly acid, dark brown water of low transparency. Littoral substrate consists primarily of sand (65%), muck (20%) and lesser amounts of rubble, boulders and gravel.

Seasons Surveyed

The period referred to in this report ran from May 5, 2007 through March 2, 2008. The open water creel survey ran from May 5 through October 31, 2007 and the ice fishing creel survey ran from December 1, 2007 through March 2, 2008.

Weather

Ice-out on Moen Lake was around April 14, 2007. Spring, summer and fall weather was normal. Fishable-ice formed on Moen Lake in mid-December.

Sportfishing Regulations

The following seasons, daily bag limits, and length limits were in place on Moen Lake during the 2007-fishing season:

| Species | Season | Bag Limit | Min. Size |
|----------------------------------|------------|---------------|-----------|
| Largemouth Bass& Smallmouth Bass | 5/05-6/15 | Catch&Release | |
| | 6/16-03/02 | 5 | 14" |
| Musky | 5/26-11/30 | 1 | 34" |
| Northern Pike | 5/05-3/02 | 5 | none |
| Walleye | 5/05-3/02 | 3* | 1>14" |
| Panfish | all year | 25 | none |
| Rock Bass | all year | none | none |

* The statewide bag limit was 5 fish, but due to tribal declarations it was reduced on Moen 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 2 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 RATES 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 9,793 hours or 21.3 hours per acre fishing Moen Lake during the 2007 season (Table 1). That was less than the statewide average of 33.6 hours per acre and the Oneida County average of 38.7 hours per acre. June was the most heavily fished month (5.4 hours per acre). Fishing effort was lightest in October (0.7 hours per acre).

SPECIES INFORMATION

Walleye (Table 2, Figure 1)

Anglers spent 1,505 hours targeting walleye. Walleye fishing effort was greatest in December (491 hours). October had the least amount of walleye fishing effort (14 hours).

Catch was 49 walleye with a harvest of 24 fish. Highest catch (19 fish) occurred in May. Anglers fished 41.0 hours to catch and 62.3 hours to harvest a walleye during 2007.

The mean length of harvested walleye was 19.1 inches and the largest walleye measured was a 22.5-inch fish harvested in February.

Northern Pike (Table 2, Figure 2)

Fishing effort directed at northern pike was 884 hours during the 2007 season. Northern pike fishing effort was greatest in December (325 hours).

Catch was 292 fish with a harvest of 60 northern pike. Anglers fished 10.6 hours to catch a northern pike during 2007.

The mean length of harvested northern pike was 25.8 inches and the largest northern pike measured was a 35.1-inch fish harvested in January.

Muskellunge (Table 2, Figure 3)

Anglers spent 3,073 hours targeting muskellunge during the 2007 season. Muskellunge fishing effort was greatest in July (880 hours).

Catch was 105 muskellunge and harvest was 6 fish. Highest catch (37 fish) occurred in July. Anglers fished 31.6 hours to catch a muskellunge during 2007.

Smallmouth Bass (Table 2, Figure 4)
Fishing effort targeted at smallmouth bass was 139 hours during the 2007 season. Smallmouth bass fishing effort was greatest in July (76 hours).

Catch was 365 smallmouth bass with a harvest of 16. Highest catch (241 fish) occurred in July. Mean length of fish harvested was 15.7 inches.

Largemouth Bass (Table 2, Figure 5)
Fishing effort directed at largemouth bass was 148 hours during the 2007 season.

Estimated catch was 37 fish.

Panfish (Table 2, Figures 6-10) Panfish received over half of the total fishing effort on Moen Lake during the 2007-08 fishing season. Panfish accounted for 96% of the estimated catch and 98% of the estimated harvest of all fish species.

Black Crappie (Table 2, Figure 10)
Black crappie was the most sought after fish during the survey. Fishing effort directed at black crappie was 5,280 hours during the 2007 season.

Catch was 12,322 fish and harvest 4,437 fish. Anglers fished 24 minutes to catch and 1.2 hours to harvest a black crappie during the 2007 season.

The mean length of harvested black crappie was 9.6 inches. The largest black crappie measured was a 12.3 inch fish caught in January.

Bluegill (Table 2, Figure 7)
Anglers caught 4,064 and harvested 697 bluegill. The mean length of harvested bluegill was 7.3 inches.

Other panfish caught were yellow perch (2,169 fish), Pumpkinseed (416 fish) and rock bass (199 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, Jeff Blonski, and Jason Halverson. Marty Kiepke was the creel clerk on Moen 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.

This creel survey report was reviewed by Mike Coshun, John Kubisiak and Dennis Scholl, 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, Moen Lake, 2007-08 season.

| Month | Total Angler Hours | Total Angler Hours/Acre | Oneida County Average Hours/Acre | Statewide Average Hours/Acre |
|---------------|---------------------------|--------------------------------|---|-------------------------------------|
| May | 1201 | 2.6 | 5.6 | 5.8 |
| June | 2490 | 5.4 | 7.6 | 6.1 |
| July | 2096 | 4.6 | 8.7 | 6.4 |
| August | 1201 | 2.6 | 6.5 | 5.4 |
| September | 724 | 1.6 | 3.9 | 3.8 |
| October | 328 | 0.7 | 1.8 | 1.6 |
| December | 553 | 1.2 | 1.3 | 1.7 |
| January | 498 | 1.1 | 1.6 | 1.5 |
| February | 460 | 1.0 | 1.5 | 1.3 |
| March | 242 | 0.5 | 0.2 | ** |
| *Summer Total | 8040 | 17.5 | 34.1 | 29.1 |
| *Winter Total | 1752 | 3.8 | 4.6 | 4.5 |
| Grand Total | 9793 | 21.3 | 38.7 | 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 Moen 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 Moen 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 Moen Lake to other lakes statewide.

Table 2. Creel survey synopses, Moen Lake, 2007-08 fishing seasons.

