



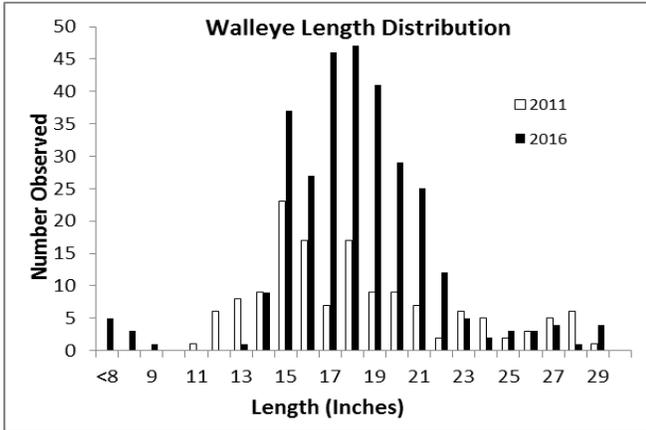
**WISCONSIN DNR  
FISHERIES INFORMATION SHEET**

**LAKE:** Patten Lake

**COUNTY:** Florence

**YEAR:** 2016

The Wisconsin Department of Natural Resources conducted a comprehensive survey of Patten Lake, Florence County, to analyze the health of its fishery. Patten Lake is located approximately 6 miles Southwest of Florence off of Hwy 101, with boat access to Patten Lake off of North Shore Rd. Patten Lake covers 255 acres and achieves a maximum depth of 52 feet.



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

**Walleye**



A mark-recapture survey was conducted to estimate the abundance of adult walleye in Patten Lake. Over a three day period in April a total of 305 different walleye were captured during fyke net and electrofishing surveys. Based on our survey data we estimate the adult walleye population in Patten Lake to be approximately 499 fish (1.96/acre), with a 95% confidence interval of 102 fish. At just under two adults per acre this population is considered to be of moderate abundance. However, the walleye population has improved greatly since the last survey, conducted in 2011, suggesting that the population has doubled over the past 5 years. This population should continue to grow in the future due to increased natural reproduction following a bullhead removal project completed in 2011.

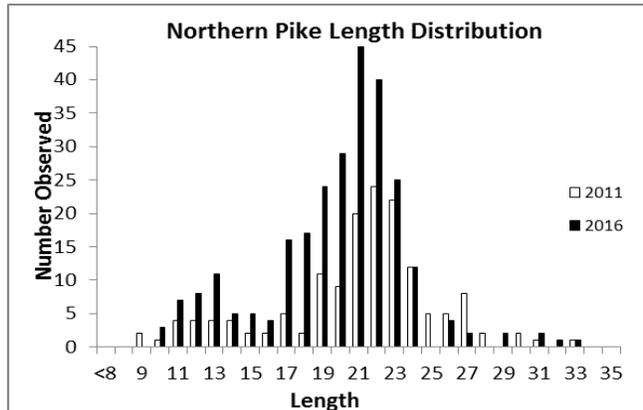
Every walleye captured was measured to assess the size structure of the population. Size structure of walleye in Patten Lake is very good with approximately 93% of the adult population being  $\geq 15$  inches and 28%  $\geq 20$  inches. The largest walleye captured during 2016 was 29.5 inches in length.

