



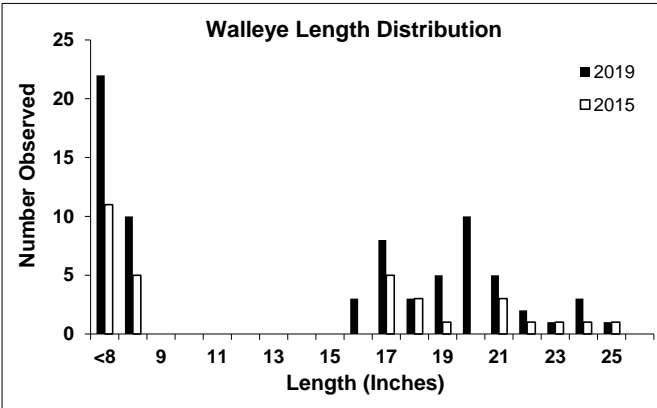
**WISCONSIN DNR
FISHERIES INFORMATION SHEET**

LAKE: Cosgrove Lake

COUNTY: FLORENCE

YEAR: 2019

The Wisconsin Department of Natural Resources conducted a comprehensive survey of the Cosgrove Chain of Lakes (Cosgrove Lake), Florence County, to analyze the health of its fishery. Cosgrove Lake is located approximately 5 miles east of Florence, just south of US HWY 2. Cosgrove Lake covers 91 acres and achieves a maximum depth of 30 feet.



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

Walleye



Fyke nets were set during early spring for 8 days on Cosgrove Lake to estimate the abundance of adult walleye. The data gathered from this mark-recapture survey estimated the adult walleye population has increased to 0.7 adult fish/acre (62 fish) from 0.3 adult fish/acre (26 fish) estimated in 2015. Abundance of walleye is still low but seems to be improving under the current stocking plan. In 2018, 382 large fingerling walleye (7.5" avg) were stocked. It is estimated that 56 of these walleye (14.7%) survived over winter.

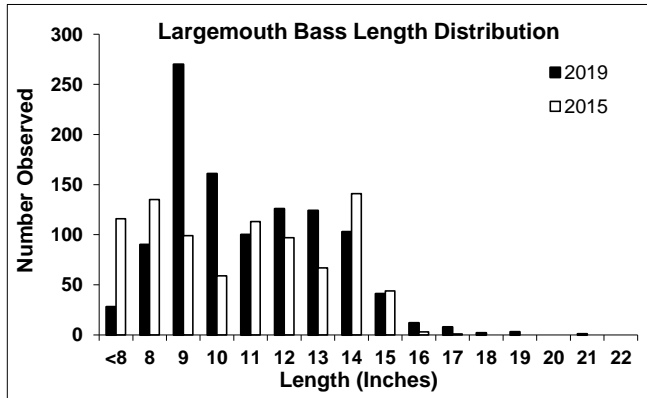
A total of 73 fish were measured during the spring surveys to assess size structure. After removing fish < 10 inches, all walleye were ≥ 15 inches and 53.7% were ≥ 20 inches. Although the abundance is low, the size structure of this population is very good.

Largemouth Bass



The largemouth bass population was assessed during early spring fyke netting and 4 electrofishing surveys. A total of 850 adult largemouth bass were marked during the netting and first 3 electrofishing surveys. During the recapture survey 349 adult fish were caught, 158 bearing the mark given during the marking survey. The data collected from these surveys estimated the adult largemouth population to be 20.6 fish/acre (1,871 fish). The population has increased since 2015 (19.0 fish/acre; 1,729 fish). This is an extremely high abundance of largemouth bass.

A total of 1,069 fish were measured to assess the size structure of this population. After removing fish < 8 inches, approximately 16.3% and 2.5% of the fish captured were ≥ 14 and ≥ 16 inches respectively, which is considered poor size structure. In 2015, size structure was similar with 24.9% and 0.5% in the same size categories. A more liberal regulation has been placed on bass in Cosgrove Lake. If anglers increase harvest on largemouth bass, the size structure will likely improve.



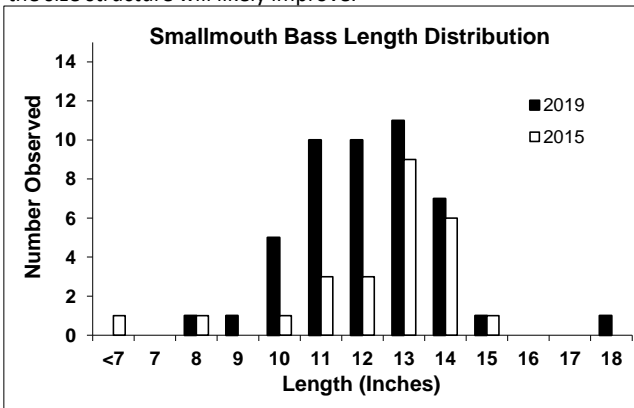
* Note: Adult bass are defined as all bass ≥ 8 inches long.

Smallmouth Bass



Smallmouth bass were assessed during the same surveys that we used to assess largemouth bass. A total of 31 fish were marked during the first 3 electrofishing surveys. During the recapture survey 21 adult smallmouth bass were captured, 5 of which had already been "marked". The data gathered from these surveys estimated the adult population to be 1.1 fish/acre (104 adult fish). The population in Cosgrove Lake appears to have doubled since the last survey in 2015, which estimated the population to be 0.5 fish/acre (48 adult fish).