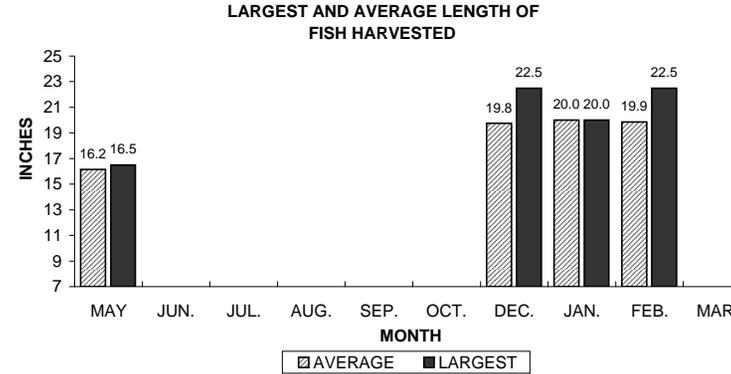
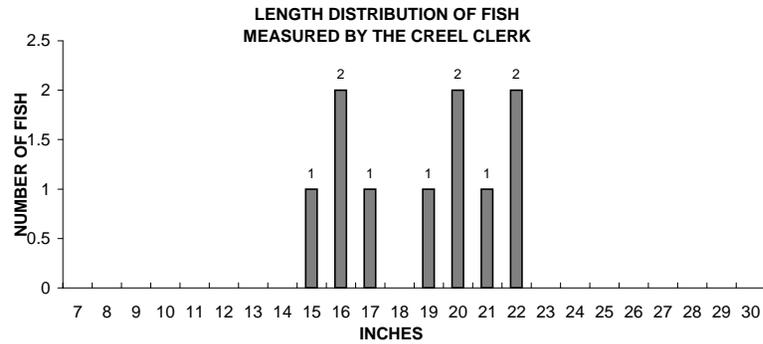
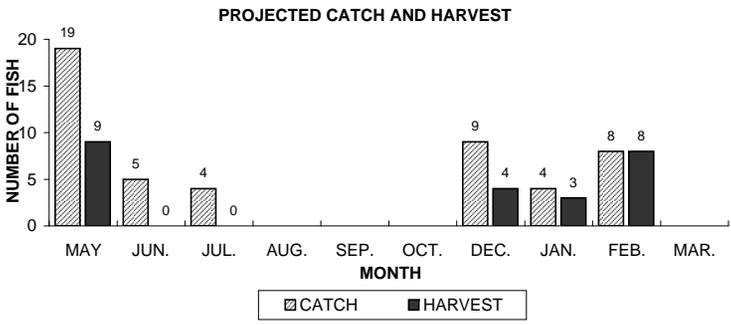
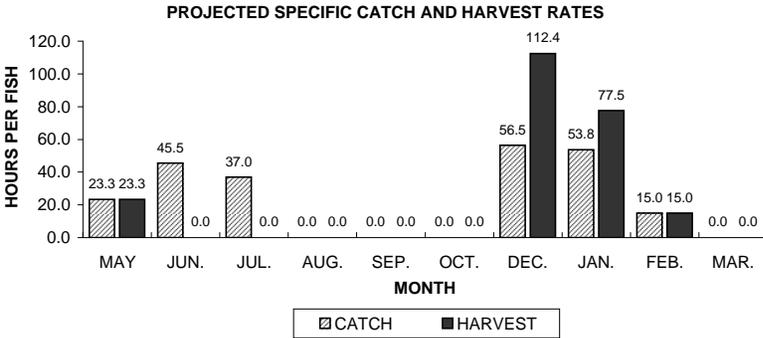
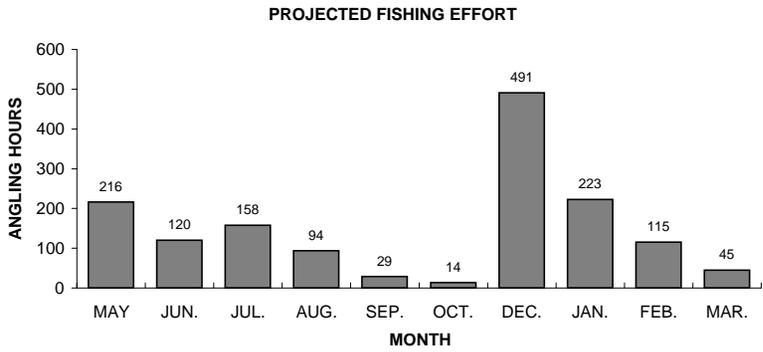
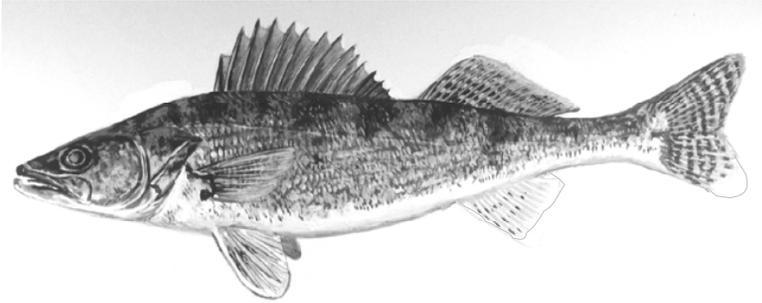
CREEL YEAR: 2007-08

| 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 | 1505 | 11.6% | 49 | 41.0 | 24 | 62.1 | 19.1 |
| Northern Pike | 884 | 6.82% | 292 | 10.6 | 60 | 21.1 | 25.8 |
| Muskellunge | 3073 | 23.70% | 105 | 31.6 | 6 | 504.7 | 45.5 |
| Smallmouth Bass | 139 | 1.07% | 365 | 1.5 | 16 | 17.6 | 15.7 |
| Largemouth Bass | 148 | 1.14% | 37 | 9.0 | 0 | | |
| Yellow Perch | 548 | 4.23% | 2169 | 2.2 | 340 | 10.9 | 8.3 |
| Bluegill | 1314 | 10.13% | 4064 | 0.4 | 697 | 2.5 | 7.3 |
| Pumpkinseed | 77 | 0.59% | 416 | 1.3 | 71 | 16.5 | 6.9 |
| Rock Bass | 0 | 0.00% | 199 | | 19 | | 7.3 |
| Black Crappie | 5280 | 40.72% | 12322 | 0.4 | 4437 | 1.2 | 9.6 |

* 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.

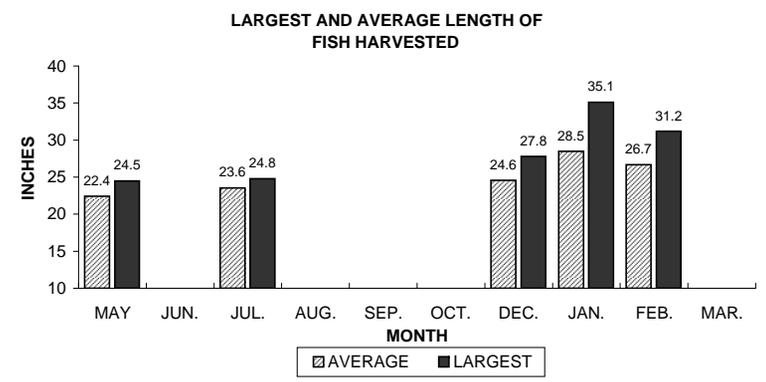
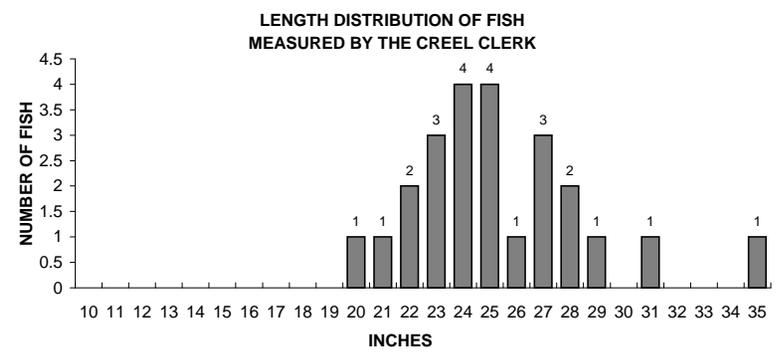
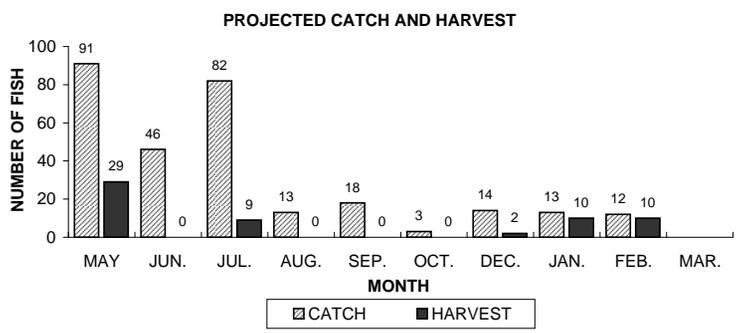
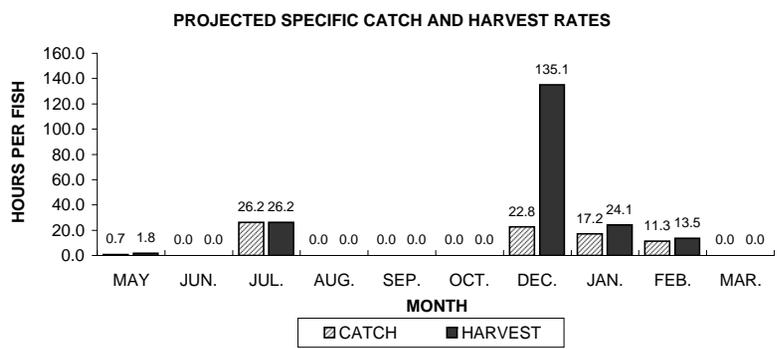
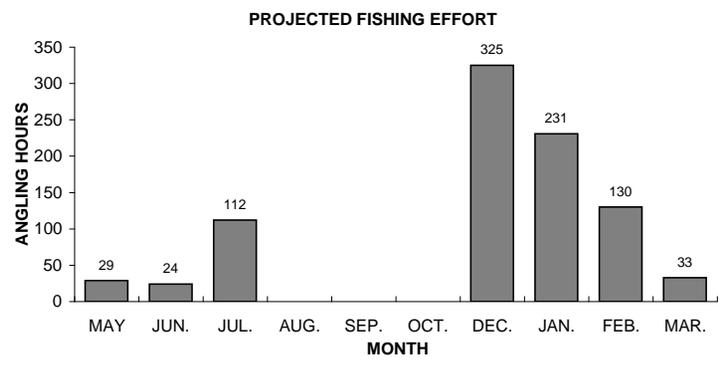
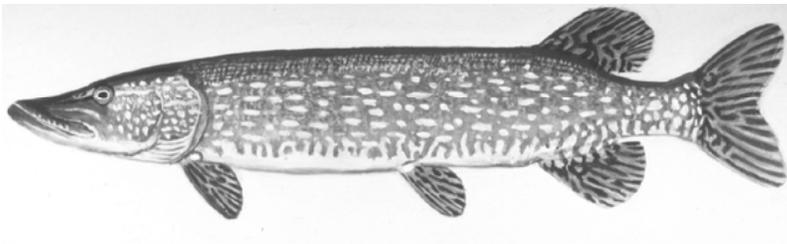
WALLEYE