**Northern Pike**

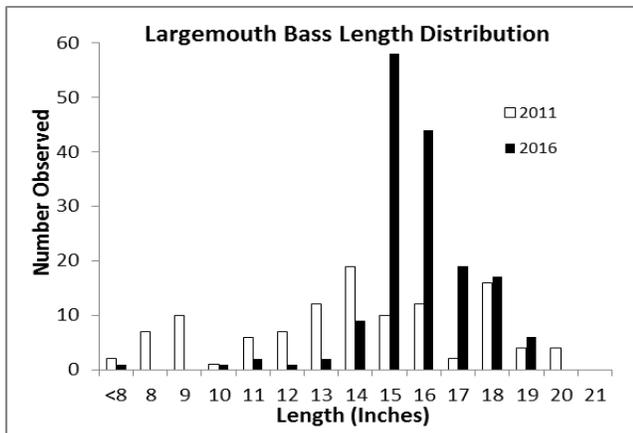


Northern Pike were captured and marked with an identifiable fin clip during the first two days of our spring fyke net survey. A second sample of northern pike were captured during netting and electrofishing surveys conducted between 4/20 and 6/15 to estimate the population of adult ( $\geq 12$  inches) northern pike. The data collected this year estimates the adult population to be approximately 938 fish (3.7/acre), with a 95% confidence interval of 435 fish. The current population is down approximately 45% from the 2011 population (6.7/acre).

Every Northern Pike captured during the 2016 survey was measured to assess size structure. The size structure of northern pike has decreased slightly since 2011. During 2016, approximately 57% of the northern pike greater than 14 inches were  $\geq 21$  inches and 2.6% were  $\geq 28$  inches, compared to 74% and 4.4% during 2011.



**Largemouth Bass**



\* Note: Adult bass are defined as all bass  $\geq 8$  inches long.

Largemouth bass were captured during spring fyke net surveys and 6 electrofishing surveys conducted between 4/20 and 6/2 this year to estimate the largemouth bass population ( $\geq 8.0$  inches). After analyzing the data the current largemouth bass population is estimated at approximately 337 fish (1.32/acre), with a 95% confidence interval of 111 fish. This suggests a slight increase (16%) since 2011, when the largemouth population was estimated at approximately 1.13 fish/acre.

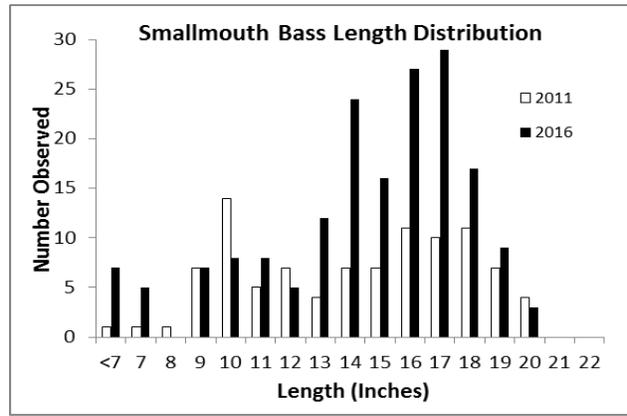
Every largemouth bass captured, was measured to assess size structure. The size structure of the largemouth bass population is still considered good, however, some changes have been observed since the 2011 survey. During 2016, approximately 95% of the fish greater than 8 inches were  $\geq 14$  inches, substantially higher than the 61%  $\geq 14$  inches in 2011. However, the percentage of fish  $\geq 18$  and 20 inches (currently 14% and 0% respectively) has decreased from the 2011 survey when approximately 22% and 4% of the catch was  $\geq 18$  and 20 inches.

**Smallmouth Bass**



The smallmouth bass population was assessed during the same surveys conducted for largemouth bass. The data from these surveys estimate the smallmouth bass population ( $\geq 8.0$  inches) to be approximately 320 fish (1.25/acre), with a 95% confidence interval of 106 fish. This suggests that the population has increased approximately 38% since 2011 when the population was estimated at 0.9 smallmouth bass/acre.

Every smallmouth bass captured, was measured to assess size structure. The size structure of the current population has not changed much in the past 5 years, and is still considered very good with approximately 74% of the fish greater than 7 inches being  $\geq 14.0$  inches and 34%  $\geq 17.0$  inches.



