



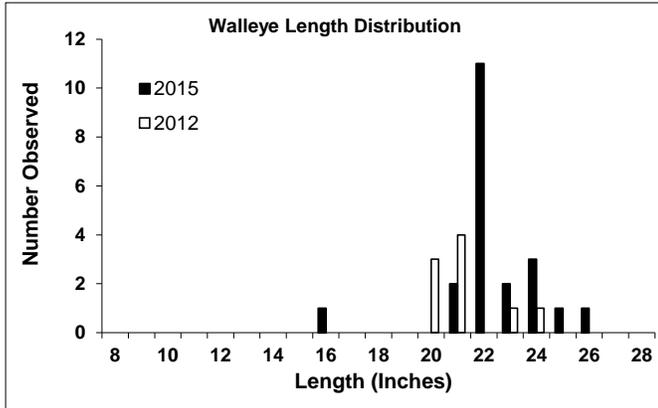
**WISCONSIN DNR
FISHERIES INFORMATION SHEET**

LAKE: Lake Ellwood

COUNTY: FLORENCE

YEAR: 2015

The Wisconsin Department of Natural Resources is conducting a comprehensive survey of Lake Ellwood, Florence County, to better understand the cause of the fishery collapse documented in 2012. This summary of our 2015 findings will document the current fishery and how it has changed since 2012. Lake Ellwood is located between Florence and Iron Mountain, MI, just south of HWY 2. Lake Ellwood covers 132 acres and achieves a maximum depth of 25 feet.



Walleye



Fyke nets were used on 4/16-17 this spring to mark walleye and northern pike. A total of 9 adult walleye were captured and given an identifiable fin clip during this survey. Nets were then moved to other locations of the lake and fished for 3 days and another 15 adult walleye were captured, 8 of these fish (53.3%) had the mark given during the "marking" survey. This data estimates the walleye population in Lake Ellwood to be approximately 22 fish (0.17/acre).

The few walleyes in Lake Ellwood are of very nice size, with just over 95% of the fish captured being ≥ 20.0 inches in length.

We are not sure how these walleyes got to be in Lake Ellwood, but they are not naturally reproducing and provide little fishing potential.

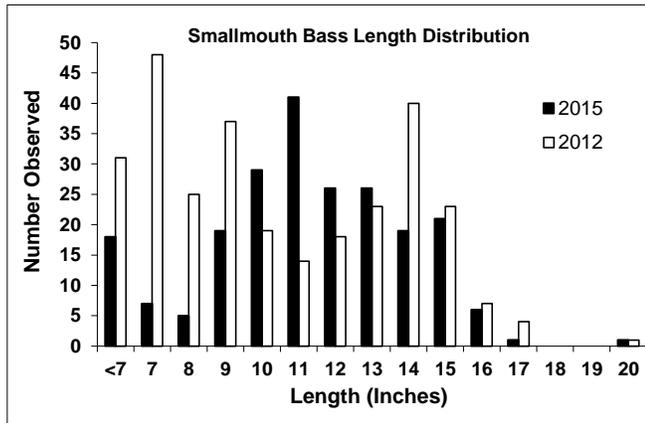
* Note: Adult walleye are defined as all sexually mature fish and all unknown sex pike ≥ 15 inches long.

Smallmouth Bass

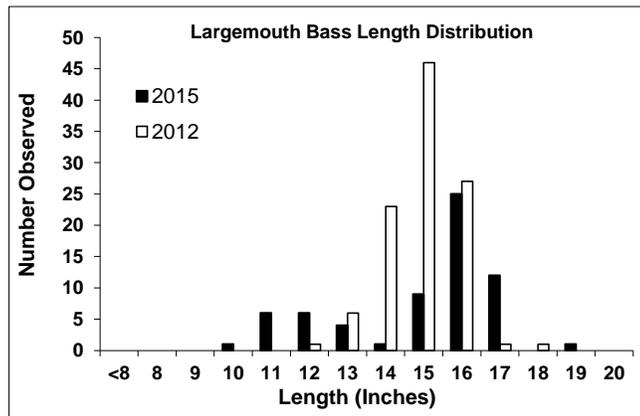


A total of 5 electrofishing surveys were conducted from 5/5 to 6/3 this year to estimate the smallmouth bass population. The data from these surveys estimate the adult (≥ 8.0 inches) smallmouth bass population to be approximately 420 fish (3.18/acre). This suggests that the population has decreased approximately 28% since 2012 when the population was estimated at 4.41 adults/acre.

Every smallmouth bass captured, a total of 219 different fish, was measured to assess size structure. The size structure of the population was quite similar to the population 3 years ago with approximately 24% and 4% of the adult population being ≥ 14.0 and 16.0 inches respectively. The biggest difference between this years size structure and the one measured in 2012 is a decline in the number of fish < 10 inches. The size structure of this population is considered poor.



* Note: Adult bass are defined as all bass ≥ 8 inches long.



* Note: Adult bass are defined as all bass ≥ 8 inches long.