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Figure 1. Walleye sportfishing effort, catch, harvest, and length distribution, Moen Lake, during 2007-08.

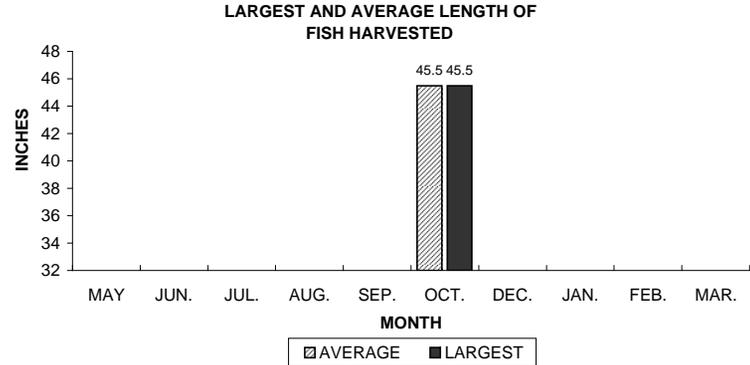
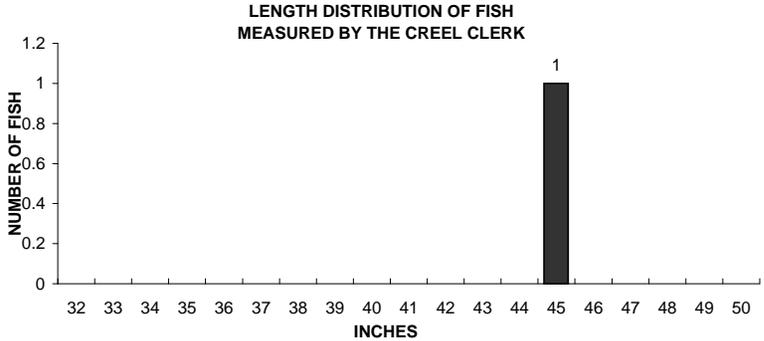
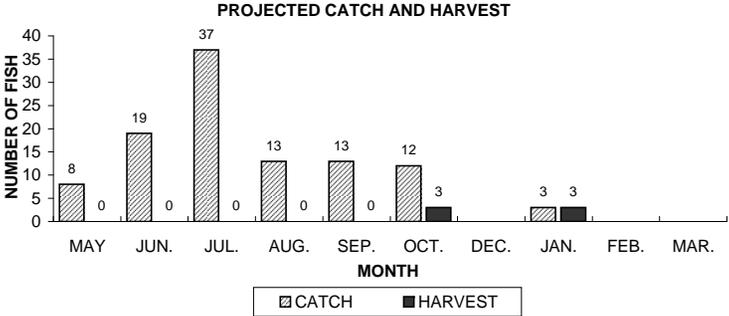
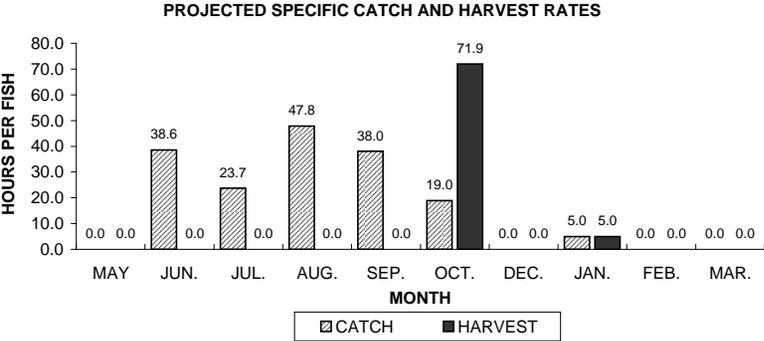
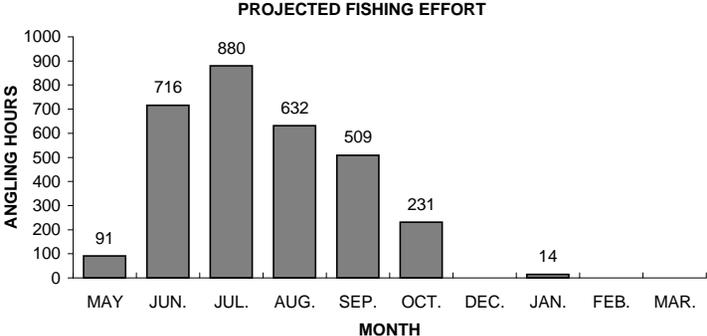
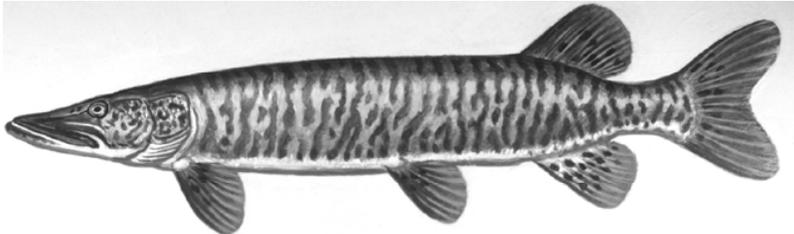
NORTHERN PIKE



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Figure 2. Northern pike sportfishing effort, catch, harvest, and length distribution, Moen Lake, during 2007-08.

