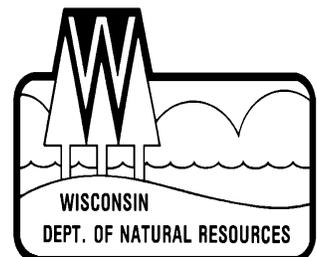


WISCONSIN DEPARTMENT OF NATURAL RESOURCES  
CREEL SURVEY REPORT

**DIAMOND LAKE**  
BAYFIELD COUNTY  
**2009-2010**



Treaty Fisheries Publication  
2010



# INTRODUCTION

The Wisconsin Department of Natural Resources regularly conducts netting and electrofishing surveys of area lakes and reservoirs to determine what species of fish are present, how many of each there are, and what is the health of these populations. Information is also needed to determine the impact sport anglers are having on fish populations. To gather this information we conduct creel surveys.

A creel survey is a management tool used to measure the fishing activities of the anglers on a body of water. The key word in the last sentence is **SURVEY**. We can not practically interview every angler (census) who fishes on a lake. Creel surveys are designed to have a creel survey clerk on a lake, working random shifts, forty hours each week throughout the fishing season. Each month these shifts cover a sample of all the daylight hours. A computer program is then used to accurately calculate estimates of all angler activity. This data is summarized by month using information collected by the creel survey clerk.

Creel survey clerks travel around their assigned lakes using a boat or snowmobile to count and interview anglers. Typically only anglers that have completed their fishing trip are interviewed. We prefer not to disturb anglers while they are fishing.

You may have encountered one of the department's clerks on a recent fishing trip and were interviewed. It only takes a moment of your time, but it helps us determine quite a lot about the fishery.

This creel survey report will provide you with four types of estimated information for this body of water:

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 in this report are physical information about the lake; discussion of results of the survey; and detailed summaries, by species, of what anglers caught.

Additional copies of this report and those covering other local lakes can be obtained from the Spooner DNR. Written requests should be sent to:

Treaty Fisheries Biologist  
WDNR Spooner Office  
810 West Maple Street  
Spooner WI 54801

# GENERAL INFORMATION

## Seasons Surveyed

The creel survey started on opening day (5/2) of the 2009 gamefish season and ran through March 7, 2010. The only period not covered by the survey during this time was November 1 through November 30, due to unsafe ice conditions.

## Harvest Regulations

The following seasons, daily bag limits, and length limits were in place on this lake in 2009-2010:

Largemouth Bass	06/20-3/07	5	14"
Smallmouth Bass	06/20-3/07	5	14"
Musky	5/23-11/30	1	34"
Northern Pike	5/02-3/07	1	32"
Walleye	5/02-3/07	5	15", 1>28", 20"-28" protected
Panfish	all year	25	none

## **SPECIES CATCH AND HARVEST INFORMATION**

Angling information is summarized on a single page for each species. If a page for a particular species is not present in this section it is because no one reported they were fishing for that species and/or none were caught. Each species page has up to five graphs covering the following:

### **1. ESTIMATED FISHING EFFORT**

Total calculated number of hours during each month that anglers spent fishing for this species.

### **2. ESTIMATED ANGLER 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 this species is reported here.

### **3. ESTIMATED ANGLER CATCH AND HARVEST**

Calculated number of fish of the species indicated caught or harvested by all anglers.

### **4. LENGTH DISTRIBUTION OF HARVESTED FISH MEASURED BY THE CREEL CLERK**

All fish of this species that were measured by the clerk during the entire creel survey season.

### **5. AVERAGE LENGTH AND LARGEST FISH HARVESTED**

Average length and the largest fish of this species harvested each month. Only those fish measured by the creel survey clerk are reported here.

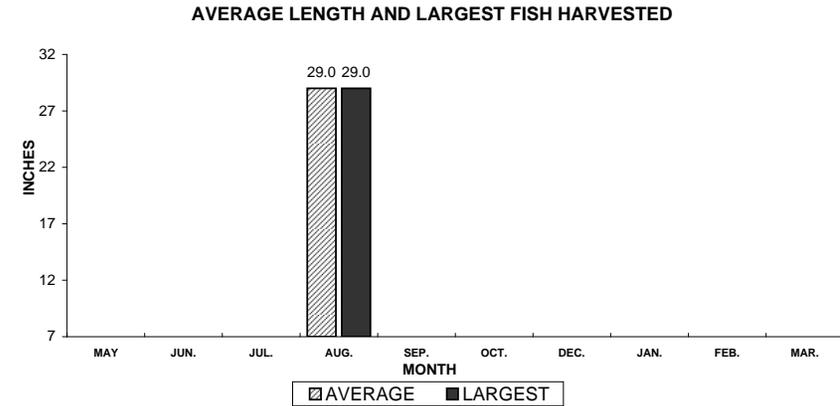
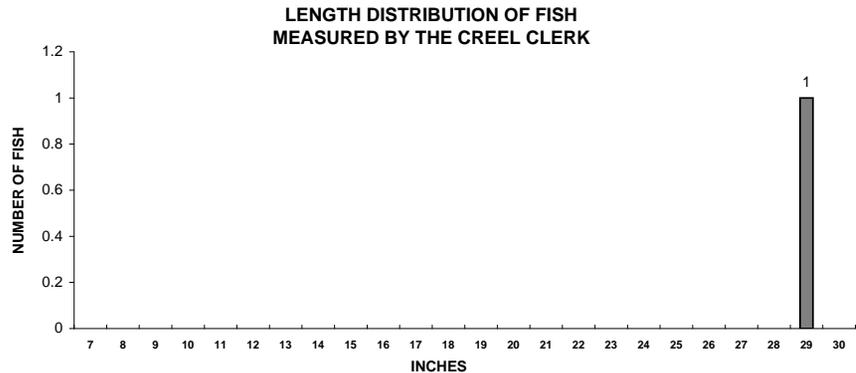
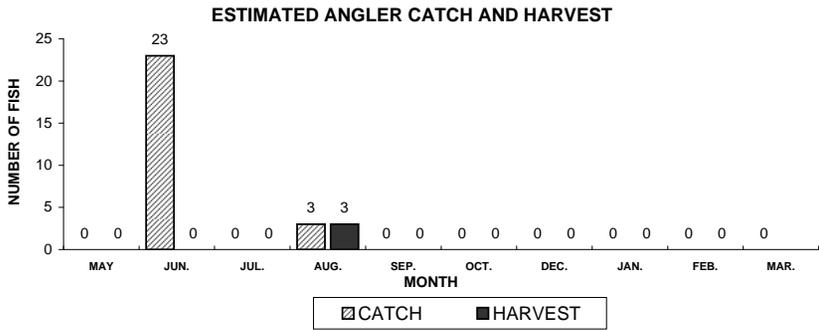
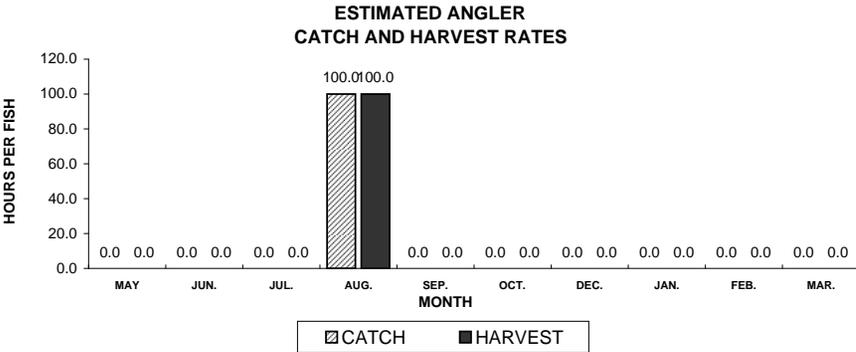
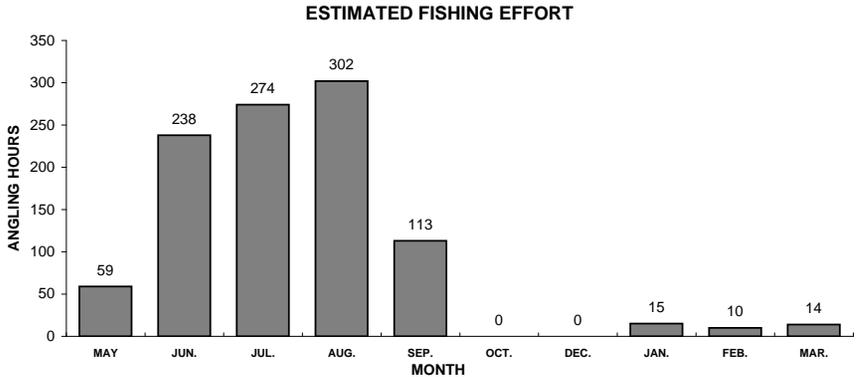
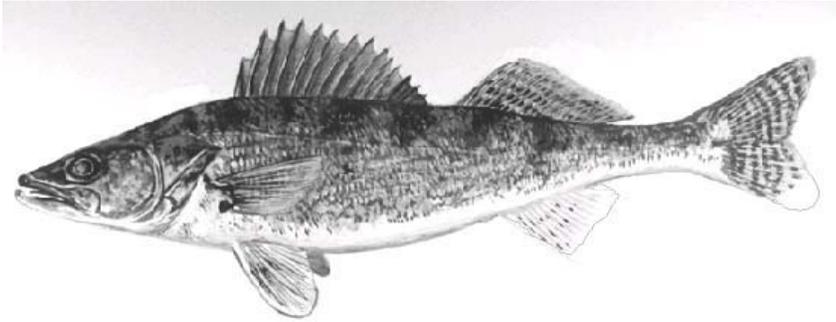
## **ACKNOWLEDGEMENTS**

