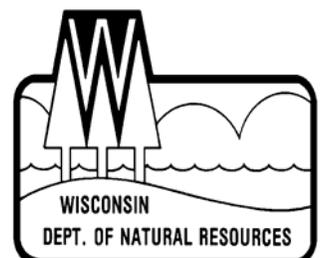


**WISCONSIN DEPARTMENT OF NATURAL RESOURCES  
CREEL SURVEY REPORT**

**BALSAM LAKE  
POLK COUNTY  
2008-2009**



Treaty Fisheries Publication  
2009



## 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

### Physical Characteristics

Balsam Lake covers 2,054 acres, has a maximum depth of 37 feet, with 22.7 miles of shoreline and several islands. The Balsam Branch runs into and out of Balsam Lake. There are four improved public access/boat landings on the lake.

### Seasons Surveyed

The creel survey started on opening day (5/3) of the 2008 gamefish season and ran through March 1, 2009. 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 2008-2009:

Species	Season	Bag Limit	Min. Size
Largemouth Bass	05/03-3/01	5	none, 1<14"
Smallmouth Bass	05/03-3/01	5	none, 1<14"
Musky	5/24-11/30	1	40"
Northern Pike	5/03-3/01	2	26"
Walleye	5/03-3/01	*2	15"
Panfish	all year	25	none

\* The statewide bag limit was 5 walleye, but due to tribal declarations it was reduced on this lake.

## 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.

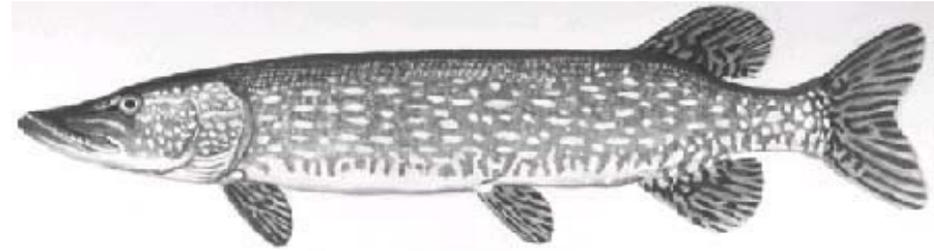
## ACKNOWLEDGEMENTS

Matt Kufahl was the survey clerk on the lake for the entire survey period. He collected the angler interview information that makes this report possible.

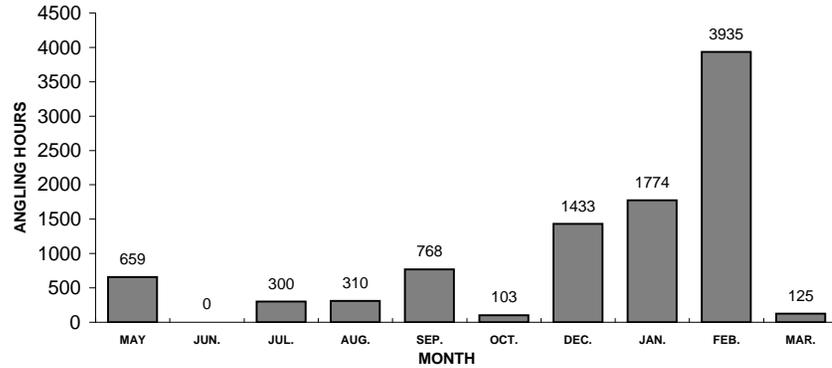
The Department would like to thank Ron and Faith Goodroad. They generously allowed the department to keep a boat and snowmobile at their property during this survey.

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.

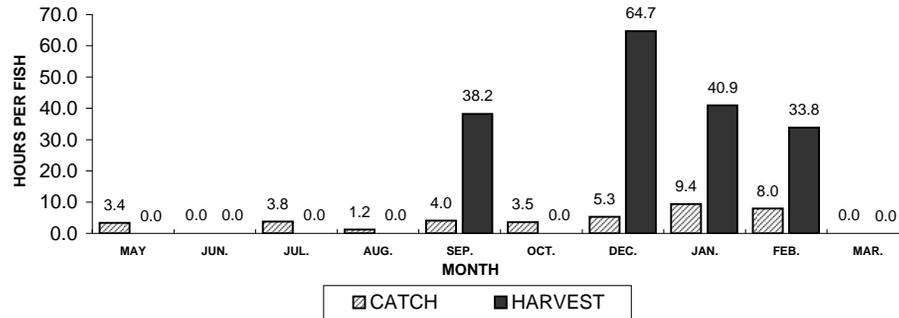
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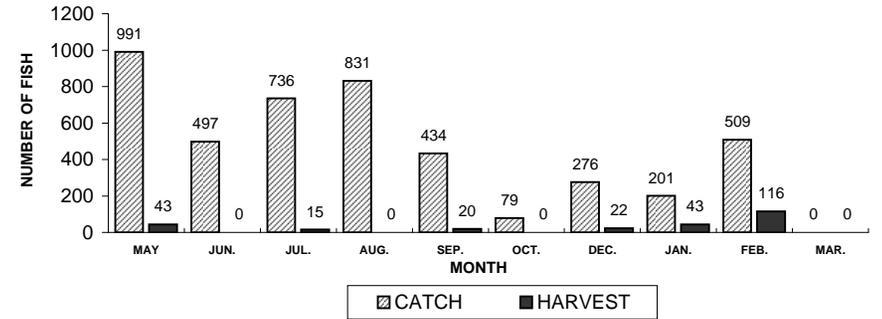
**ESTIMATED FISHING EFFORT**



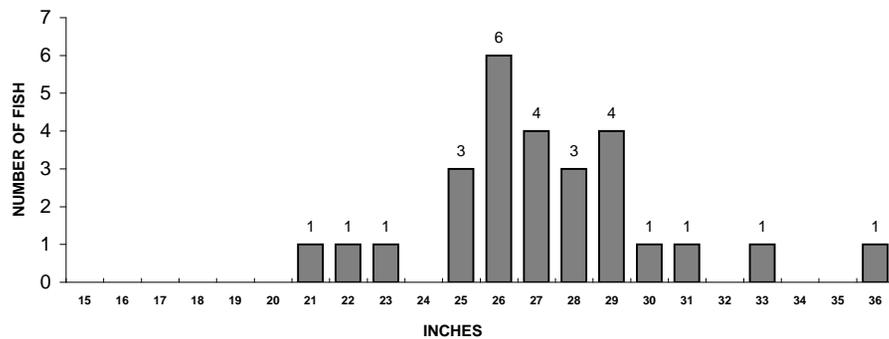
**ESTIMATED ANGLER CATCH AND HARVEST RATES**