MUSKELLUNGE



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Figure 3. Muskellunge sportfishing effort, catch, harvest, and length distribution, Moen Lake, during 2007-08.

SMALLMOUTH BASS

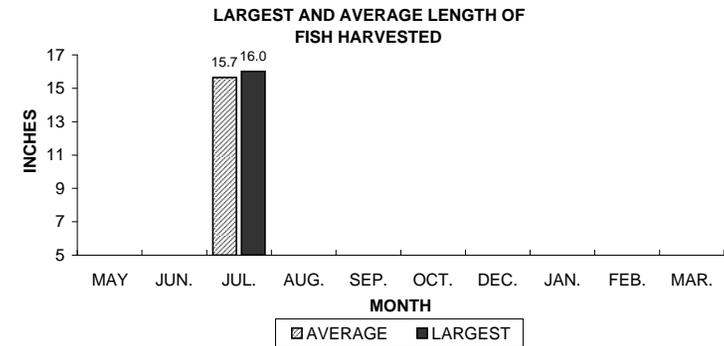
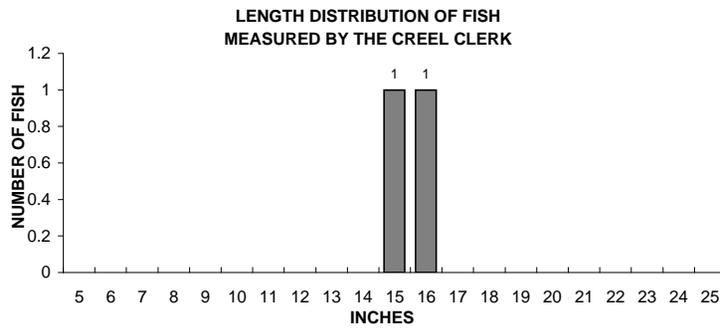
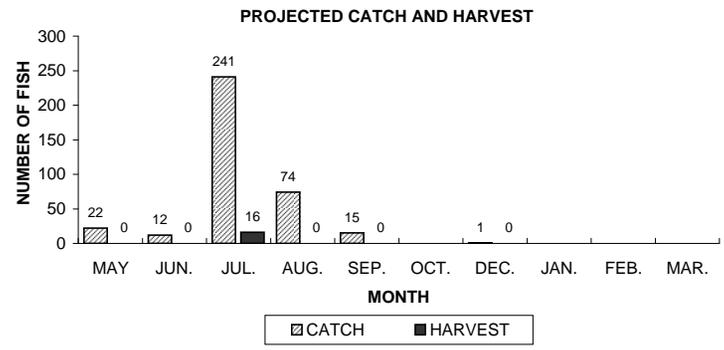
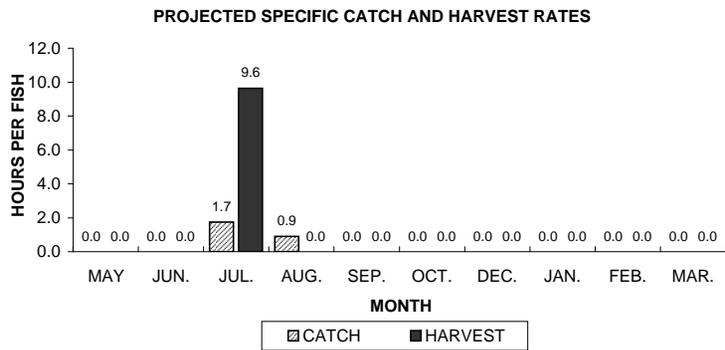
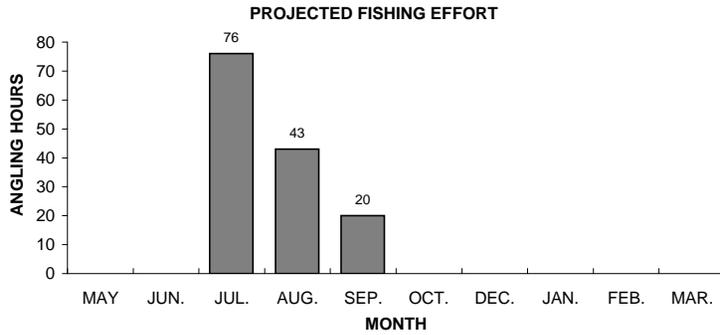
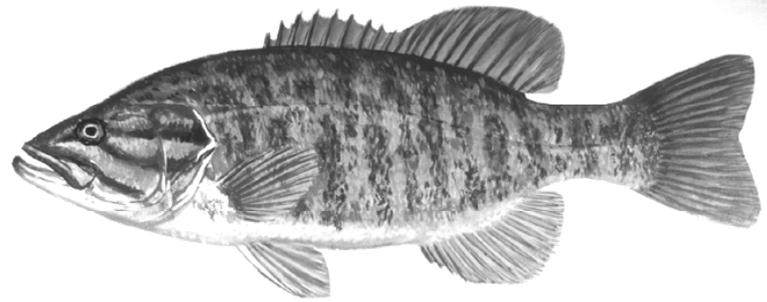


Figure 4. Smallmouth bass sportfishing effort, catch, harvest, and length distribution, Moen Lake, during 2007-08.