Largemouth Bass



The largemouth bass population was assessed during the same surveys conducted for smallmouth bass. After analyzing the data the current largemouth bass population is estimated at approximately 127 adults (0.96/acre). This suggests a major reduction (58%) since 2012, when the largemouth population was estimated at approximately 2.31 adults/acre

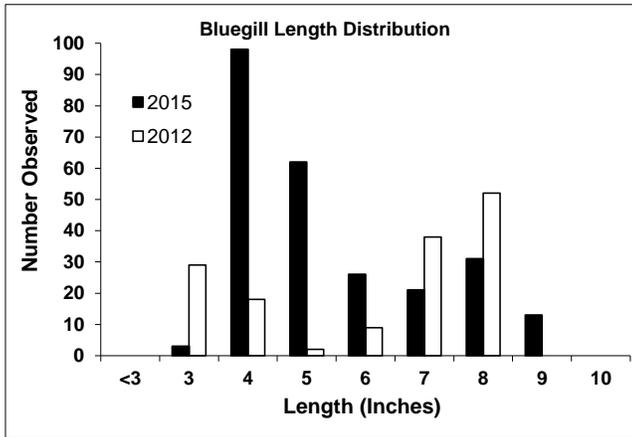
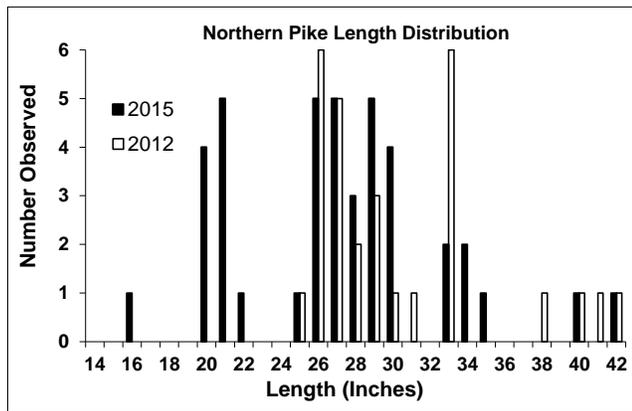
During 2012 we captured a total of 105 different largemouth, none of which were less than 12.8 inches in length, with the majority (91.4%) being between 14.0 and 16.9 inches. This year we captured and measured 65 different largemouth. Only 53.8% of the fish were between 14.0 and 16.9 inches. The majority of the change is from fish growing and surpassing 17.0 inches, but also 11.8% of the catch in 2015 was ≤ 12.0 inches, suggesting that natural recruitment is on the rise.

Northern Pike



Northern Pike were the main species targeted during our spring fyke net survey of Lake Ellwood. Just like walleyes the first two days were spent capturing and giving adult northern pike a identifiable mark. The last 3 days of netting were used to capture pike and use the ratio of new to marked fish to estimate the abundance of northern pike. The data collected this year estimates the adult population to be approximately 46 fish, up slightly from the 2012 estimate of 41 fish.

During the 2012 survey the smallest male and female pike were 25.9 and 33.0 inches respectively. This year male and female pike were measured as small as 15.9 and 21.3 inches respectively. Most of these small fish are likely the product of stocking events that took place the last few years, but there also may be an increase in natural reproduction of northern pike in Lake Ellwood.



Bluegill



Just like we did in 2012, panfish were sampled using fyke nets over a 4-day period in June. During 2012 we captured a total of 185 panfish, but this year, with the same amount of effort we captured 323 panfish. That is an increase in abundance by nearly 75%. Bluegill abundance has increased approximately 69% from 9.9 fish/net-lift to 16.7 fish/net-lift over the past 3 years.

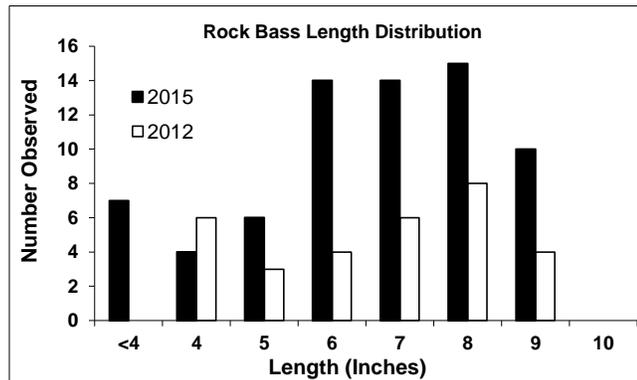
The size structure has changed from an "unhealthy" size structure (with missing year classes and more large fish than small fish) to a size structure consisting of lots of 1 and 2 year old fish which appear to be growing quite fast.

Rock Bass



Rock bass abundance has also increased substantially over the past 3 years from a catch rate of 2.07 fish/net-lift to 4.5 fish/net-lift.

The current rock bass size structure is very similar to 3 years ago with approximately 56% and 14% of the fish being \geq 7.0 and 9.0 inches respectively.



Other Species

Juvenile yellow perch are very abundant in Lake Ellwood, but are quite rare as adults. Pumpkinseed are present but in extremely low numbers. White sucker are fairly abundant, however, they are extremely rare below 17 inches, suggesting that white sucker natural reproduction may not be high enough to sustain their population.

This report is interim only; data and findings should not be considered final.
For answers to questions about fisheries management activities and plans for Lake Ellwood contact:

Greg Matzke, Fisheries Biologist
Wisconsin Department of Natural Resources
(715) 528-4400 Ext: 122 Email: Gregory.Matzke@Wisconsin.gov