



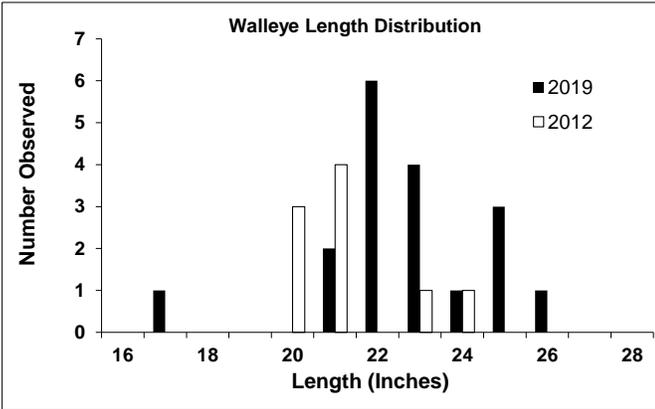
**WISCONSIN DNR
FISHERIES INFORMATION SHEET**

LAKE: Lake Ellwood

COUNTY: FLORENCE

YEAR: 2019

The Wisconsin Department of Natural Resources conducted a comprehensive survey of Lake Ellwood, Florence County, to better understand the cause of the fishery collapse documented in 2012. This summary of our 2019 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.



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

Walleye



Fyke nets were used from 4/26 to 5/1 this spring to assess the walleye and northern pike populations in Lake Ellwood. The data obtained from this survey estimates the adult 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 94% of the fish captured being ≥ 20 inches in length. In 2012, the 9 fish caught ranged from 20.0 to 24.9 inches.

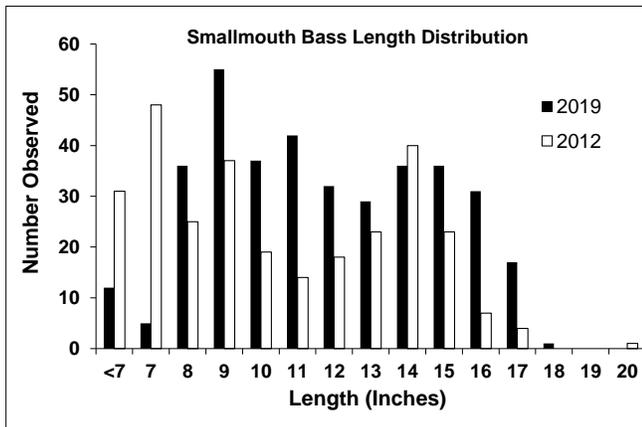
We are not sure how these walleye came to be in Lake Ellwood, but they are not naturally reproducing, and due to their low abundance they provide little fishing potential.

Smallmouth Bass



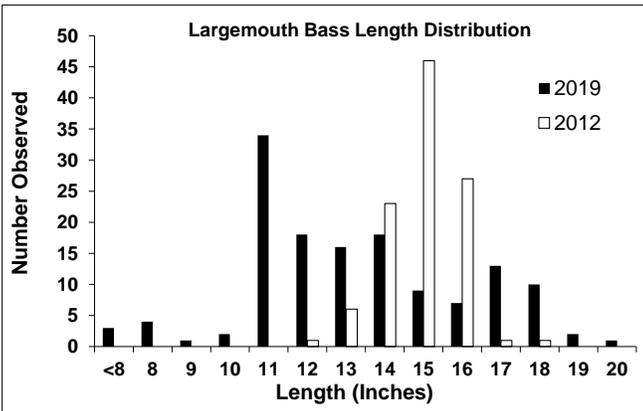
Smallmouth bass were assessed during early spring fyke netting and 6 electrofishing surveys conducted from 5/13 to 6/6 this year to estimate the abundance of the smallmouth bass population. The data from these surveys estimate the adult (≥ 8 inches) smallmouth bass population to be approximately 642 fish (4.86/acre). This suggests that the population has increased approximately 10% since 2012 when the population was estimated at 4.41 adults/acre.

Every smallmouth bass captured, a total of 369 different fish, was measured to assess size structure. The size structure of the population has improved since 2012, when approximately 29% and 4.6% of the adult population was ≥ 14 and 16 inches respectively, to the current size structure of 33.9% and 13.7% of the population being larger than the same size cut offs. While size structure has increased, it is still considered poor when compared to the area average.



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

Largemouth Bass



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

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 208 adults (1.6/acre). This suggests a reduction in abundance of 32% since 2012, when the largemouth population was estimated at approximately 2.3 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 138 different largemouth, with 56.5% of the fish being < 14 inches.

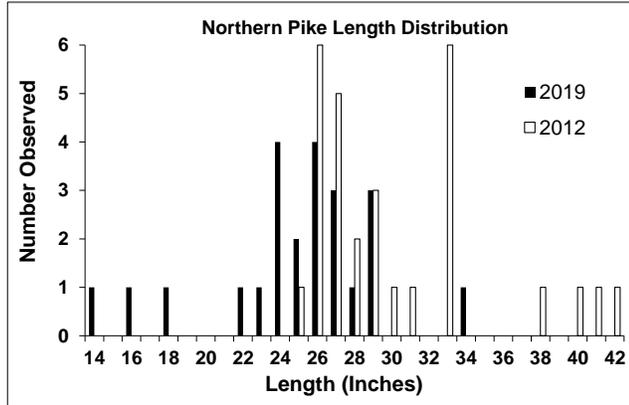
The drastic change in size structure was due to many years of failed natural recruitment prior to 2012. The problems facing largemouth recruitment seem to have been rectified, with the 2019 surveys showing that natural recruitment has been reestablished, and this population is no longer threatened.