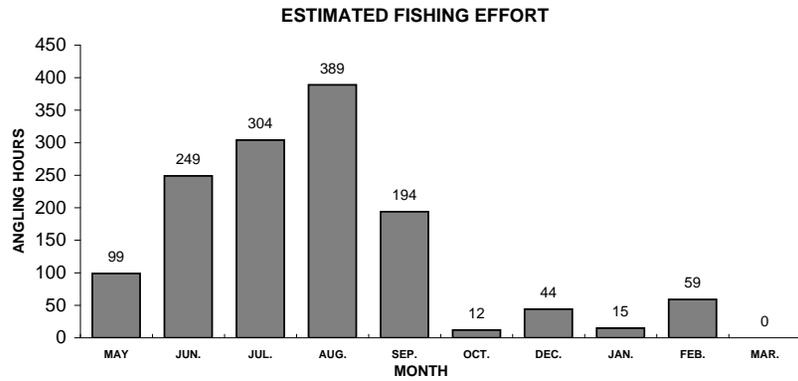
Donna Sorensen was the survey clerk on the lake for the entire survey period. She collected the angler interview information that makes this report possible.

The Department would like to thank Chris and Dorothy Melland. They generously allowed the department to keep a boat at their property during this survey.

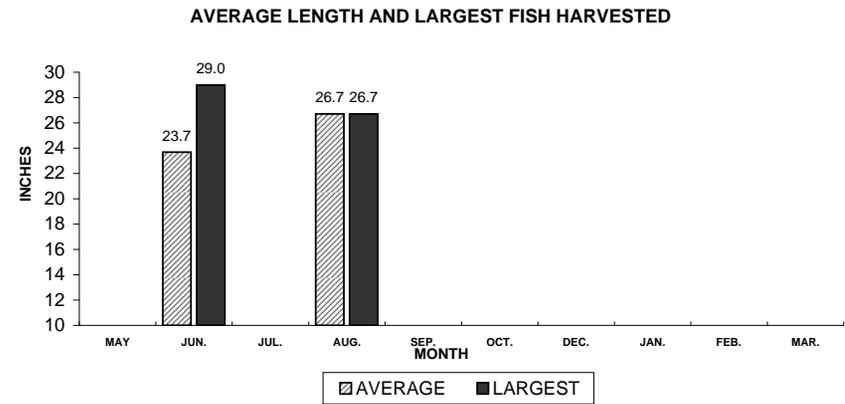
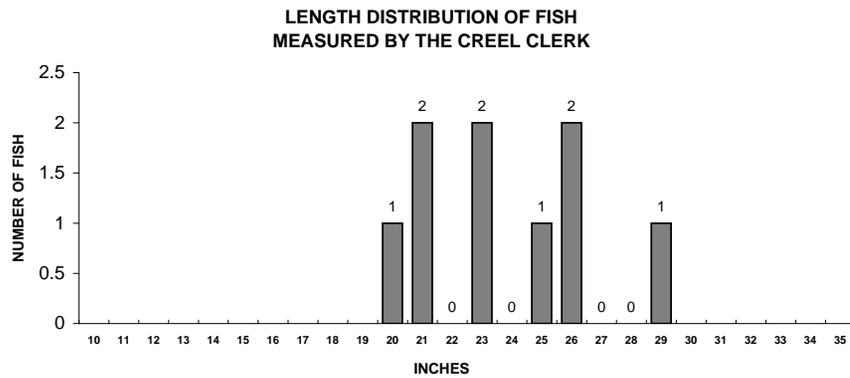
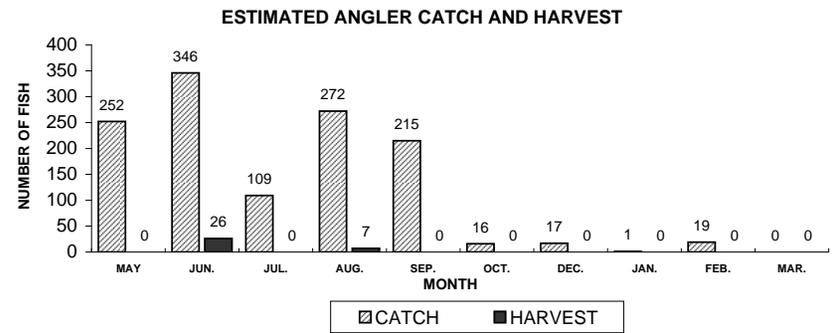
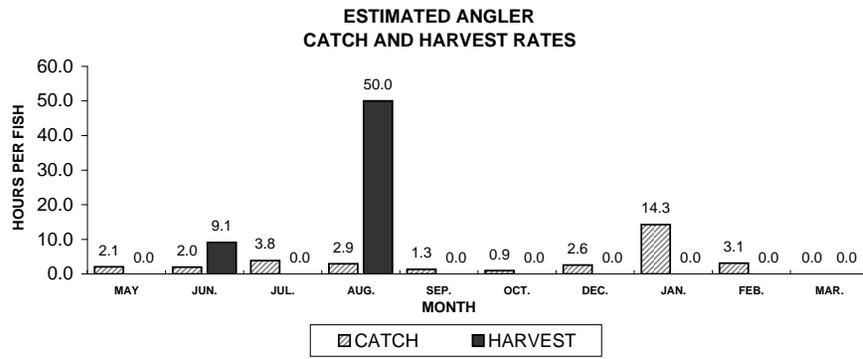
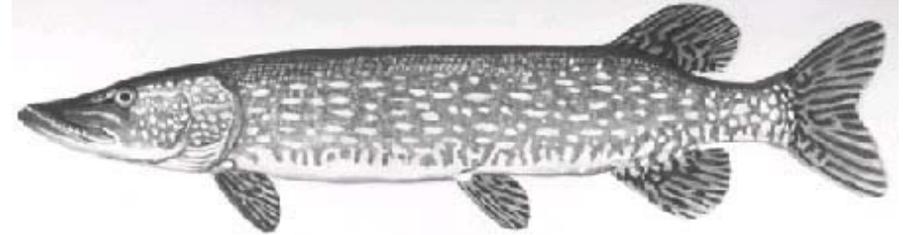
We would also like to thank all the anglers who took the time to offer information about their fishing trip to the survey clerk. Without their cooperation this survey would not have been possible.