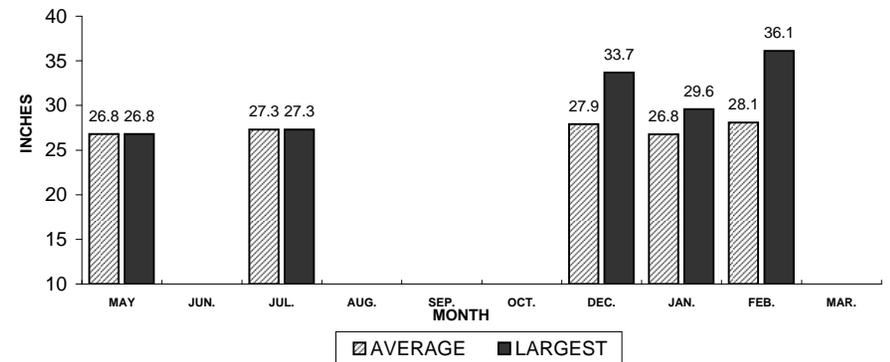
**ESTIMATED ANGLER CATCH AND HARVEST**



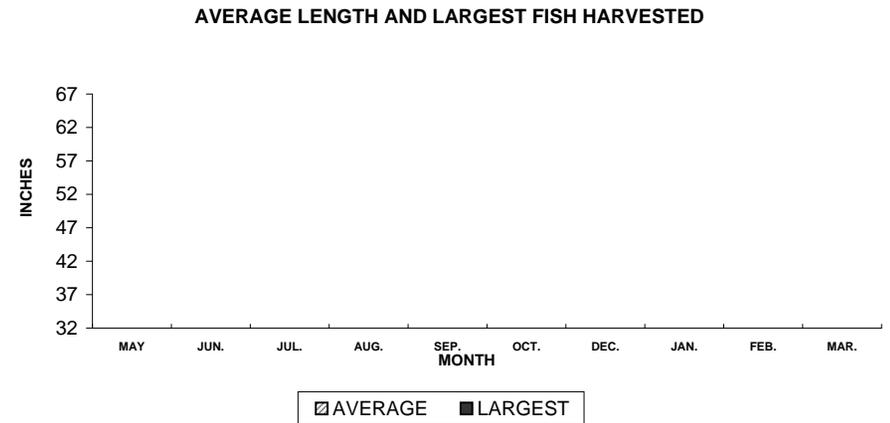
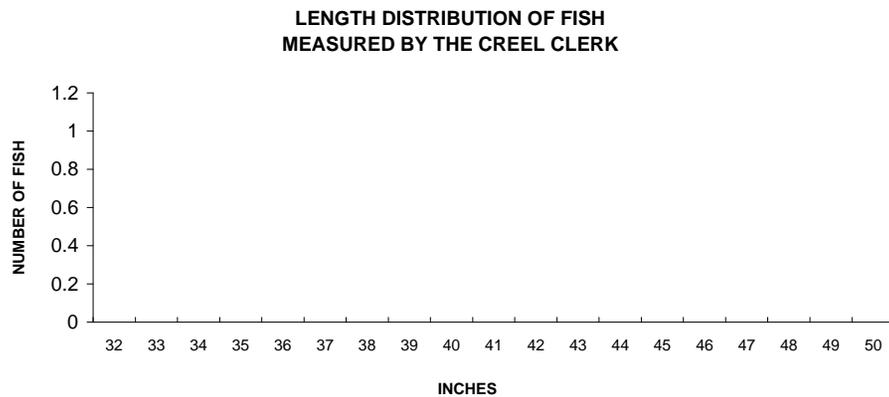
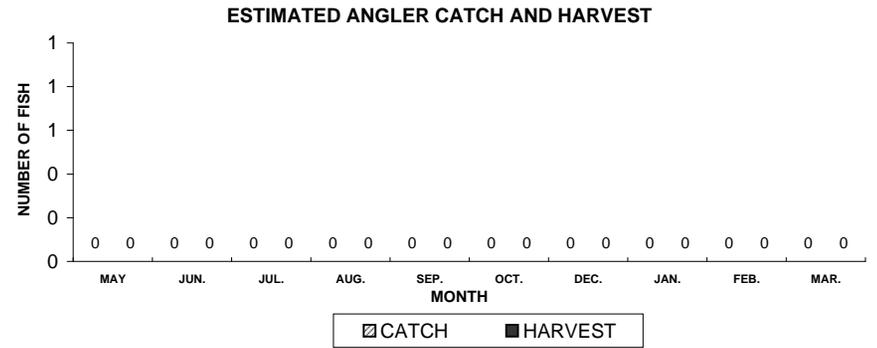
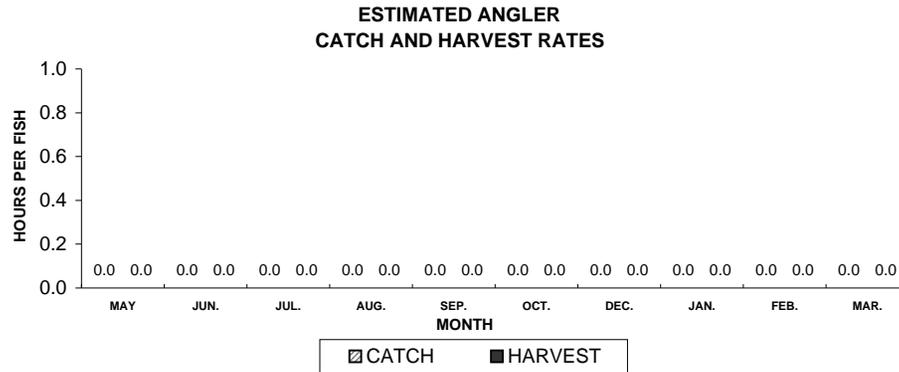
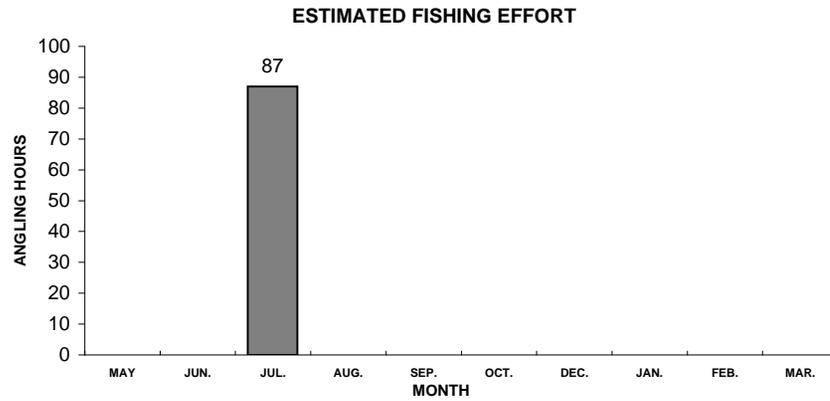
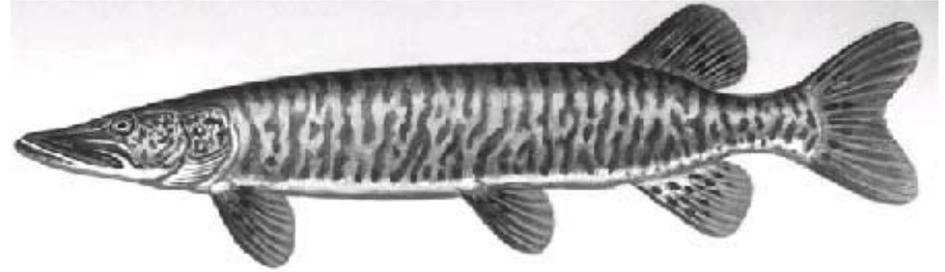
**LENGTH DISTRIBUTION OF FISH MEASURED BY THE CREEL CLERK**