LARGEMOUTH BASS

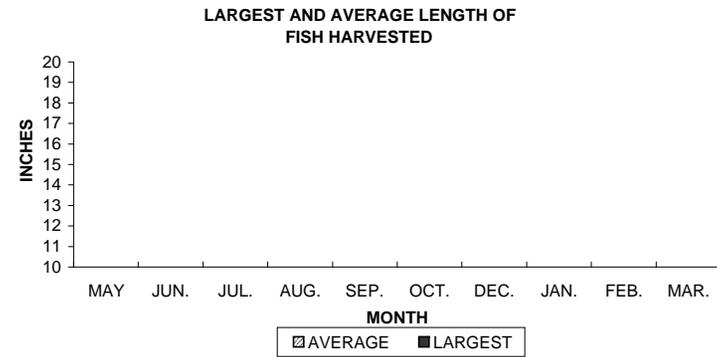
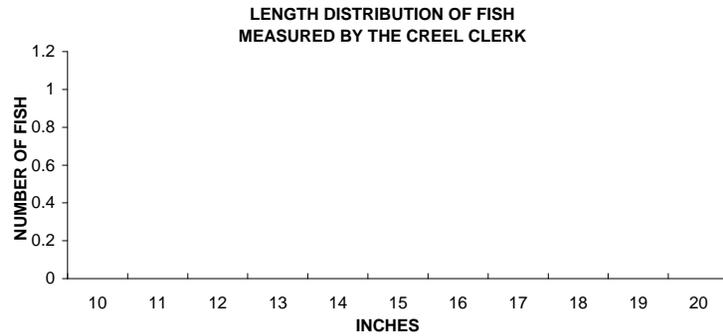
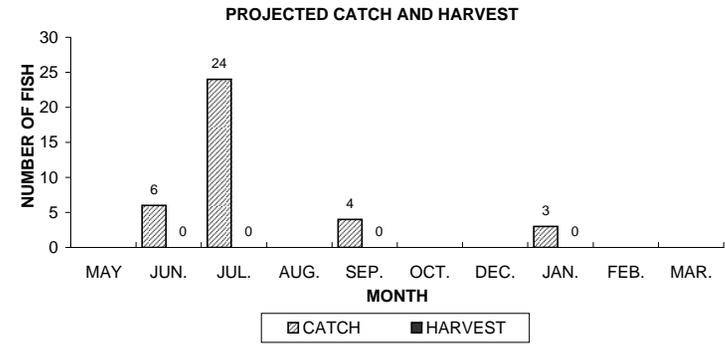
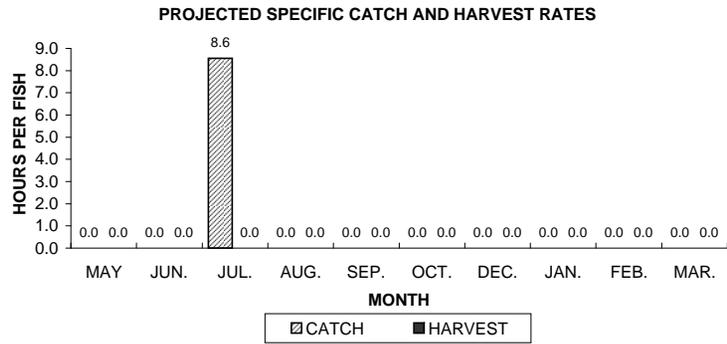
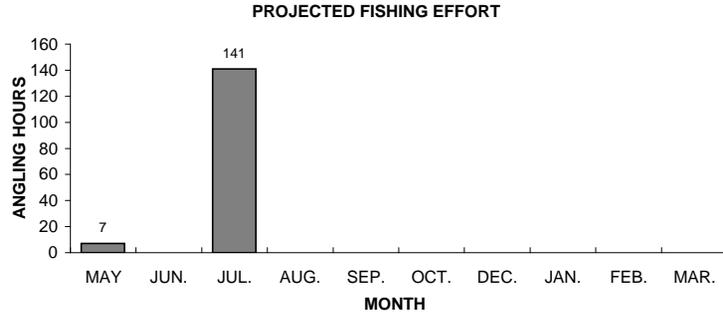
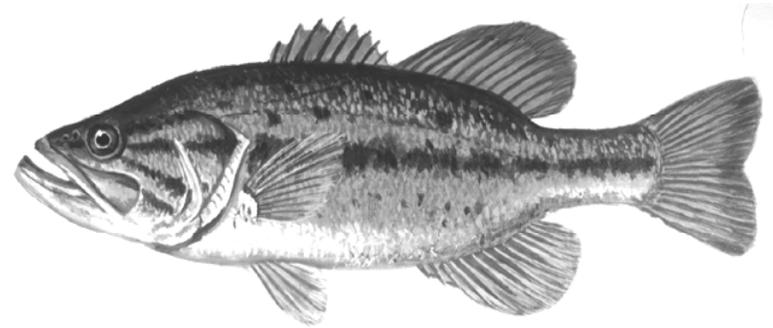


Figure 5. Largemouth bass sportfishing effort, catch, harvest, and length distribution, Moen Lake, during 2007-08.

YELLOW PERCH

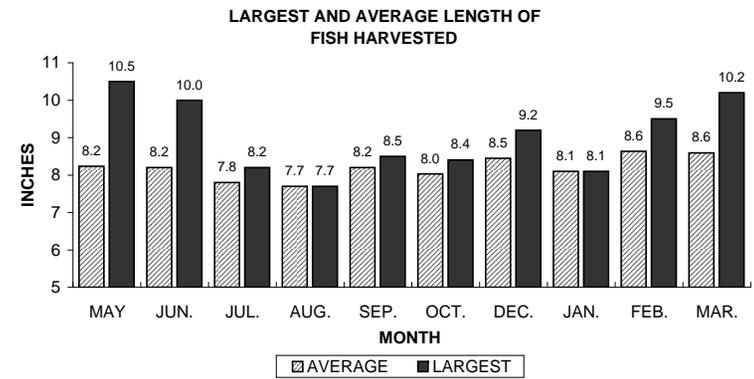
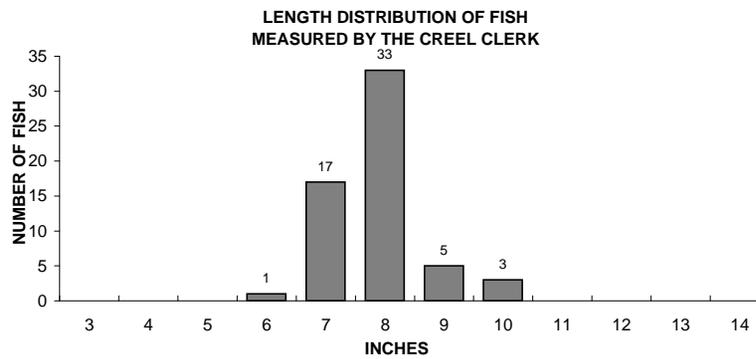
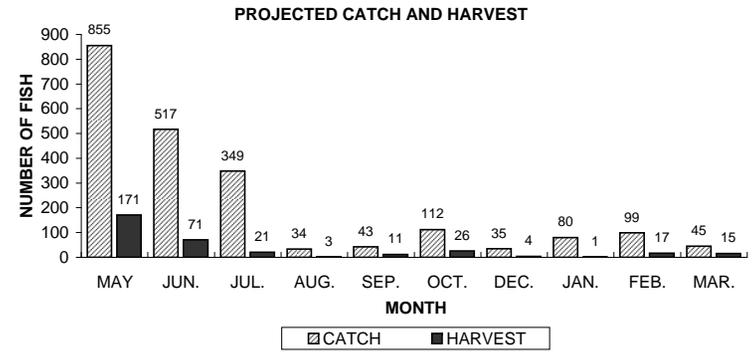
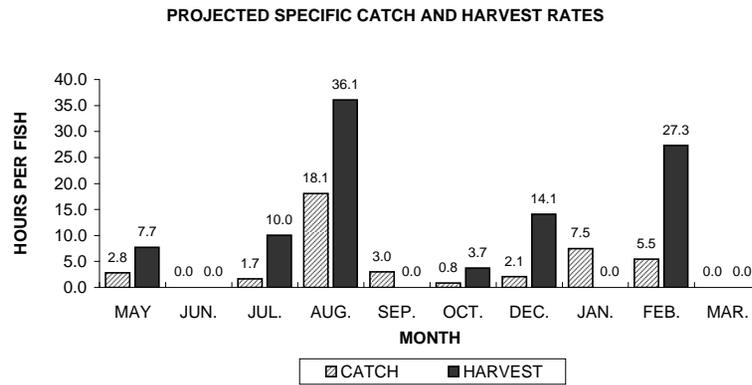
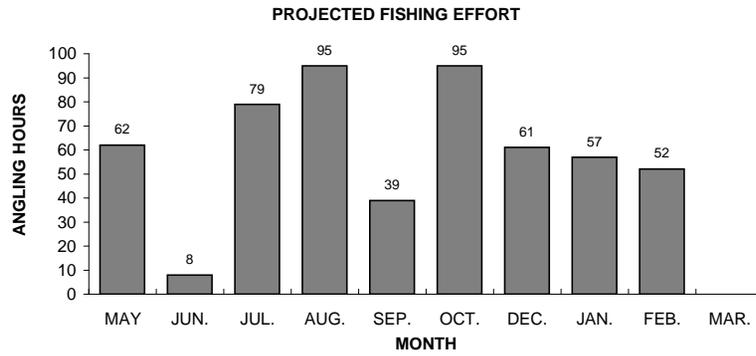
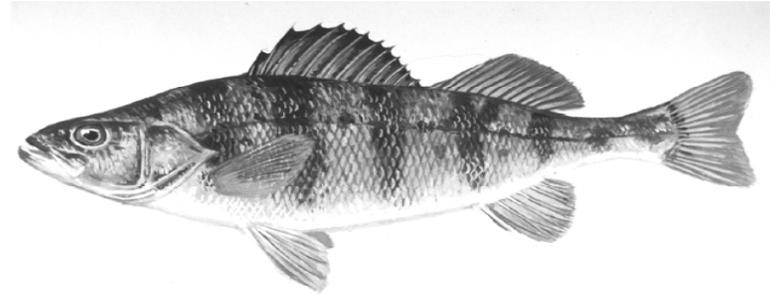