# WALLEYE

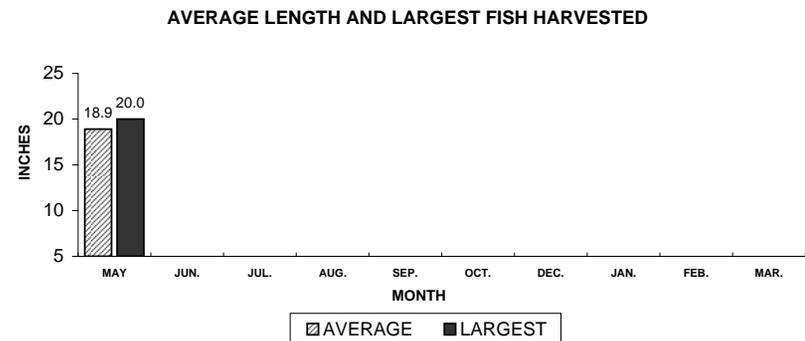
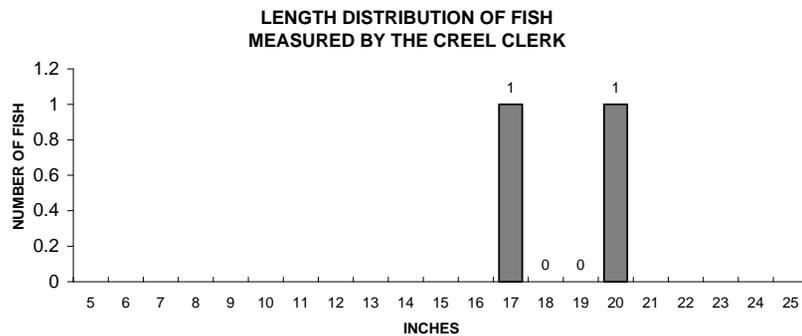
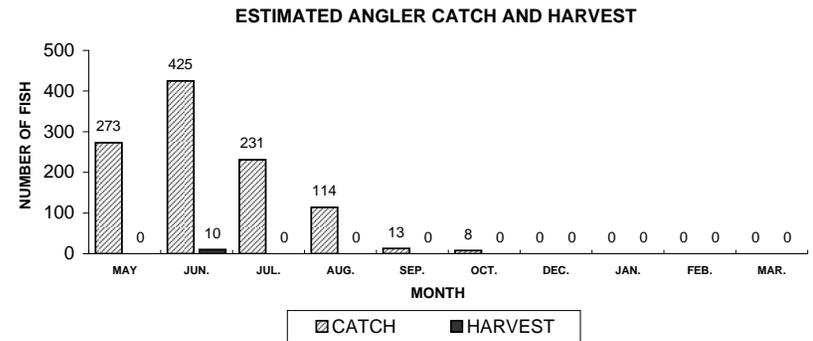
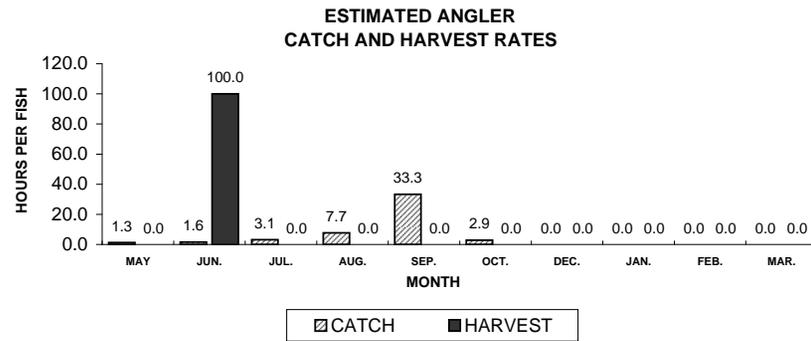
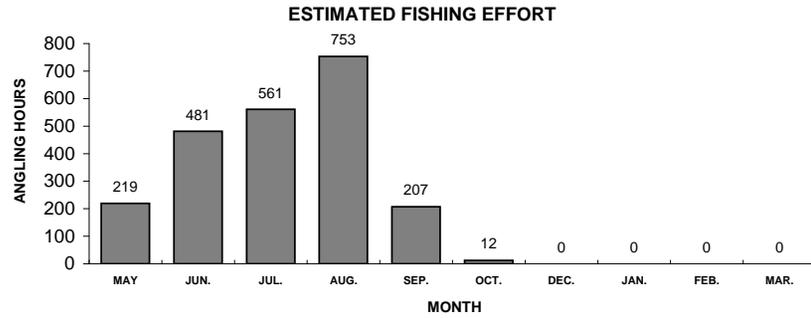
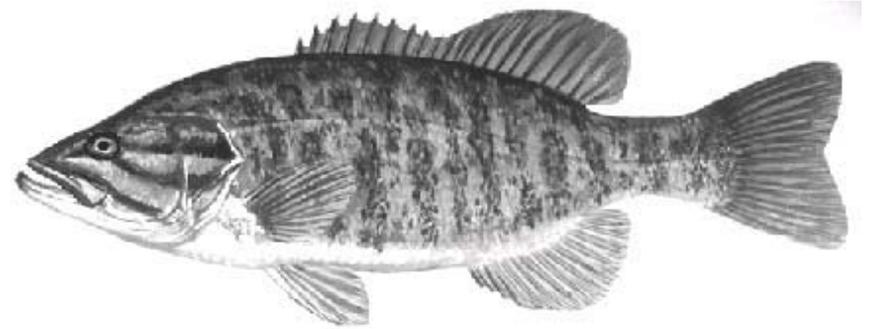