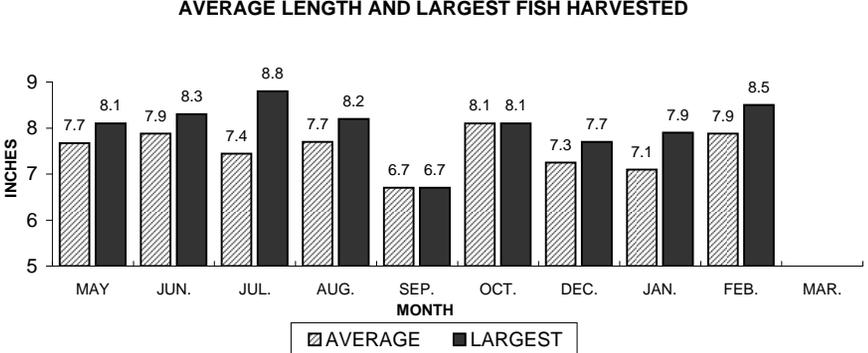
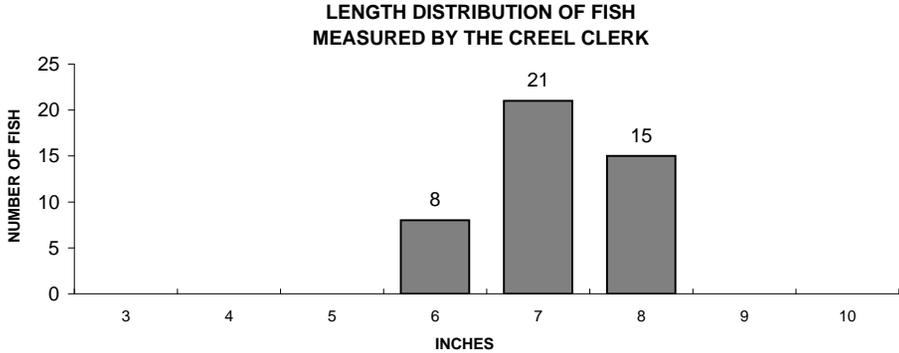
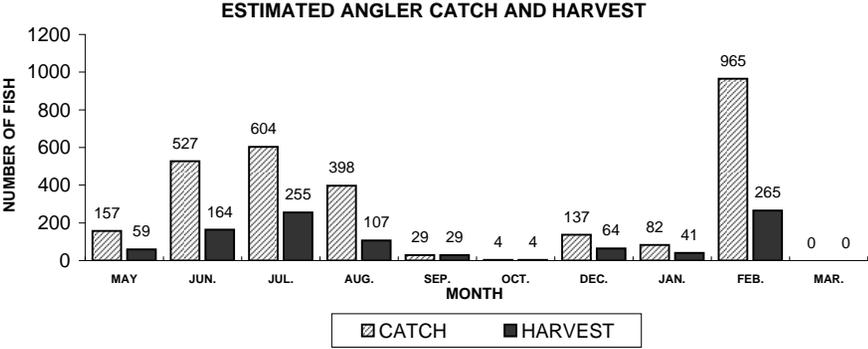
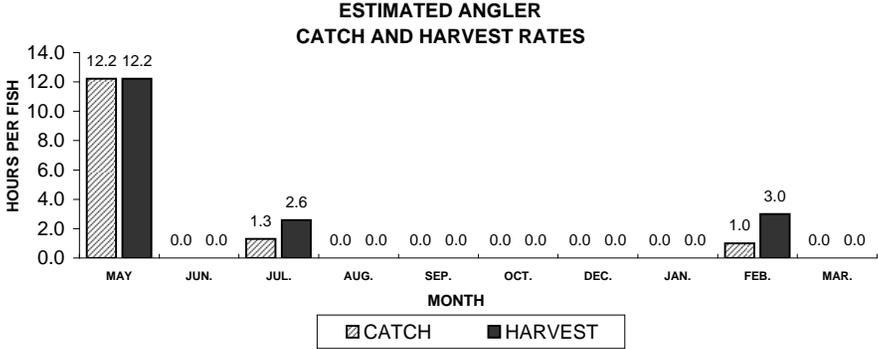
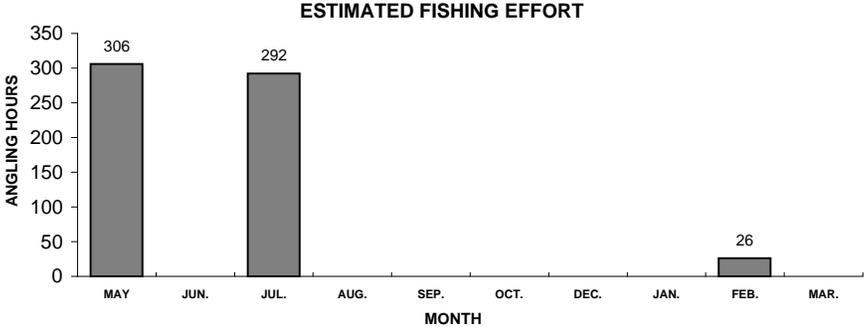
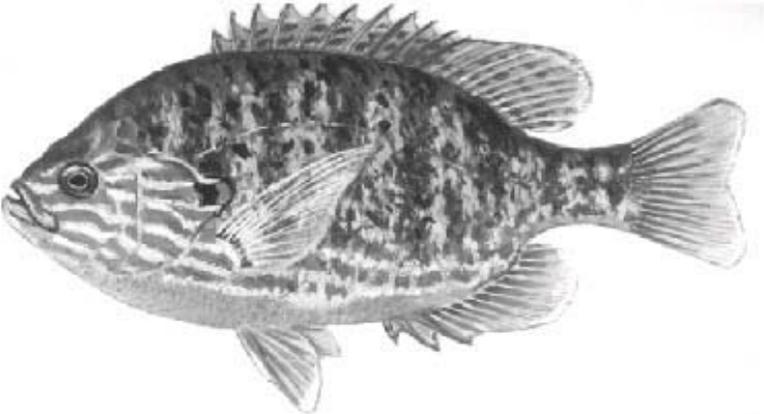
**AVERAGE LENGTH AND LARGEST FISH HARVESTED**



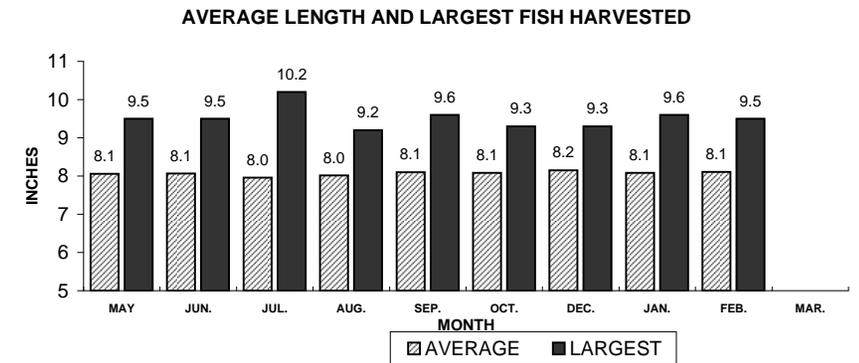
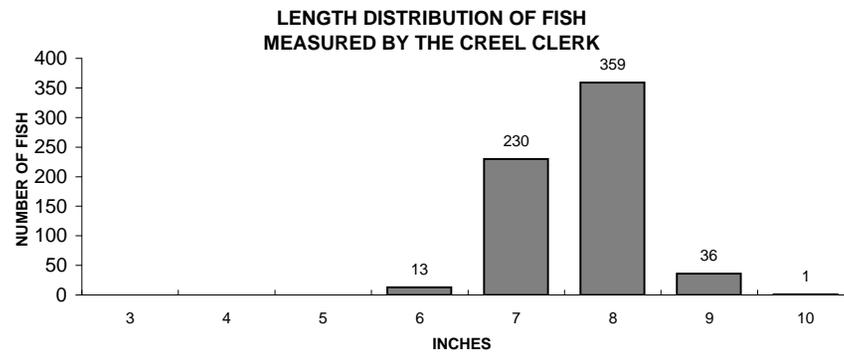
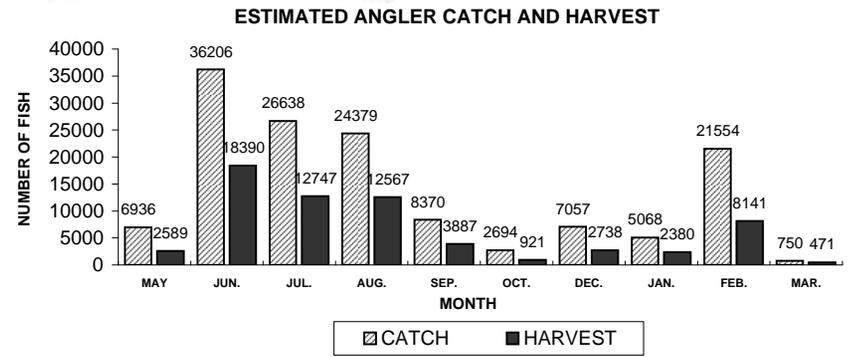
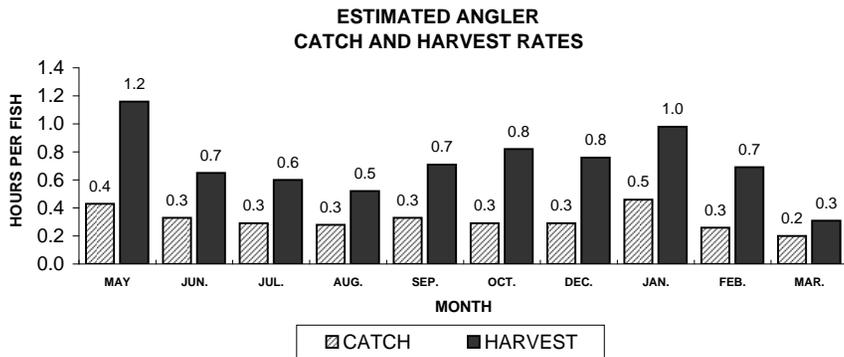
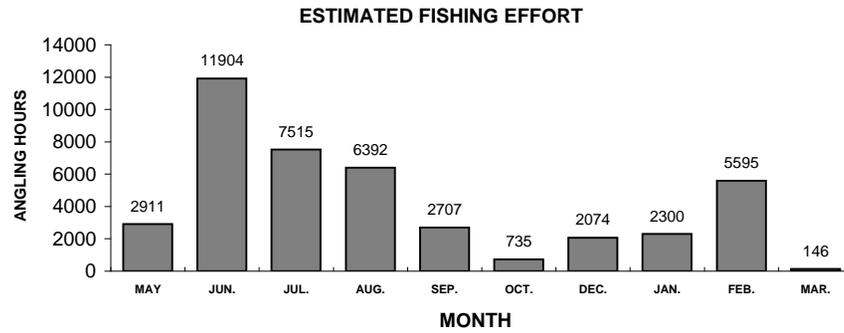
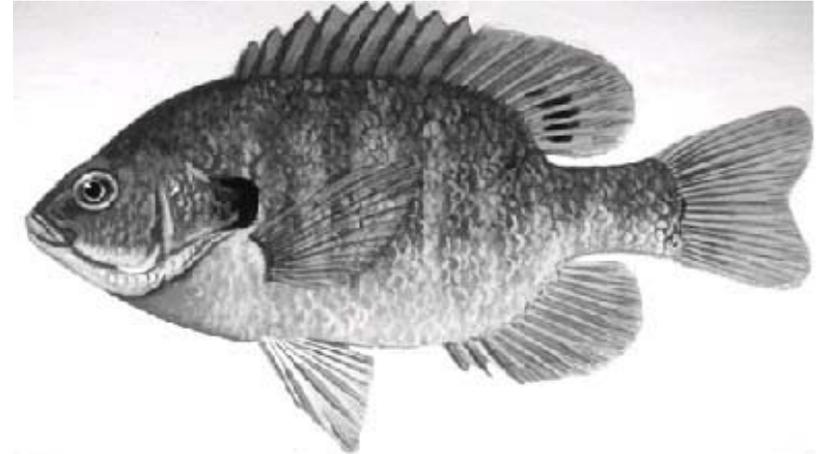
# MUSKELLUNGE