Figure 6. Yellow perch sportfishing effort, catch, harvest, and length distribution, Moen Lake, during 2007-08.

BLUEGILL

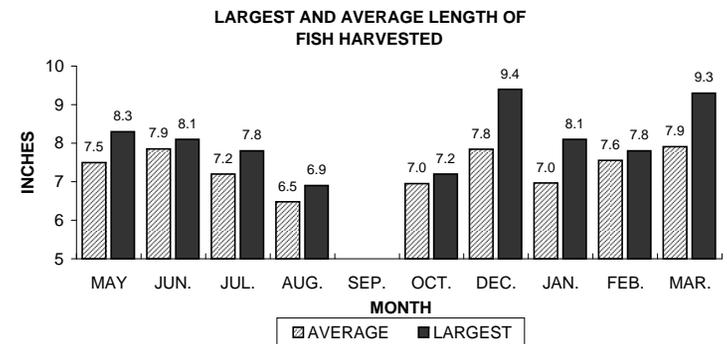
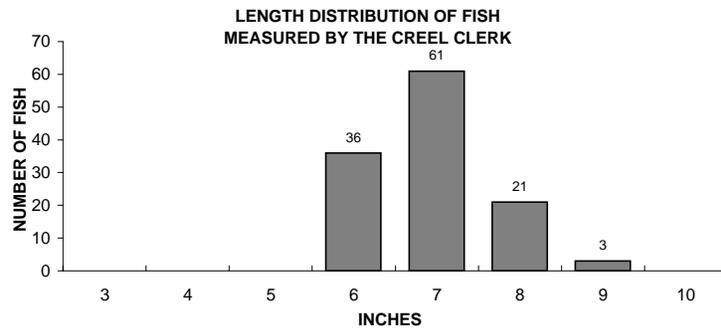
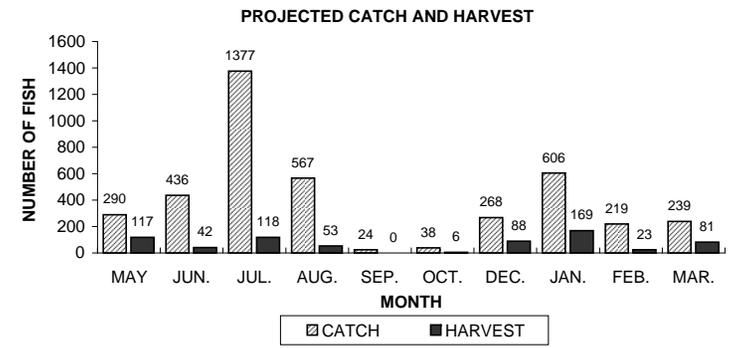
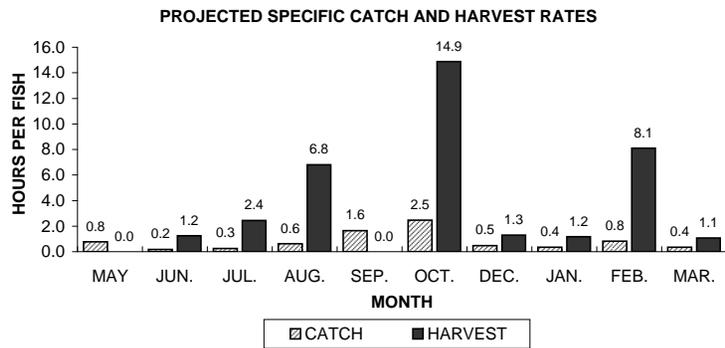
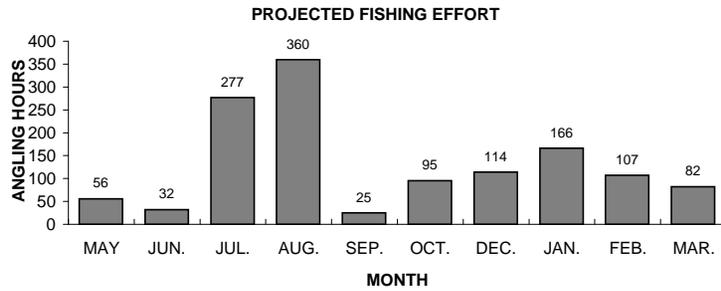
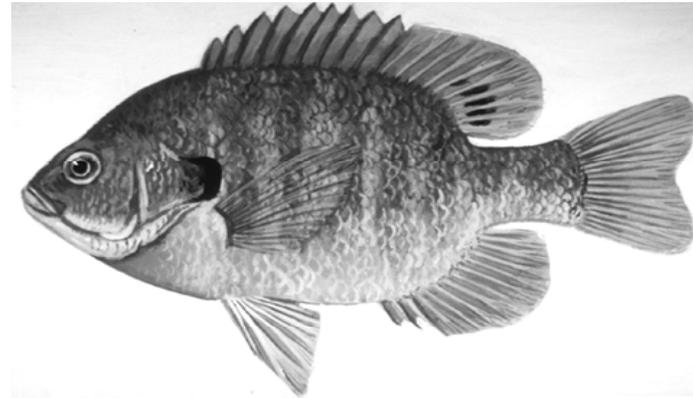


Figure 7. Bluegill sportfishing effort, catch, harvest, and length distribution, Moen Lake, during 2007-08.