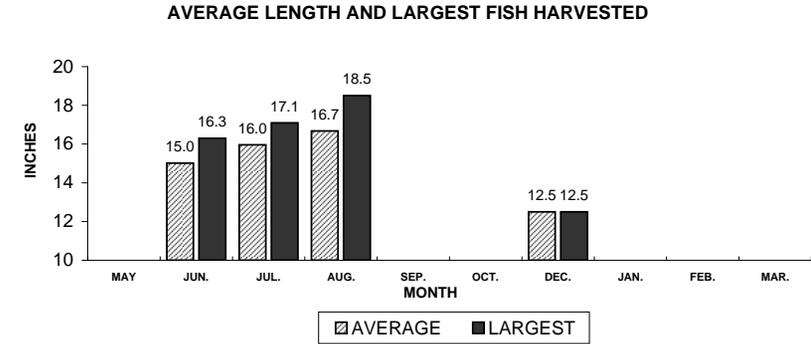
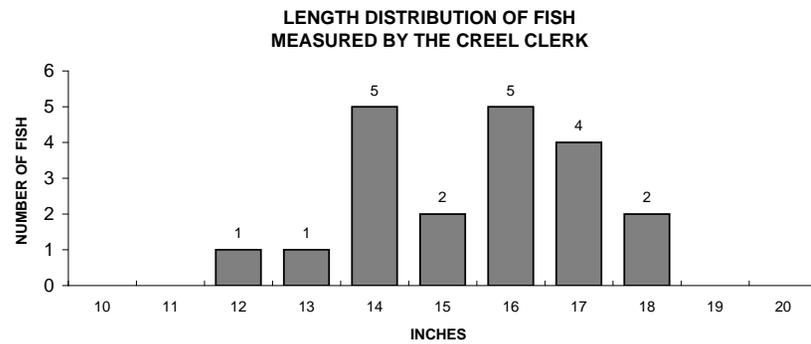
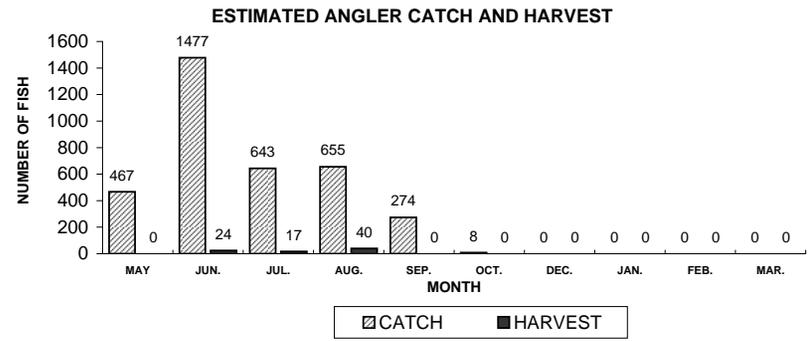
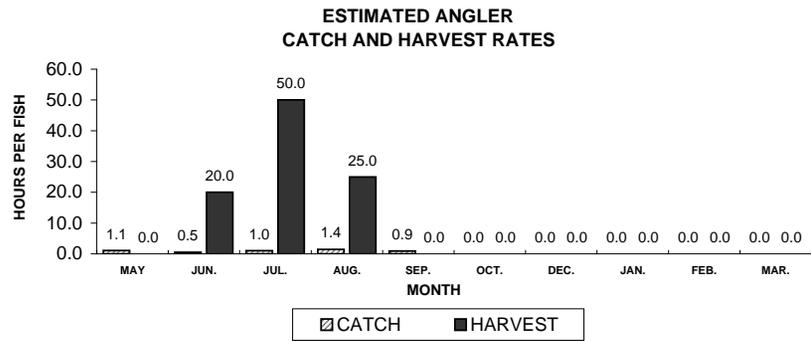
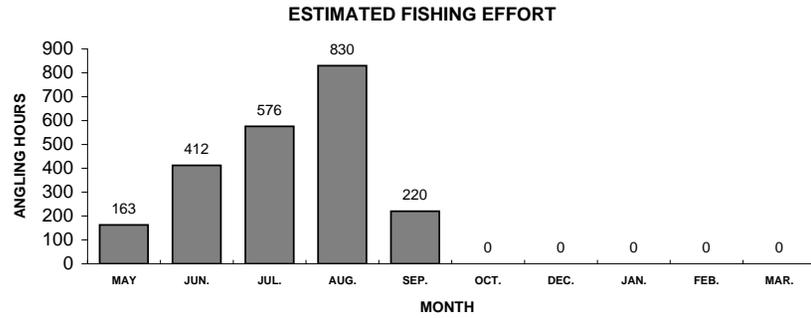
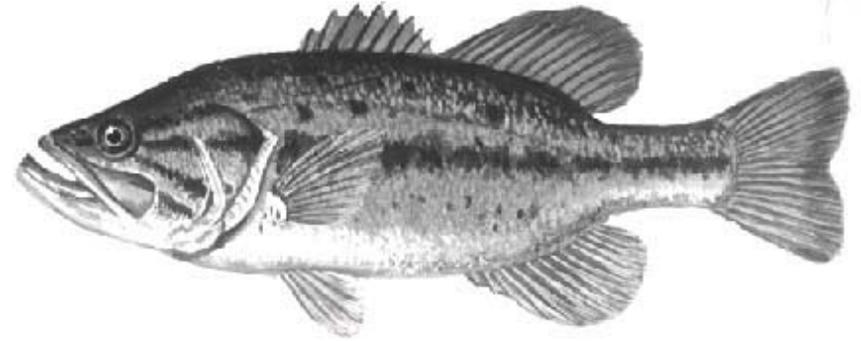
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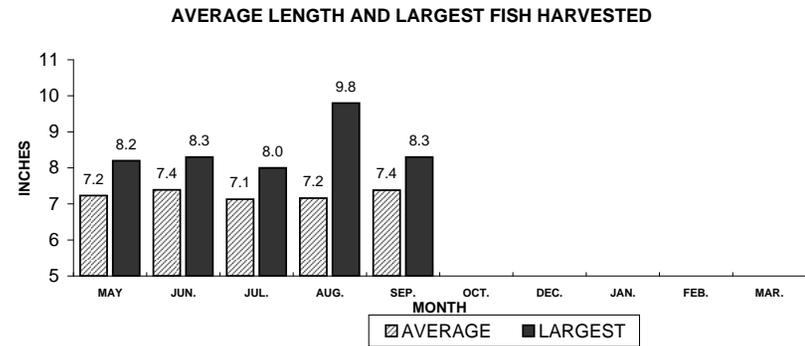
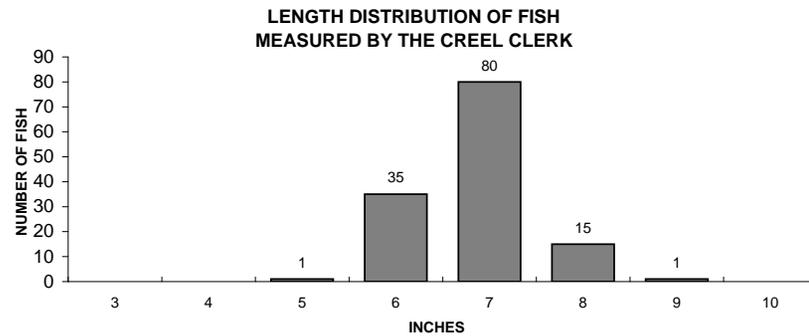