Northern Pike



Northern Pike were the main species targeted during our spring fyke net survey of Lake Ellwood. The data collected this year estimates the adult population to be approximately 38 fish, down slightly from the 2012 estimate of 41 fish. The northern pike population in Lake Ellwood is considered to be of very low abundance.

Prior to the 2012 survey there were many years of failed natural recruitment of northern pike, creating an artificially high size structure. Since 2012 there has been a limited amount of successful natural recruitment, and the population is beginning to rebuild itself. While natural recruitment has increased, it appears that most of these smaller fish present in the current population are the product of small stocking events that took place the last few years. Further investigation is needed to determine whether stocking of northern pike is still necessary in Lake Ellwood.



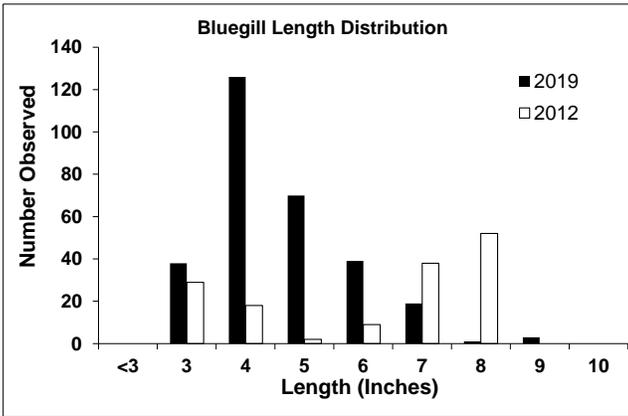
* Note: Adult northern pike are defined as all sexually mature fish and all unknown sex pike ≥ 12 inches long.

Bluegill



The 2012 survey of Lake Ellwood suggested that bluegill abundance had decreased approximately 65% since 2002. During June of 2019 we conducted another panfish netting survey, estimating that bluegill abundance has increased 87% from 9.9 fish/net-night in 2012 to the current relative abundance of 18.5 fish/net-night. Since 2012 natural recruitment of bluegill has been very high, and this population should continue to grow through time.

The size structure of the bluegill population has changed from an "unhealthy" size structure (with missing year classes and more large fish than small fish) to a size structure consisting of mainly young fish which are growing quite fast.

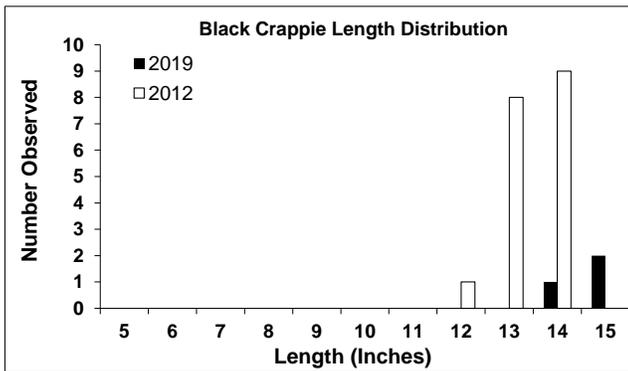
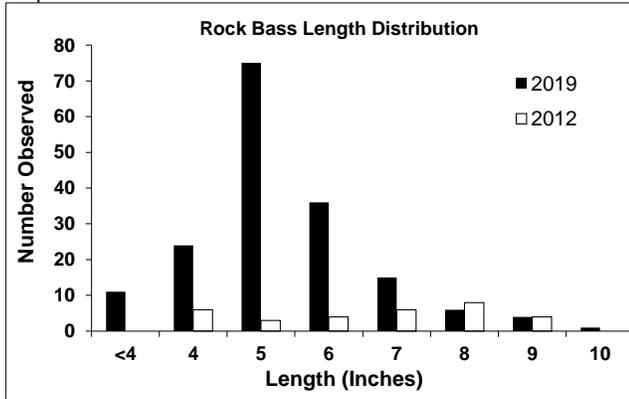


Rock Bass



Rock bass abundance has also increased substantially over the past 7 years from a catch rate of 2.1 fish/net-night to 10.8 fish/net-night.

The current rock bass size structure shows that approximately 16.1% and 3.1% of fish are ≥ 7 inches and ≥ 9 inches.



Black Crappie



Black crappie abundance is extremely low in Lake Ellwood. In 2012, 18 fish were captured (0.6 fish/net-night), this year we only captured 3 fish (0.1 fish/net-night). Unlike many other species in Lake Ellwood, it does not appear that there has been substantial natural recruitment in recent years.

Size structure is artificially high and not sustainable.

Other Species

Yellow perch were found at a low abundance during the early spring netting survey. 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. Pumpkinseed were present during the 2012 survey, but were not observed during the 2019 survey.

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:

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