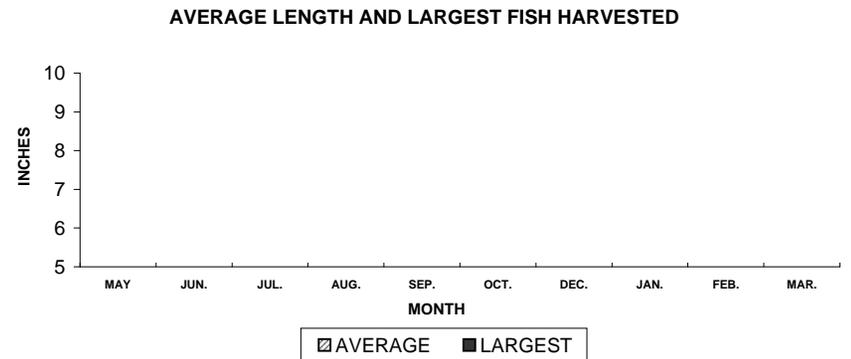
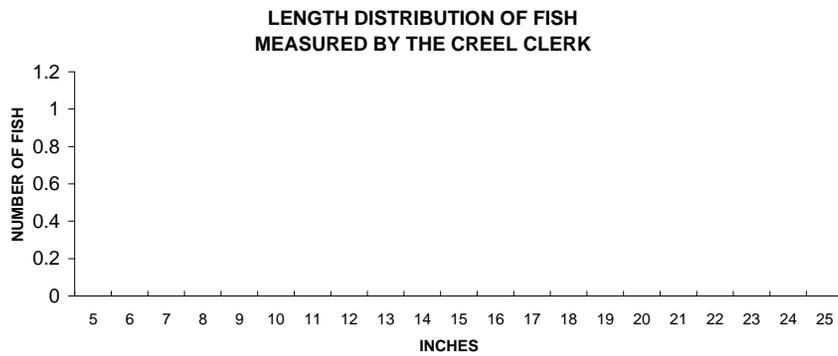
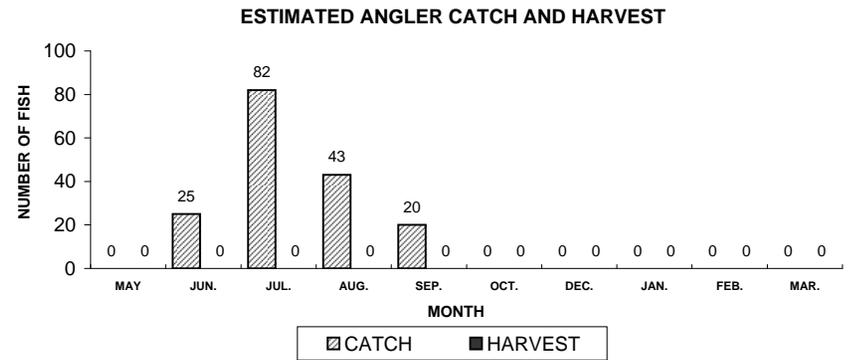
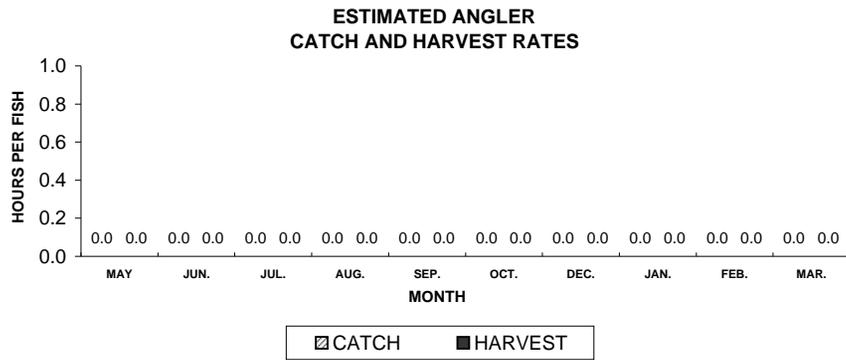
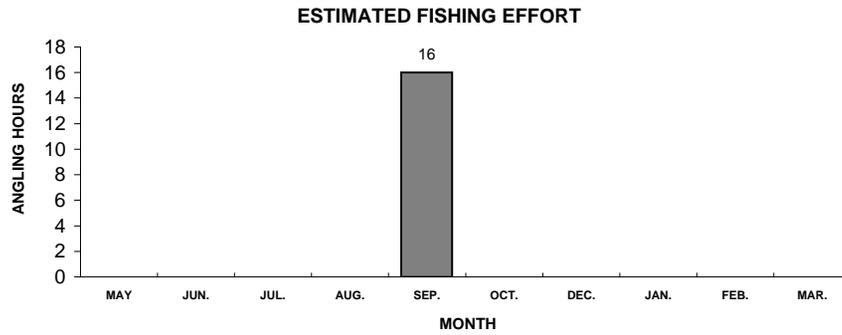
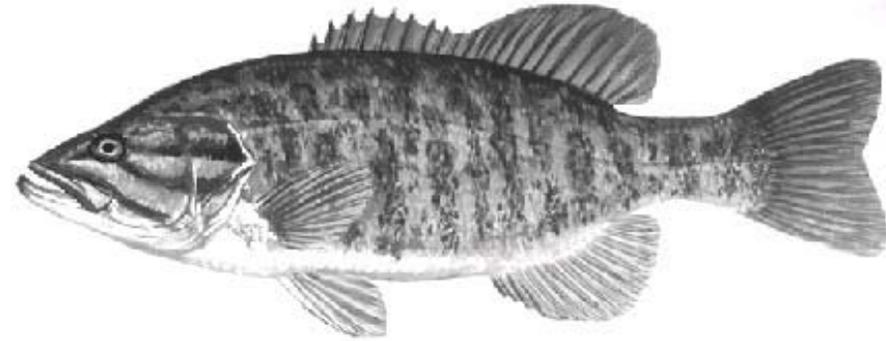
# PUMPKINSEED