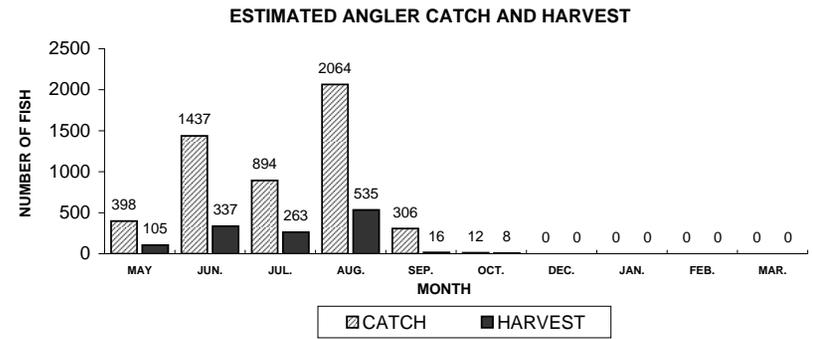
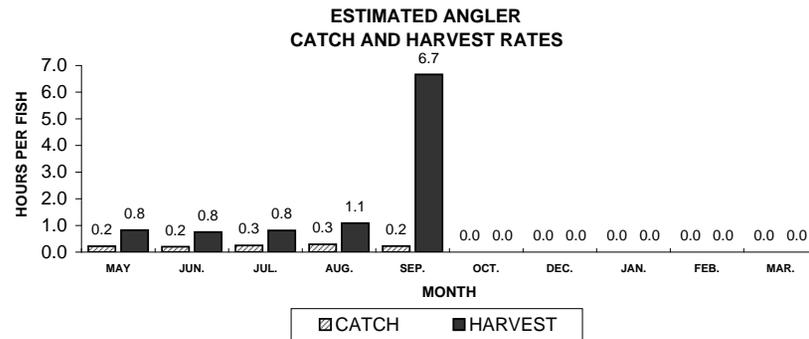
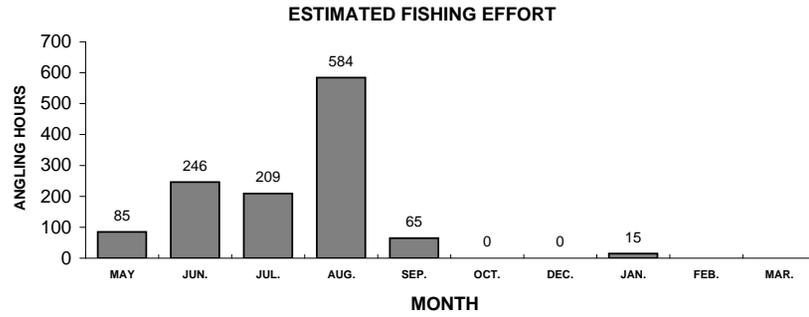
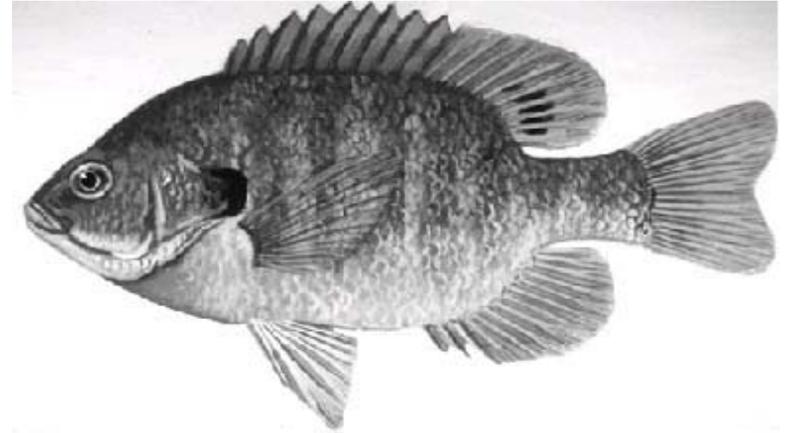
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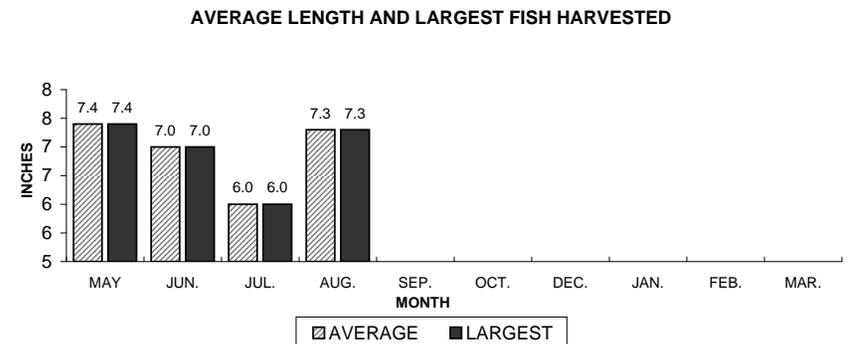
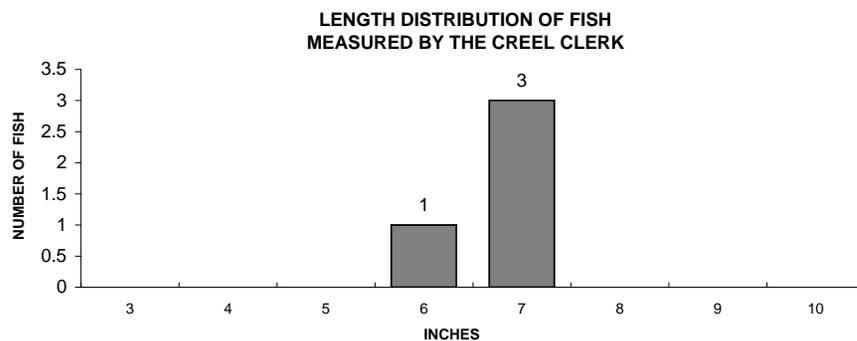
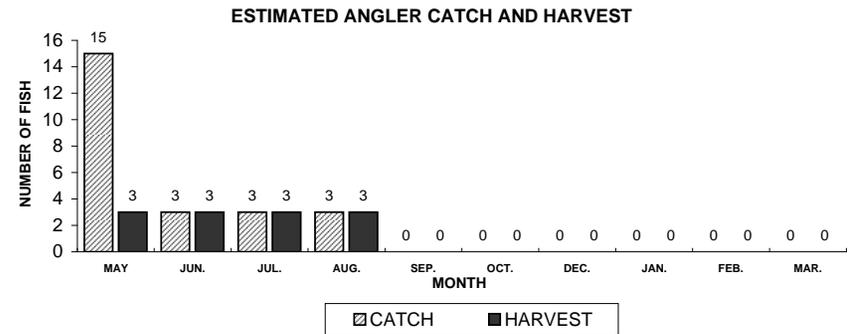
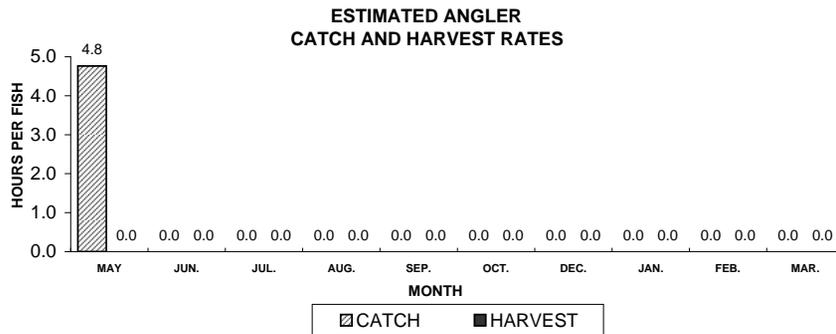