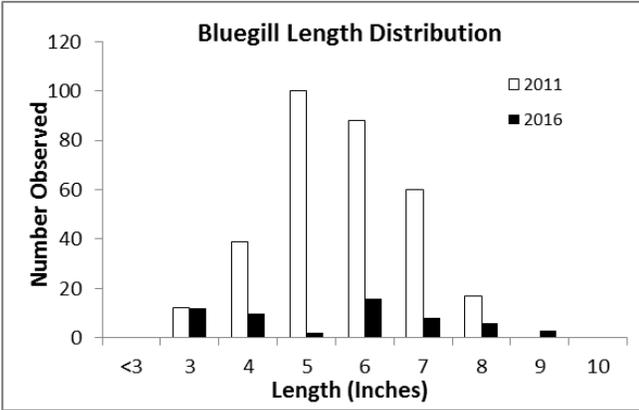
\* Note: Adult bass are defined as all bass  $\geq 8$  inches long.

**Bluegill**



As we did during 2011, summer spawning panfish were assessed using fyke nets from 6/14 to 6/15 during 2016. Bluegill abundance has decreased substantially over the past 5 years from 51.0 fish/net-night in 2011, to 7.1 fish/net-night in 2016

The size structure has increased in the past 5 years, with 58% of this years catch being  $\geq 6$  inches and 15.8%  $\geq 8$  inches, compared to 24% and 5.4% in 2011.

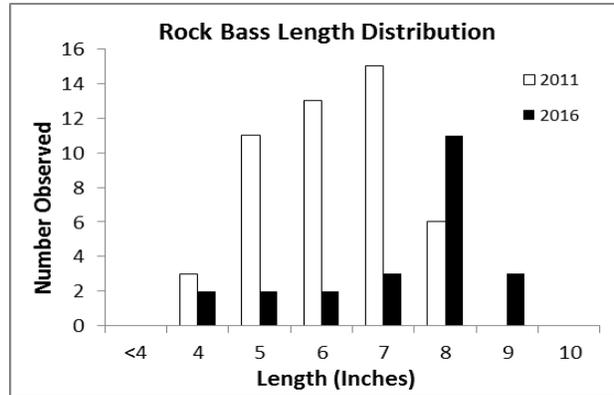


**Rock Bass**



Rock bass abundance has been quite stable over the past 5 years. Abundance of rock bass in 2016 was measured at 2.6 fish/net-night.

Rock bass size structure has increased from 44% of the fish sampled being  $\geq 7$  inches and 0%  $\geq 9$  inches during 2011, to 74% and 13% in 2016.

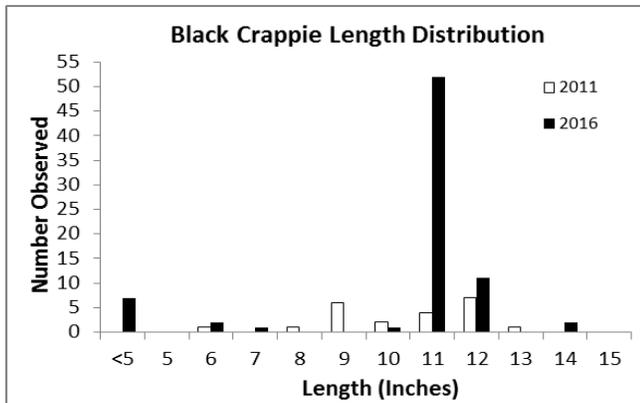


**Black Crappie**



Black crappie abundance was measured at 1.4 fish/net-night during 2016. While black crappie are still considered to be of low abundance, our data suggests that the population has grown over 3-fold since 2011.

The current Black Crappie size structure is very good with approximately 96% of the fish greater than 5 inches being  $\geq 8.0$  and 19%  $\geq 12.0$  inches.



**Other Species**

Yellow perch were captured in low numbers, however, recent fall surveys have shown high yellow perch reproduction and their abundance may increase in the future. Black bullhead abundance has decreased drastically from the most abundant fish species observed in 2011 (55.7/net-night) to a very low abundance of approximately 0.2 fish/net-night in 2016. White suckers are considered common. Very low numbers of brook trout and creek chub were captured in 2016.

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

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