PUMPKINSEED

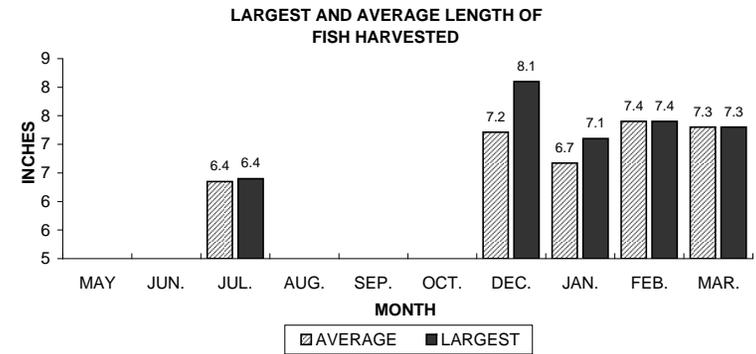
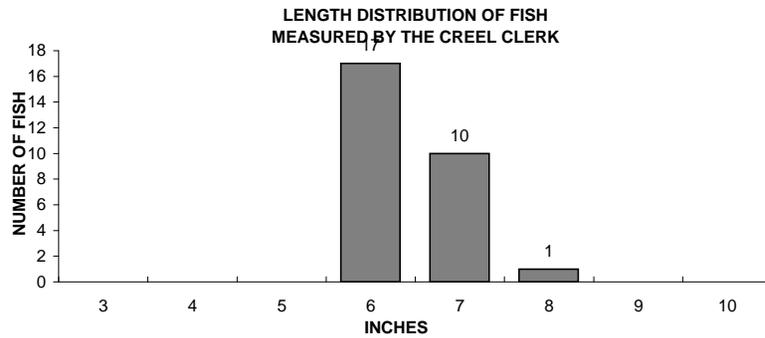
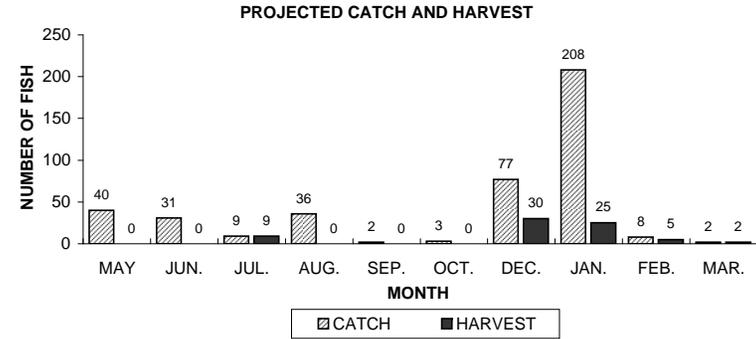
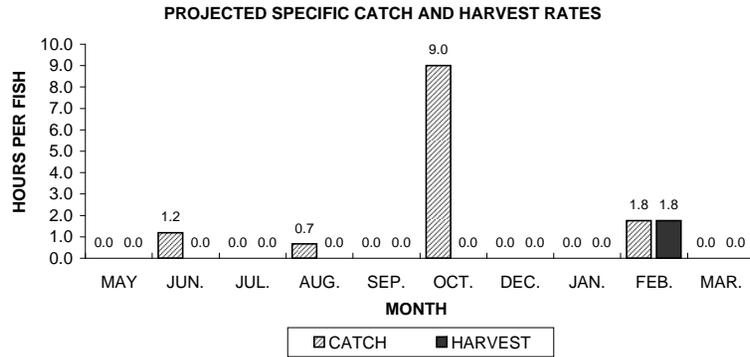
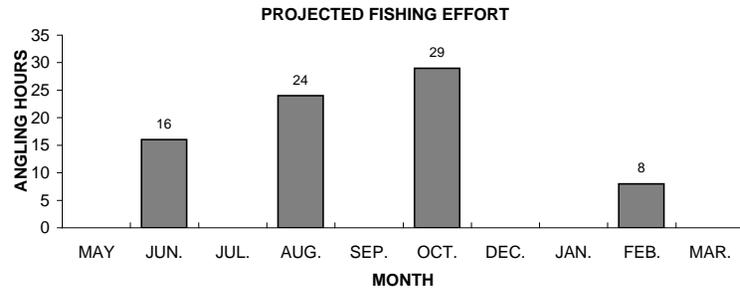
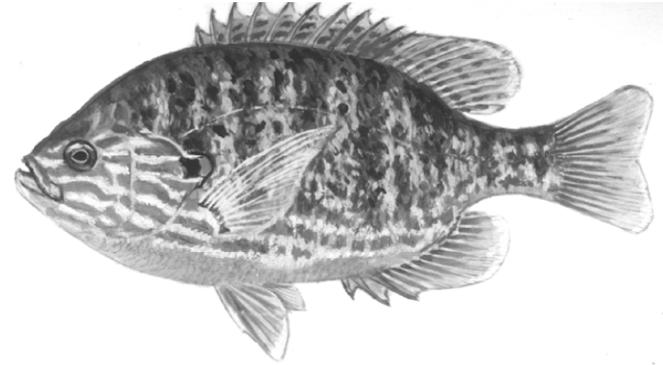


Figure 8. Pumpkinseed sportfishing effort, catch, harvest, and length distribution, Moen Lake, during 2007-08.

ROCK BASS

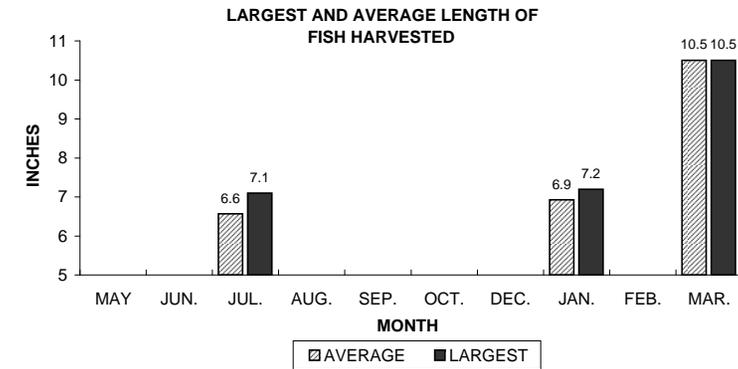
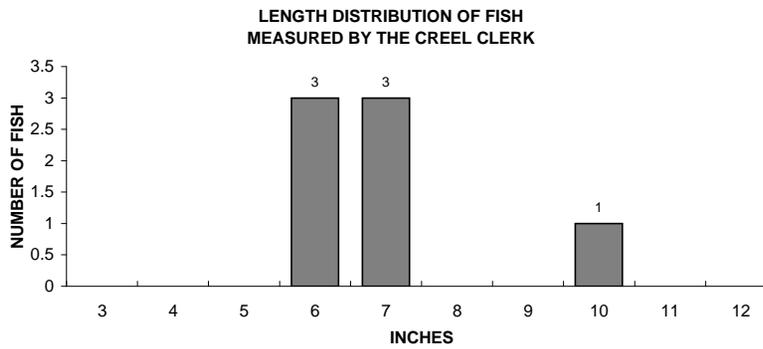
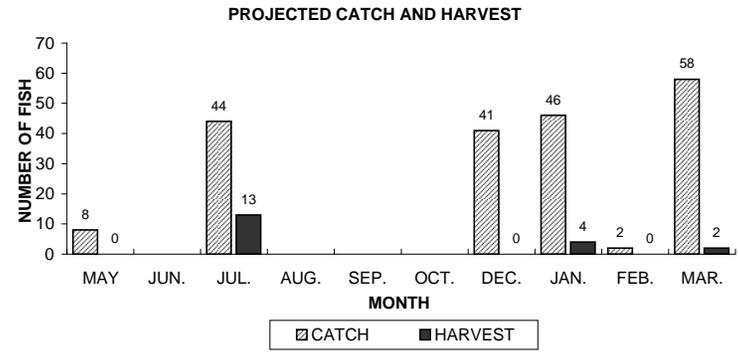
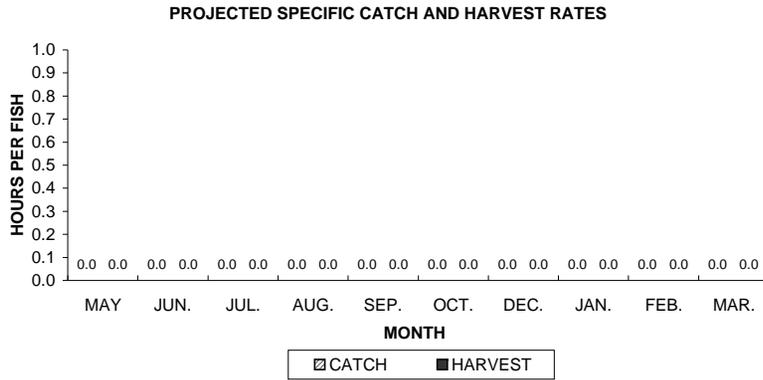
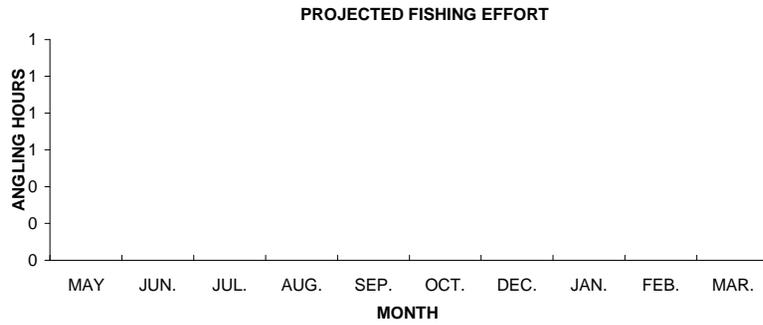
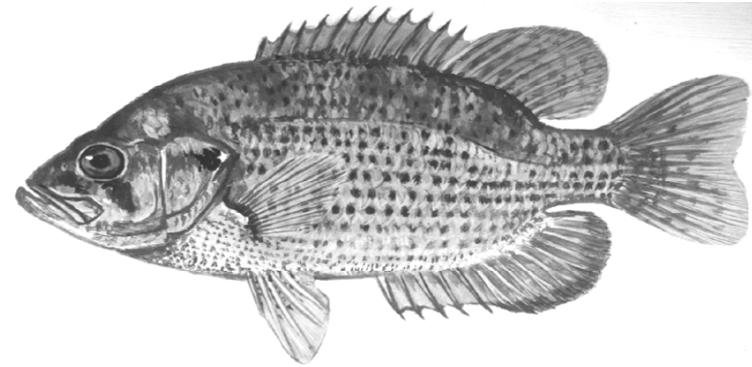