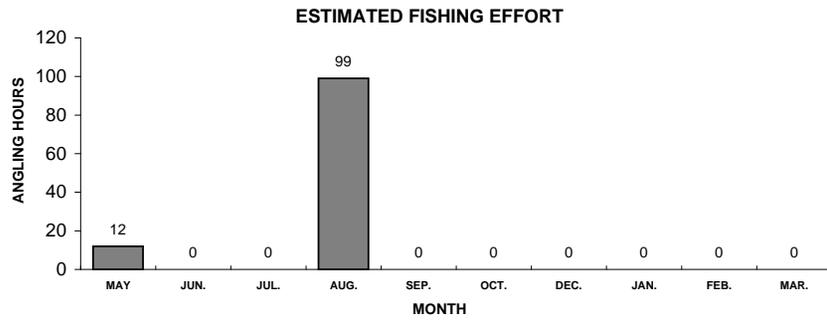
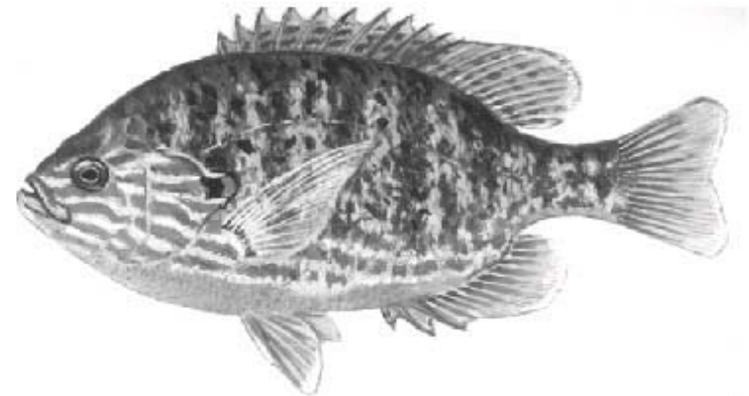
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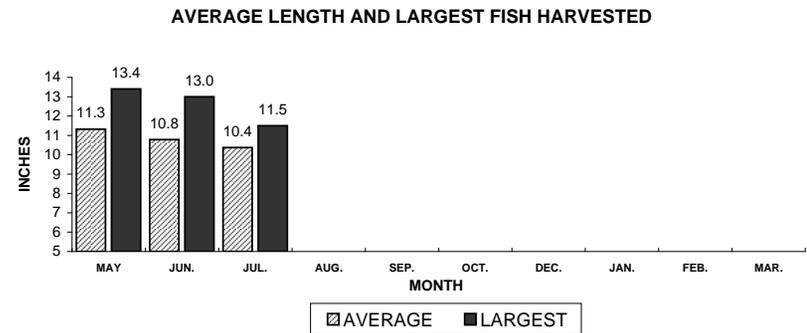
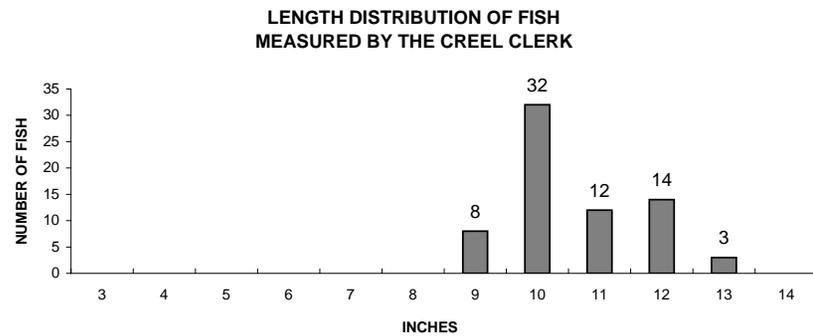
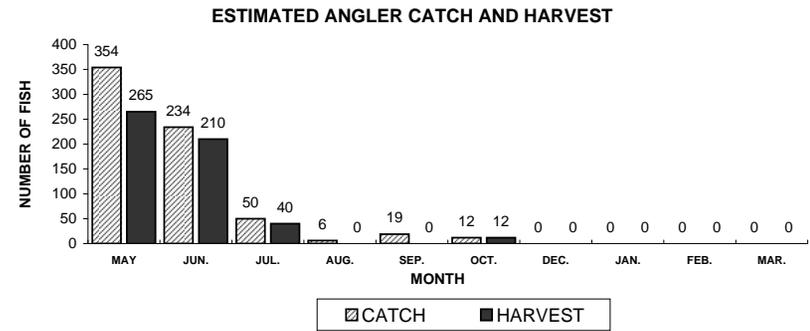
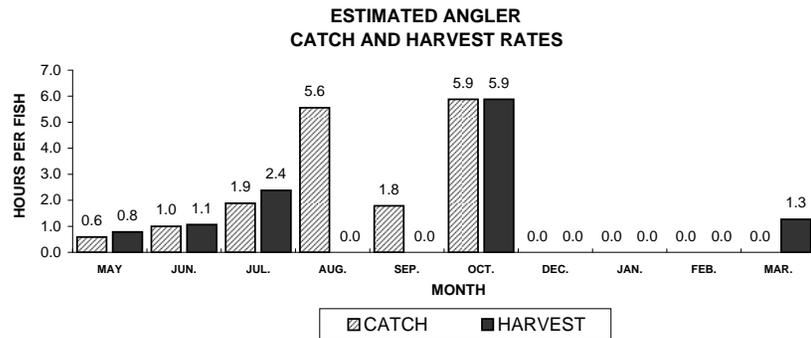
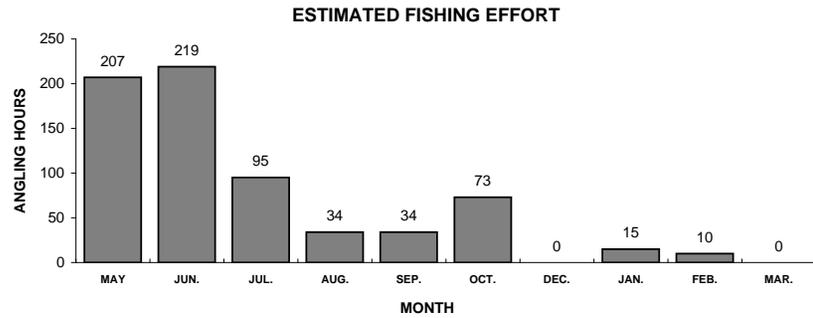
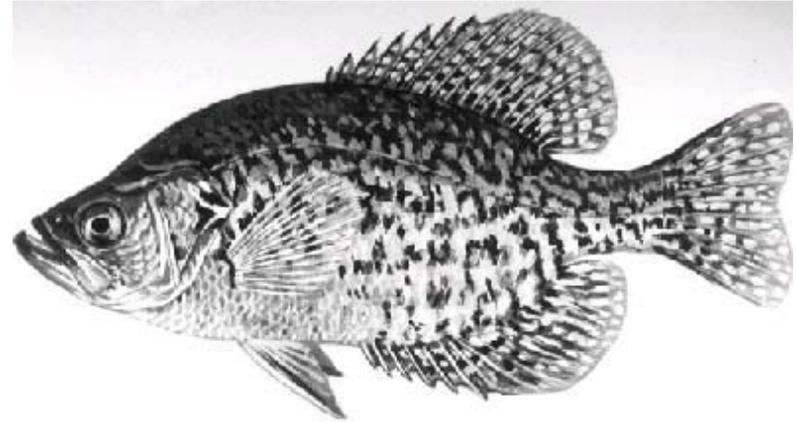