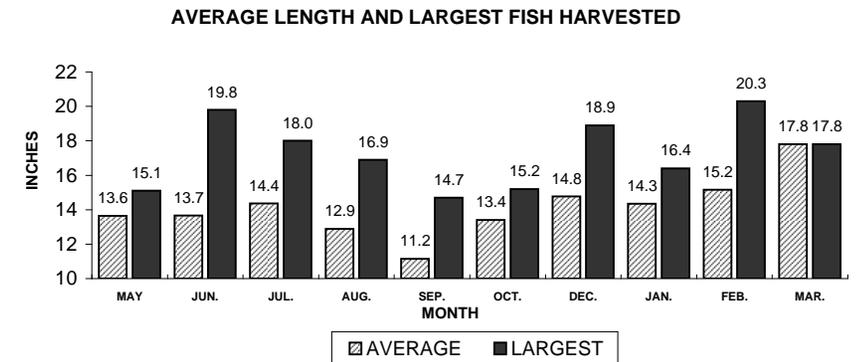
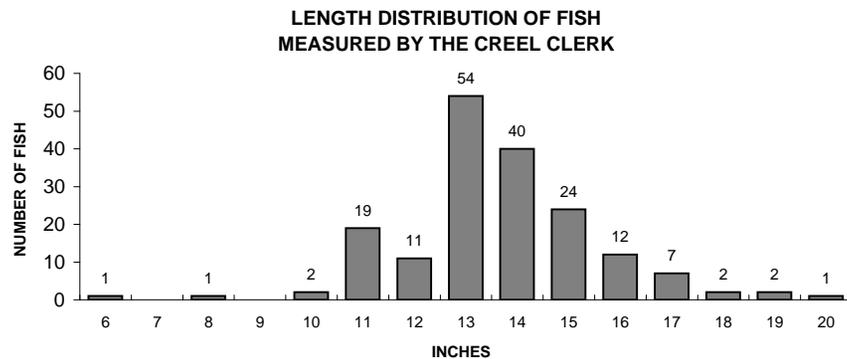
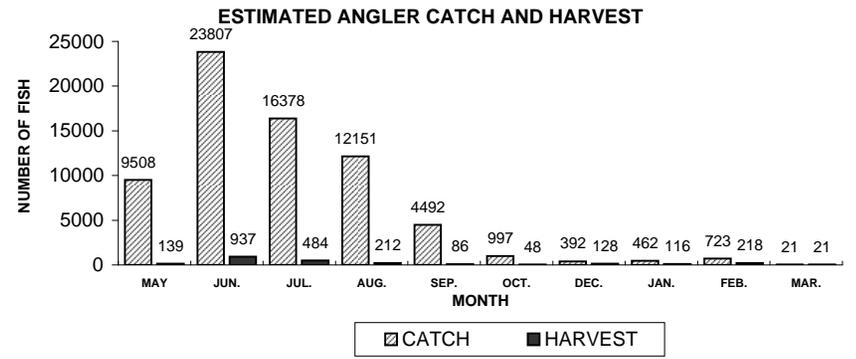
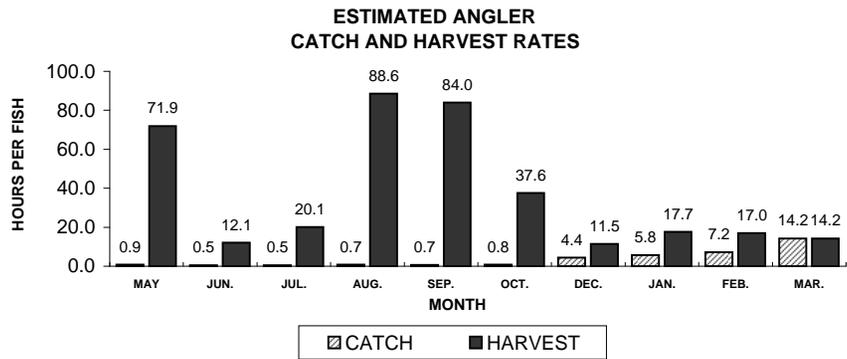
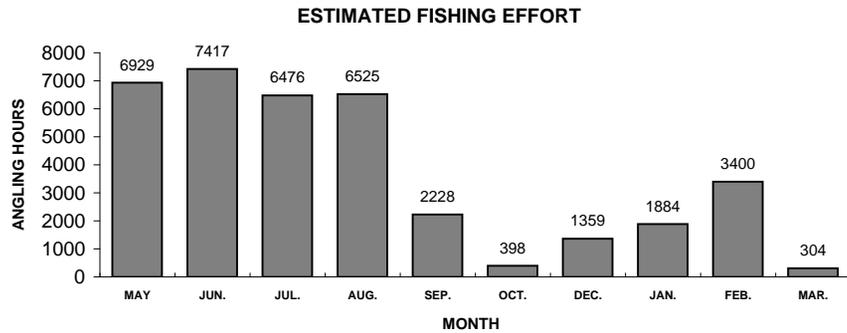
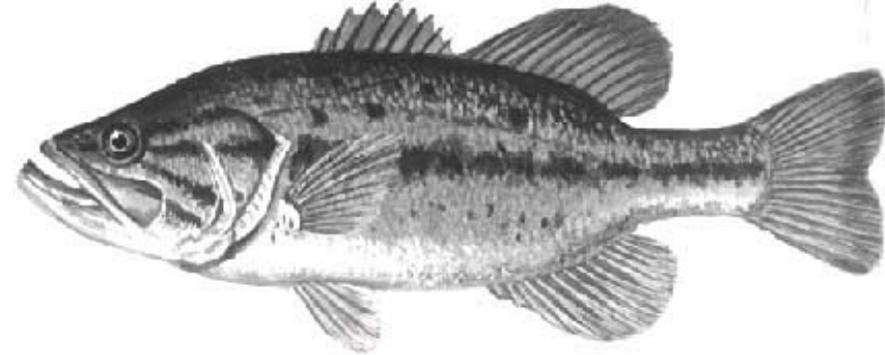
# BLUEGILL