Figure 9. Rock bass sportfishing effort, catch, harvest, and length distribution, Moen Lake, during 2007-08.

BLACK CRAPPIE

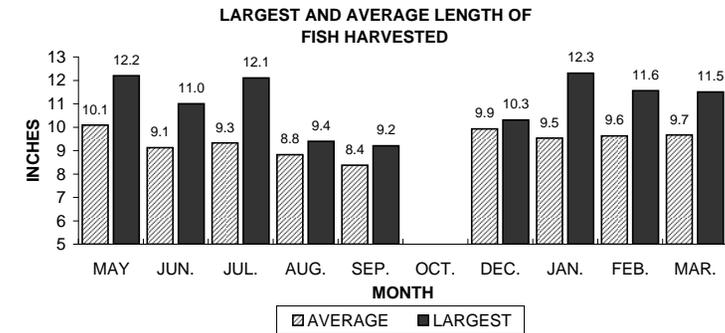
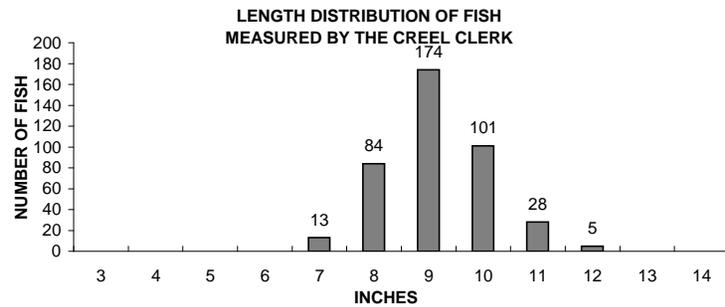
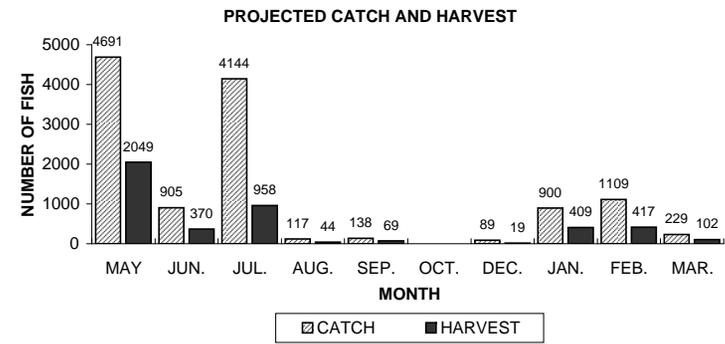
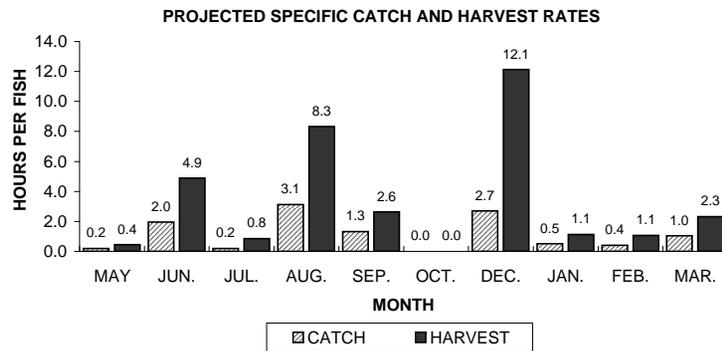
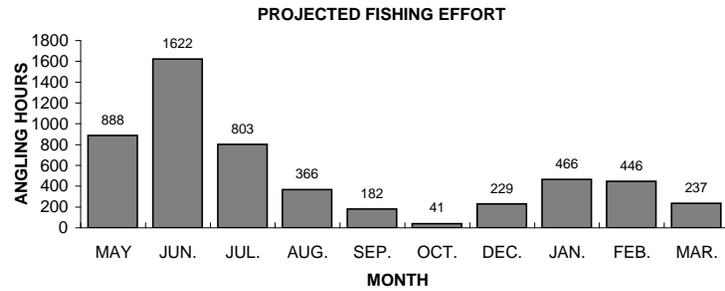
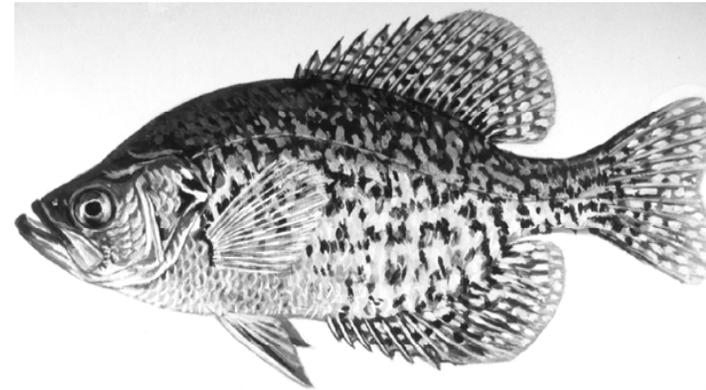


Figure 10. Black crappie sportfishing effort, catch, harvest, and length distribution, Moen Lake, during 2007-08.