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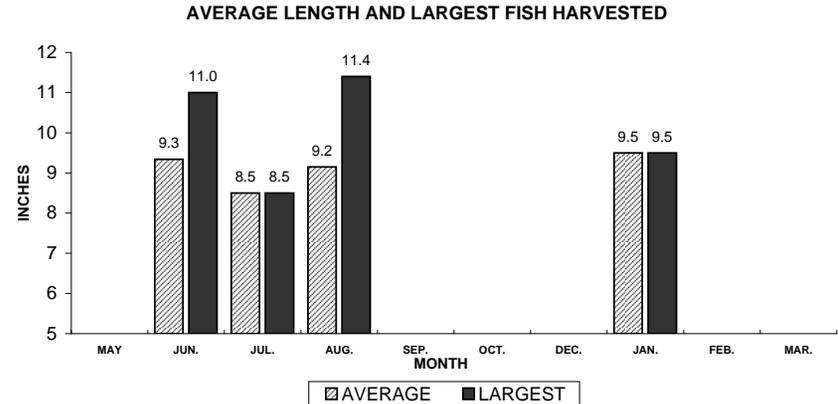
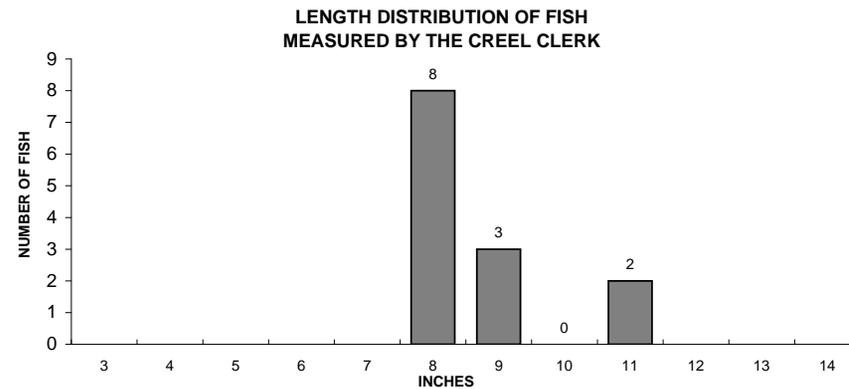
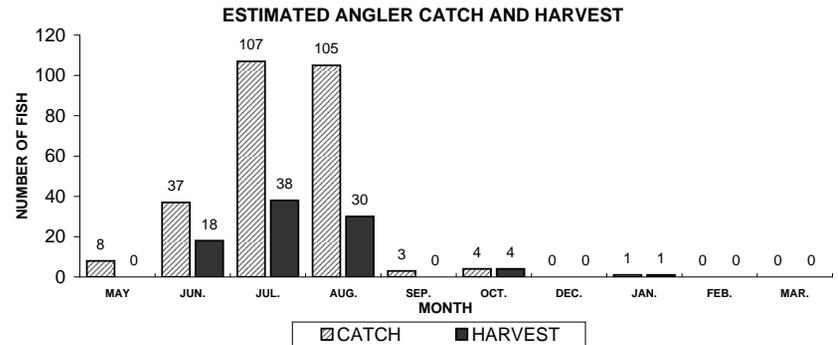
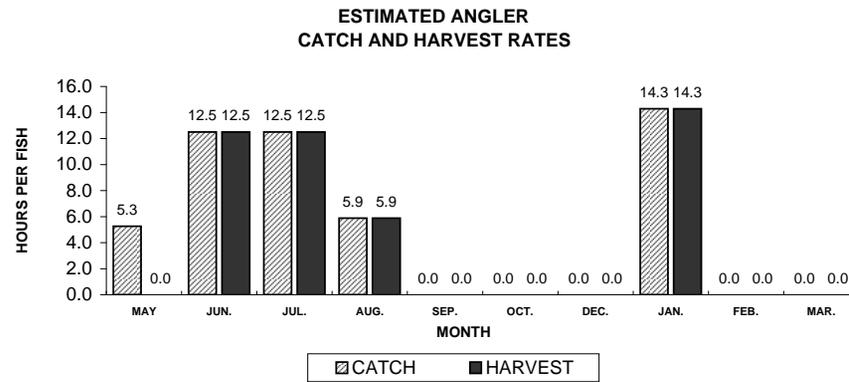
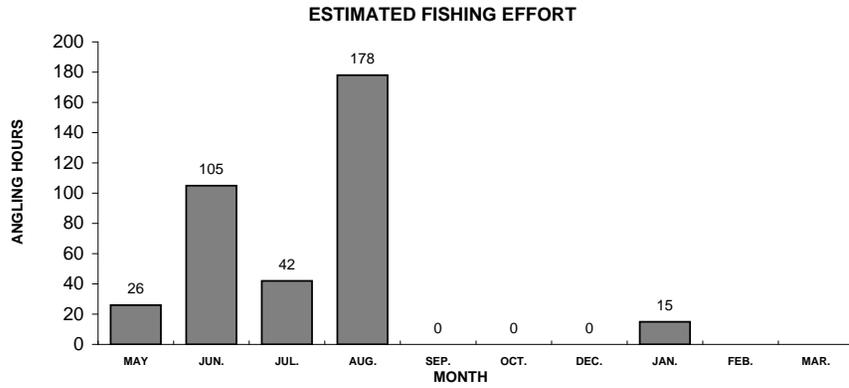
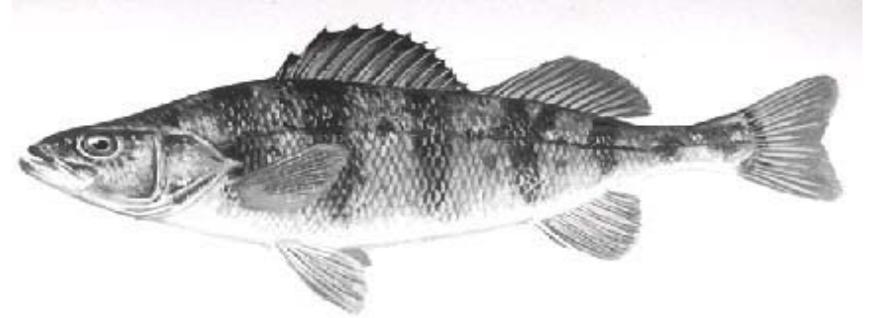
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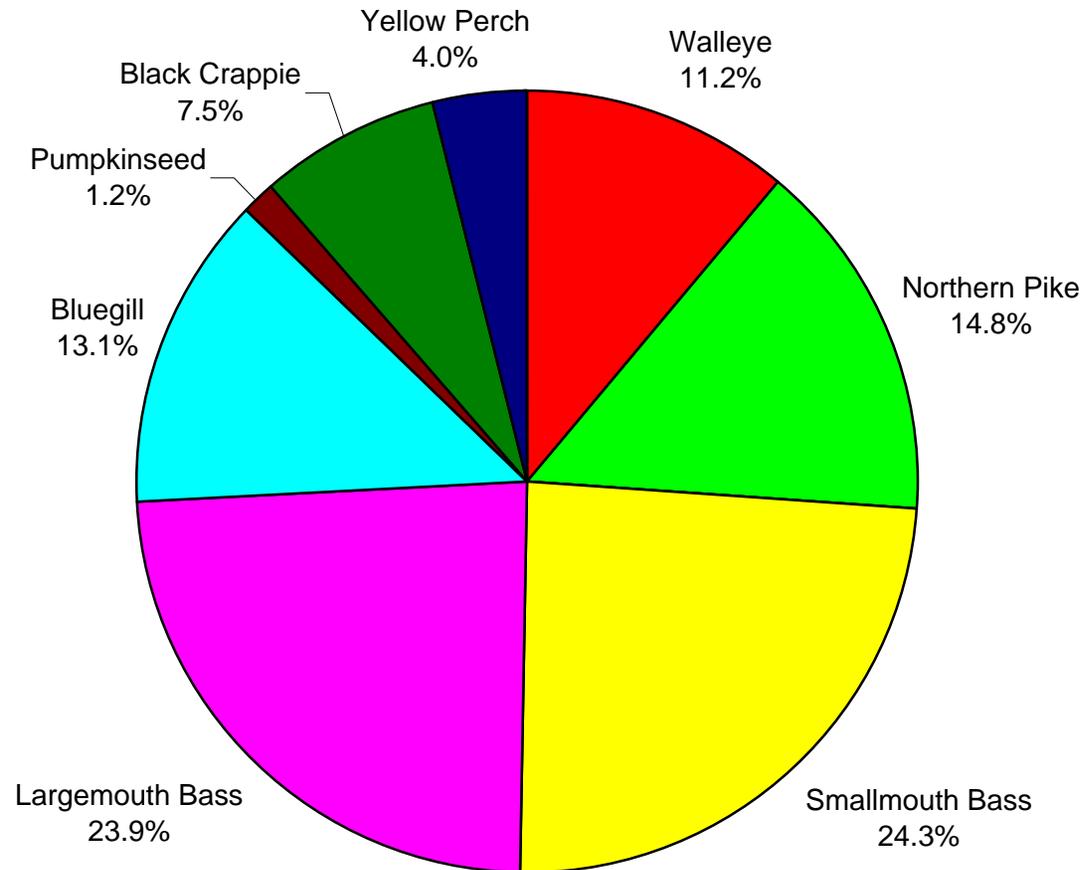