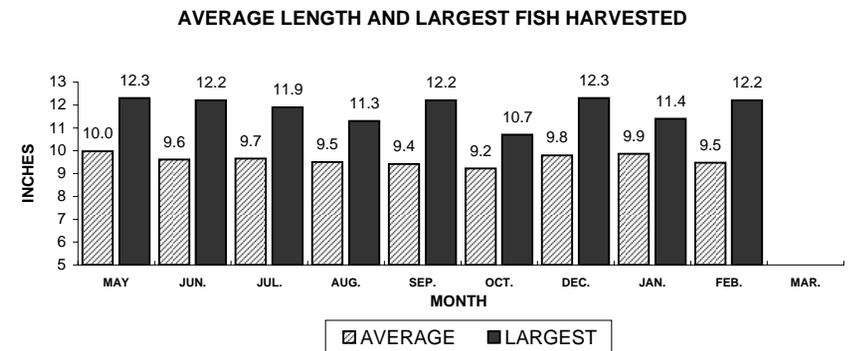
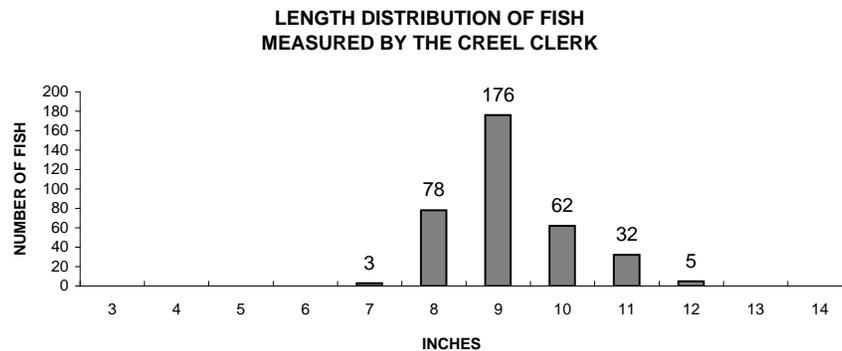
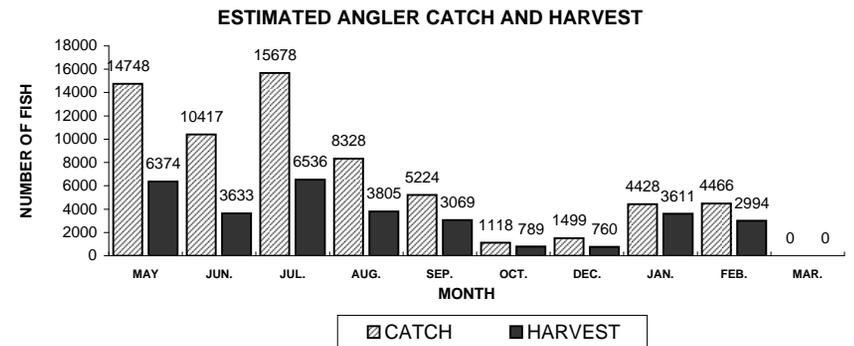
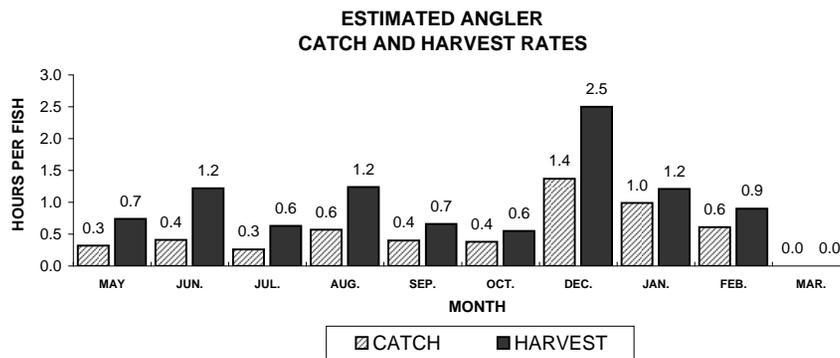
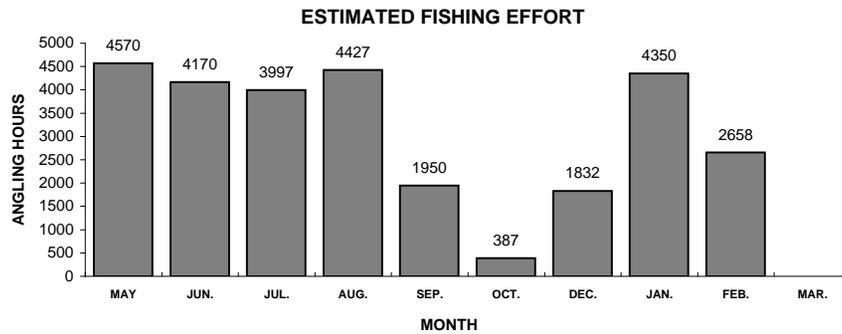
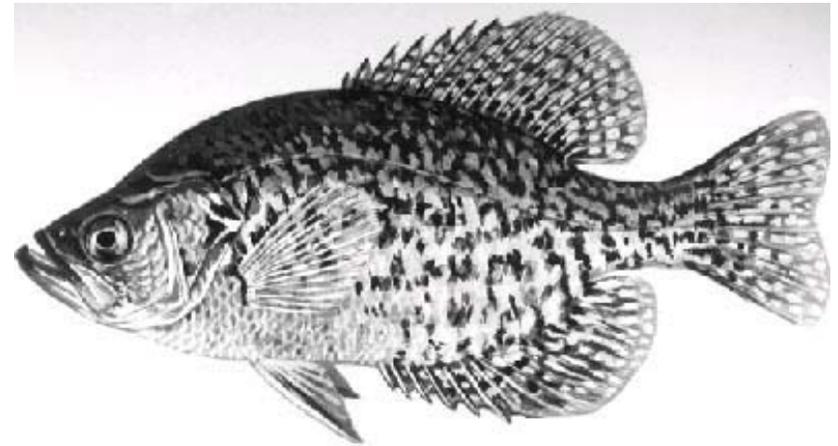
# SMALLMOUTH BASS