A total of 47 different fish were measured to assess the size structure of this population. The Cosgrove Lake population has poor size structure with only 19.1% of fish sampled being ≥ 14 inches (29.2% in 2015) and only 1 fish captured was over 16 inches long.



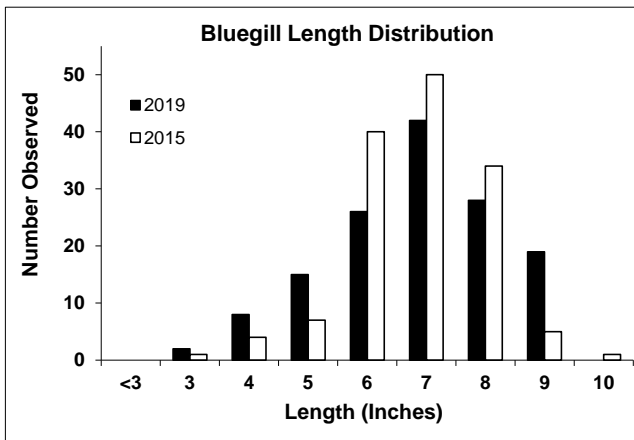
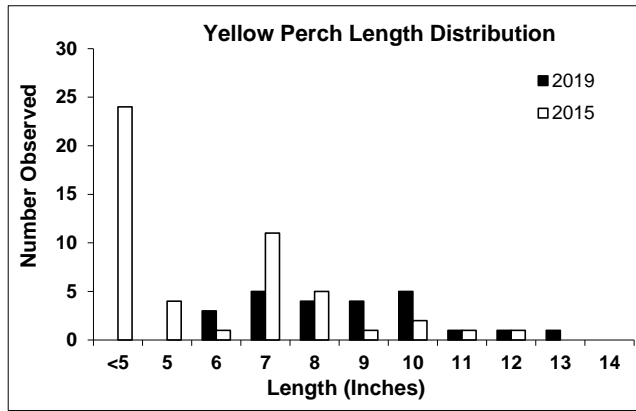
* Note: Adult bass are defined as all bass ≥ 8 inches long.

Yellow Perch



Yellow perch abundance was assessed during the early spring fyke netting survey. Relative abundance of yellow perch in Cosgrove Lake was measured at 0.9 fish/net-night, suggesting a decrease in abundance of yellow perch since 2015 when 1.9 fish/net-night were captured.

A total of 24 yellow perch were measured to assess size structure. 66.7% of the fish sampled were ≥ 8 inches. In 2015, once the juvenile fish were removed 38.5% of fish were ≥ 8 inches.



Bluegill



Bluegill relative abundance was assessed during a fyke net survey conducted in mid-June. Bluegill were the second most abundant panfish captured during this survey. However, bluegill relative abundance has decreased from 10.7 fish/net-night (2015) to 9.3 fish/net-night. Bluegill abundance in Cosgrove Lake is considered to be low, which is likely attributable to the high largemouth bass abundance.

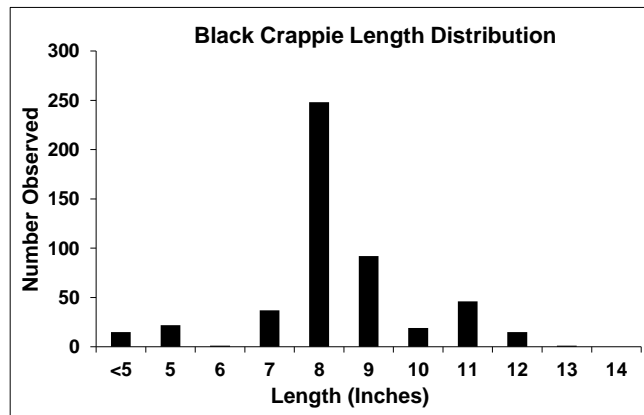
Bluegill size structure is considered very good with 63.6% and 13.6% of fish being ≥ 7 inches and ≥ 9 inches respectively. The size structure has improved since 2015 where 63.4% and 4.2% of fish being ≥ 7 inches and 9 inches respectively.

Black Crappie



Relative abundance of black crappie was measured at 8.9 fish/net-night during our early spring survey this year. This data shows a tremendous increase since 2015 when the relative abundance was 0.2 black crappie/net-night. Black crappie were captured at an abnormally high rate during the summer panfish assessment leading us to believe that black crappie are now the most abundant panfish in Cosgrove Lake.

A total of 496 fish were measured to assess the size structure of this population. The size structure is good with 87.5% and 16.8% of fish being ≥ 8 and ≥ 10 inches respectively. In 2015, of the 8 fish sampled, 4 were > 13 inches in length.



Other Species

Rock bass are a significant species in Cosgrove Lake. Their relative abundance during our summer panfish assessment has increased from 5.0 fish/net-night (2015) to 6.7 fish/net-night. Every rock bass captured during this survey was measured to assess the size structure of the population. Rock bass ≥ 7 inches increased from 38.7% (2015) to 62%. Northern pike were rare in 2015, however recruitment of northern pike has increased and they will be a much more significant component of this fishery going forward. White sucker are rare with a relative abundance of 0.1 fish/net-night during spring surveys.

This report is interim only; further analysis of the current and historical data will take place prior to a final report being produced. For answers to questions about fisheries management activities and plans for Cosgrove Lake contact:

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