# YELLOW PERCH



## TOTAL ANNUAL ANGLER DIRECTED EFFORT BY SPECIES Diamond Lake 2009-10

This graph illustrates the percentage of time that anglers spent fishing for each species during the entire creel survey. The percentages are based on the species of fish anglers told the clerk they were fishing for, not what they actually caught. If a particular species is not present in the graph it is because no one reported they were fishing for that species.



# SEASONAL ANGLER EFFORT SUMMARY

## 2009-10

Estimated angler fishing effort on Diamond Lake for each month surveyed and by season.

Month	Total Angler Hours	Total Angler Hours/Acre	Bayfield County Average Hours/Acre	Statewide Average Hours/Acre
May	531	1.6	3.5	5.8
June	945	2.8	5.3	6.1
July	910	2.7	5.5	6.4
August	1271	3.7	4.2	5.4
September	466	1.4	2.3	3.8
October	84	0.2	1.1	1.6
December	44	0.1	0.6	1.7
January	30	0.1	0.8	1.5
February	59	0.2	0.8	1.3
March	14	0.0		**
*Summer Total	4207	12.3	21.9	29.1
*Winter Total	147	0.4	2.3	4.5
Grand Total	4355	12.8	24.1	33.6

\*"Summer" is May-October; "Winter" is December-March

\*\*Too few lakes have been surveyed in March to give a meaningful statewide average.

**Number of Angler Party Interviews** is the number of groups of anglers interviewed by the creel clerk. A party is considered the members of a group who fish together in the same boat, ice shanty, or from shore. The clerk fills out one interview form for each group of anglers. The number of individual anglers actually contacted by the clerk is usually much greater than the number of groups listed in this table since most groups consist of more than one angler.

**Total Angler Hours** is the estimated total number of hours that anglers spent fishing on this 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 this lake to others.

**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 this lake to other lakes statewide.

**CREEL SURVEY HISTORY/SYNOPSIS**

DIAMOND LAKE, BAYFIELD COUNTY

CREEL YEAR: 2009-10

<b>SPECIES</b>	<b>DIRECTED EFFORT (Hours)</b>	<b>PERCENT OF TOTAL</b>	<b>TOTAL CATCH</b>	<b>SPECIFIC CATCH RATE (Hrs/Fish)</b>	<b>TOTAL HARVEST</b>	<b>SPECIFIC HARVEST RATE (Hrs/Fish)</b>	<b>MEAN LENGTH OF HARVESTED FISH</b>
Walleye	1025	11.15%	26	NA	3	NA	29.0
Northern Pike	1365	14.85%	1247	2.4	33	50.0	24.0
Muskellunge	0	0.00%	0	NA	0	NA	0.0
Smallmouth Bass	2233	24.29%	1064	2.9	10	NA	18.9
Largemouth Bass	2201	23.94%	3524	0.9	81	33.3	15.9
Bluegill	1204	13.10%	5111	0.3	1264	1.0	7.2
Pumpkinseed	111	1.21%	24	50.0	12	NA	6.9
Black Crappie	687	7.47%	675	0.2	527	1.3	11.0
Yellow Perch	366	3.98%	265	7.7	91	8.3	9.2

CREEL YEAR: 2006-07

<b>SPECIES</b>	<b>DIRECTED EFFORT (Hours)</b>	<b>PERCENT OF TOTAL</b>	<b>TOTAL CATCH</b>	<b>SPECIFIC CATCH RATE (Hrs/Fish)</b>	<b>TOTAL HARVEST</b>	<b>SPECIFIC HARVEST RATE (Hrs/Fish)</b>	<b>MEAN LENGTH OF HARVESTED FISH</b>
Walleye	1095	15.27%	69	16.7	0	NA	
Northern Pike	1373	19.15%	798	2.1	0	NA	26.0
Muskellunge	0	0.00%	0		0		
Smallmouth Bass	1420	19.80%	382	6.3	13	100.0	13.9
Largemouth Bass	1840	25.66%	1126	2.3	65	33.3	15.1
Bluegill	939	13.09%	4501	0.3	669	1.4	7.0
Pumpkinseed	11	0.15%	205	0.6	0	NA	
Black Crappie	335	4.67%	619	0.6	202	2.2	10.2
Yellow Perch	158	2.20%	217	4.5	64	4.5	8.5