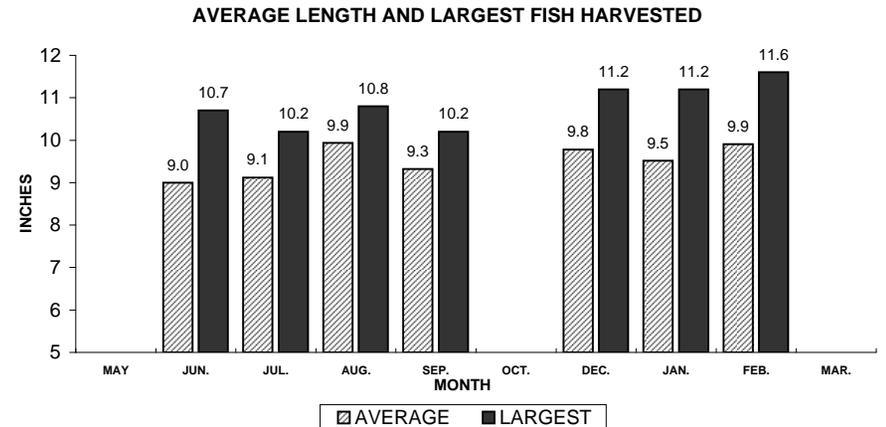
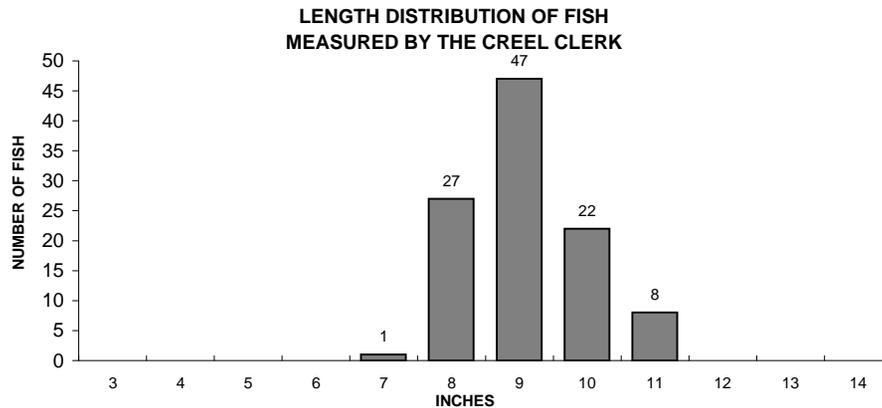
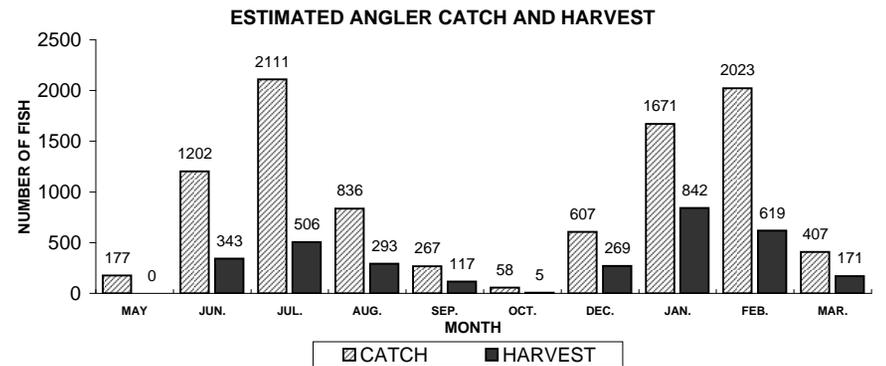
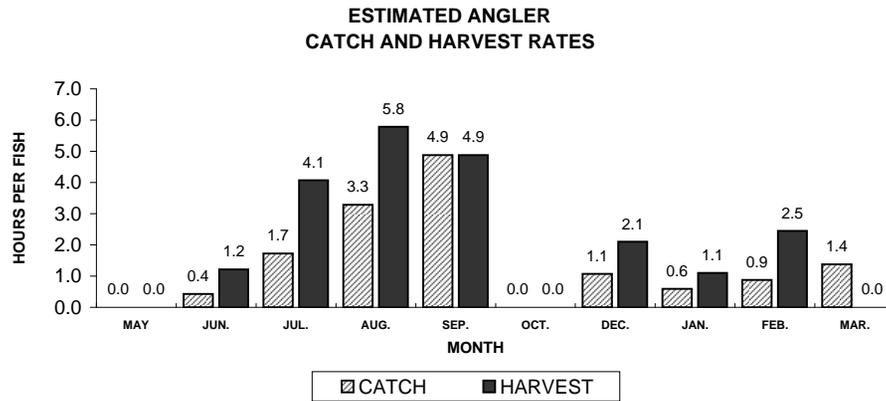
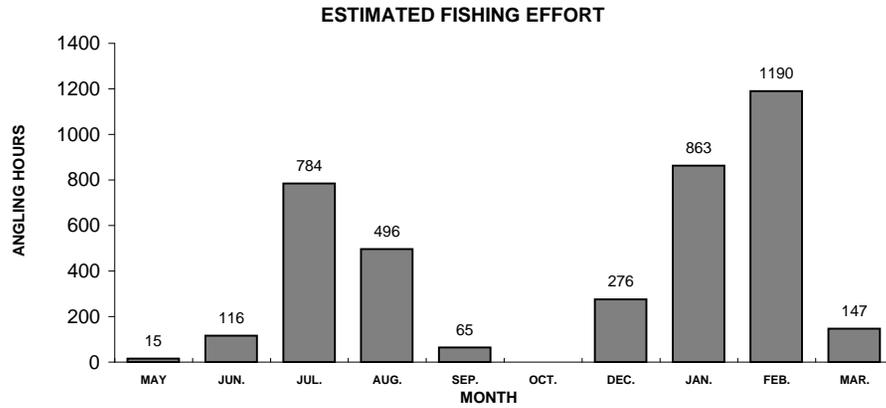
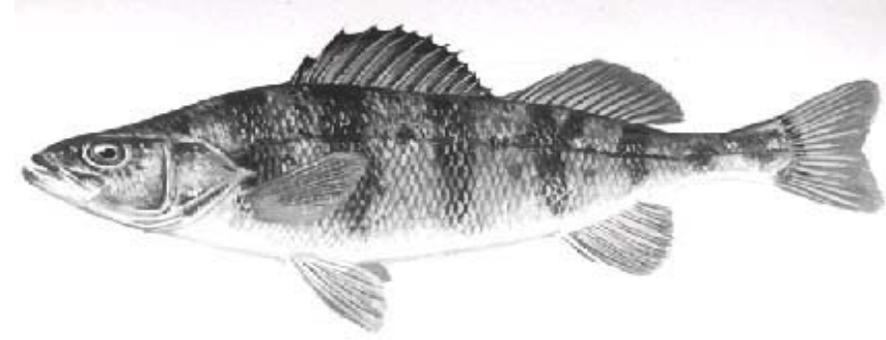
# LARGEMOUTH BASS



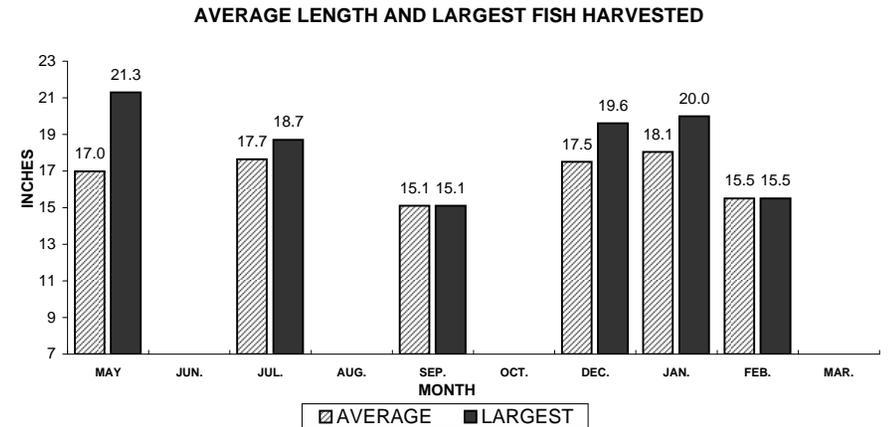
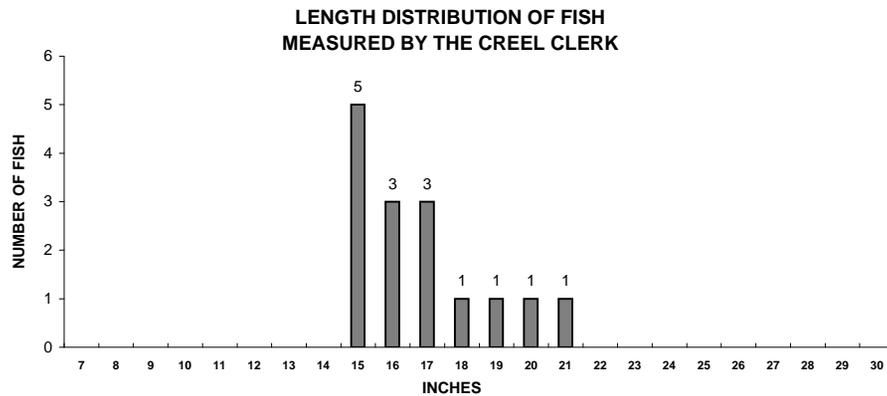
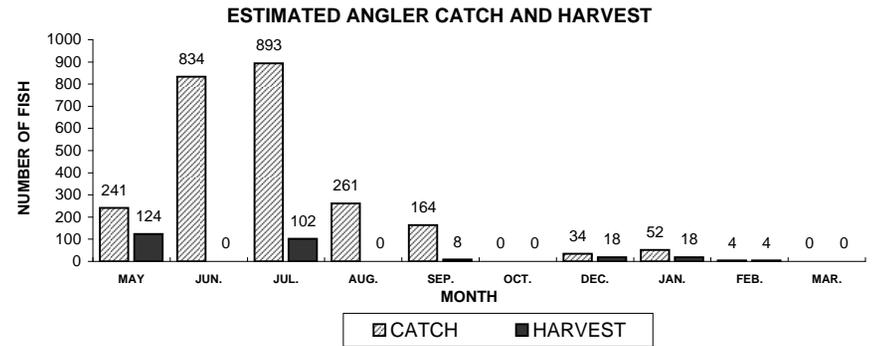
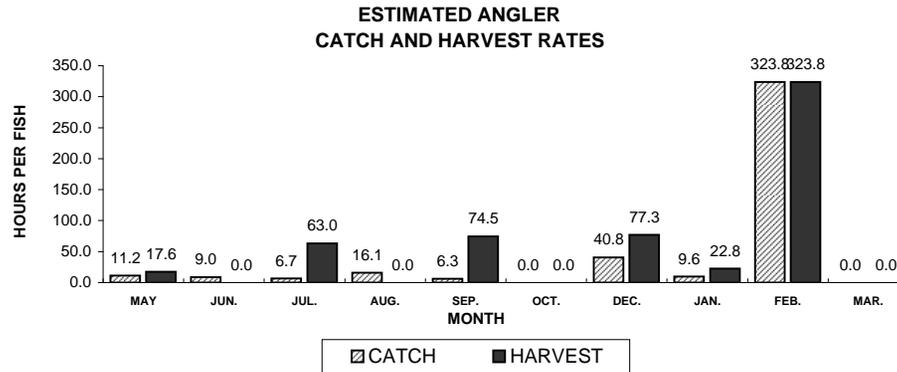
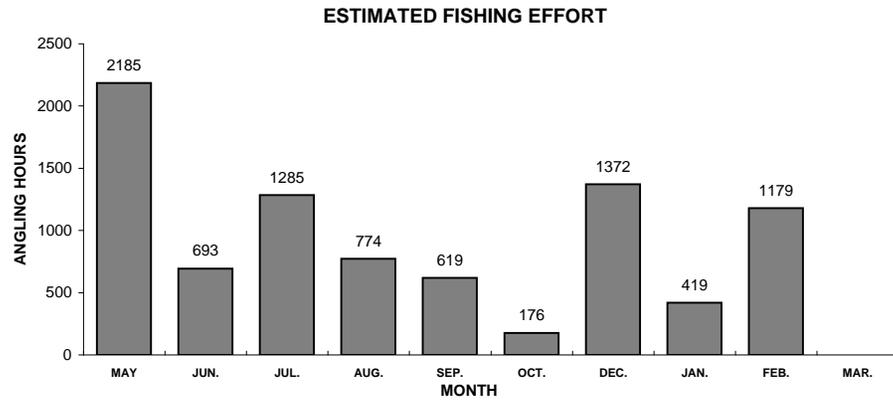
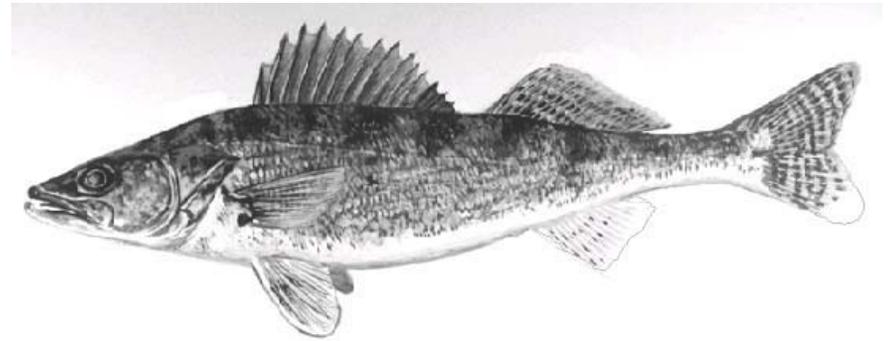
# BLACK CRAPPIE



# YELLOW PERCH

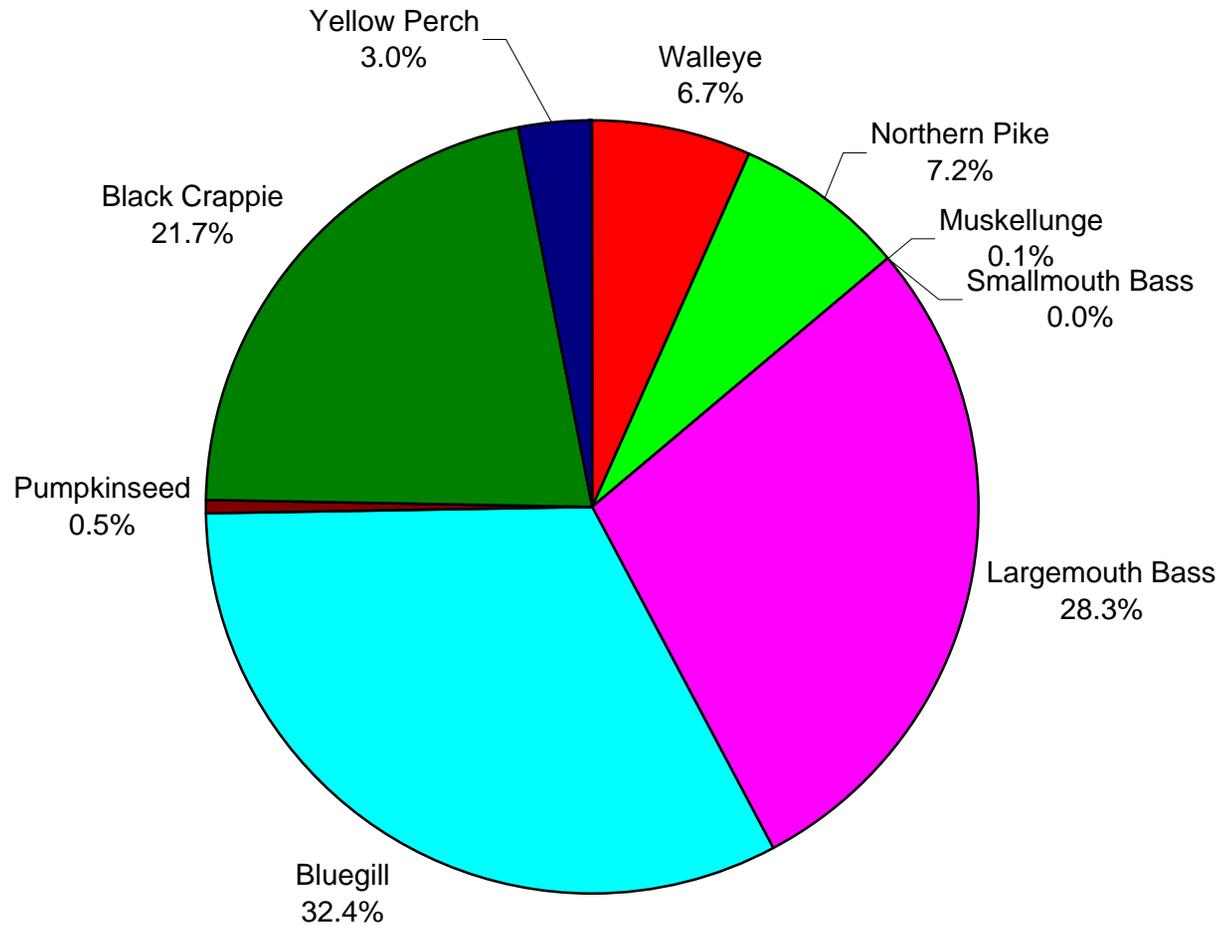


# WALLEYE



## TOTAL ANNUAL ANGLER DIRECTED EFFORT BY SPECIES Balsam Lake 2008-2009

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. Species with very little or no angler effort are not included in this graph.



**CREEL SURVEY HISTORY/SYNOPSIS**

BALSAM LAKE, POLK COUNTY

CREEL YEAR: 2008-2009

<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	8703	6.7%	2482	12.6	274	45.2	17.1
Northern Pike	9407	7.2%	4556	5.5	260	46.6	27.7
Muskellunge	87	0.1%	0		0		
Smallmouth Bass	16	0.0%	170		0		
Largemouth Bass	36920	28.3%	68933	0.8	2389	23.2	14.1
Bluegill	42279	32.4%	139651	0.3	64831	0.7	8.1
Pumpkinseed	624	0.5%	2902	2.3	988	4.3	7.6
Black Crappie	28341	21.7%	65906	0.5	31573	0.9	9.6
Yellow Perch	3953	3.0%	9360	1.0	3167	2.2	9.5

CREEL YEAR: 2005-06

<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	5915	4.1%	605	32.7	82	194.7	16.6
Northern Pike	8486	5.9%	4499	5.6	238	39.2	27.8
Muskellunge	73	0.1%	34	0.0	0	0.0	
Smallmouth Bass	379	0.3%	586	5.0	0	0.0	
Largemouth Bass	39046	27.3%	54253	1.0	2146	26.2	14.2
Bluegill	45124	31.5%	158178	0.3	69009	0.7	7.6
Pumpkinseed	2269	1.6%	3788	1.5	1662	3.5	7.3
Black Crappie	33484	23.4%	53325	0.7	35207	1.0	9.9
Yellow Perch	8492	5.9%	10421	2.3	3233	4.3	9.2