



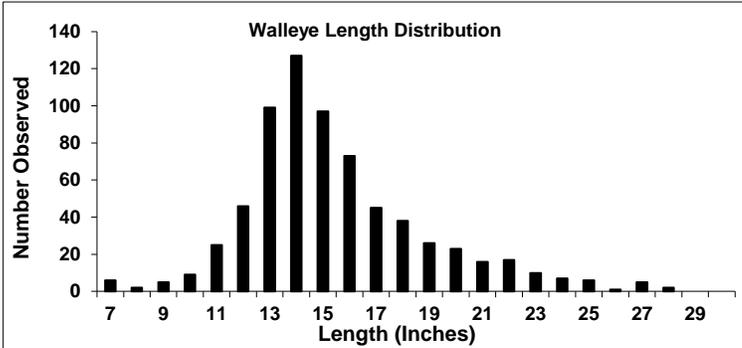
**WISCONSIN DNR
FISHERIES INFORMATION SHEET**

LAKE: BRULE RIVER FLOWAGE/PAINT POND

COUNTY: FLORENCE

YEAR: 2015

The Wisconsin Department of Natural Resources conducted a comprehensive survey of the Brule River Flowage/Paint Pond, Florence County. Fyke nets were set in early spring from 4/7-28 and again in late spring 5/26-29, along with three electrofishing surveys from 4/16-18 and three electrofishing surveys from 5/19-28, to assess game and panfish populations. The Brule River Flowage/Paint Pond is considered a WI-MI boundary water (from the Brule River downstream) and a state of Michigan water (north of the Brule River). This flowage is located a few miles north of Florence and is fed by the Brule and Paint Rivers. The entire flowage is approximately 550 acres and achieves a maximum depth of 64 feet.



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



Walleye

A mark-recapture survey of the adult walleye population was conducted from 4/8-4/19. During this survey a total of 440 different adult walleye were captured via netting and electrofishing and marked with a fin clip. On 4/18 the northern half of the flowage (including the navigable portions of both rivers) was electrofished and fyke nets were fished on 4/19 as the recapture portion of this survey. During recapture efforts a total of 209 adult walleye were captured, 57 of which (27.3%) bore the clip given during the marking survey. This data estimates the adult walleye population in this flowage to be approximately 1,548 adult fish (2.8/acre).

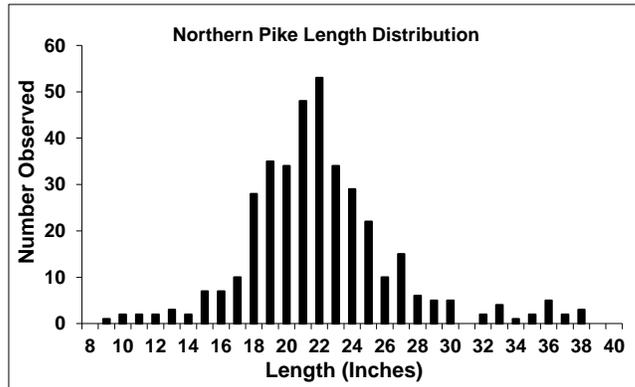
Walleye size structure in this flowage is good, with approximately 53% of the walleye captured being ≥ 15.0 inches and 13% ≥ 20.0 inches. The largest walleye captured was a 28.9-inch female.

Northern Pike

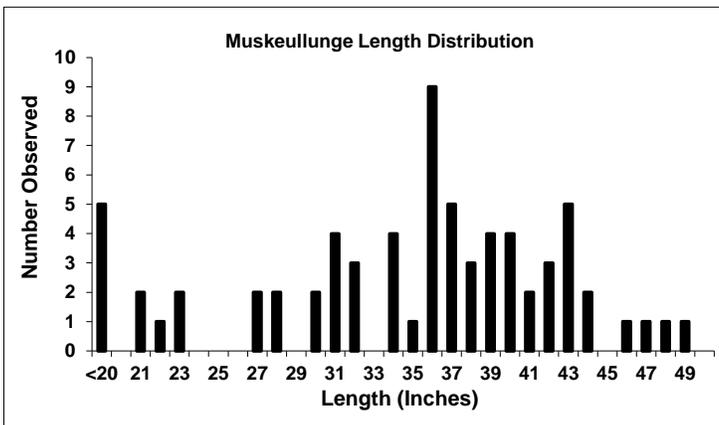


A mark-recapture survey was conducted to estimate the adult northern pike population in this flowage. During this survey we captured and measured 379 different northern pike. Results from this survey estimated the adult northern pike population to be approximately 622 fish (1.1/acre).

Size structure of northern pike is quite good in this flowage with 67% and 7% of the pike sampled being ≥ 21.0 and 30.0 inches, respectively. The largest pike captured, a 41.8" female was observed during muskellunge sampling.



* Note: Adult northern pike are defined as all sexable pike and pike of unknown sex ≥ 12 inches long.



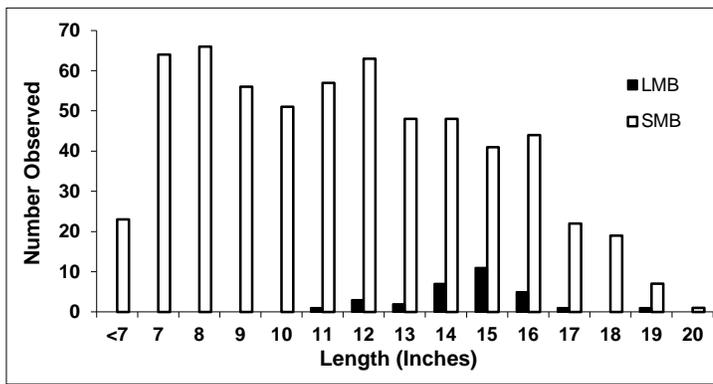
* Note: Adult muskellunge are defined as all sexable muskellunge and muskellunge of unknown sex ≥ 30 inches long.

Muskellunge



Muskellunge were captured during the walleye/northern pike and bass surveys along with a directed survey for muskellunge from 4/19-4/28. All adult muskellunge were marked with a fin clip as part of a two year assessment of the population. We captured 69 different muskellunge during our fyke netting and electro-fishing surveys, ranging from 8.9 to 49.2 inches in length. Muskellunge will be sampled again in 2016 to estimate the population size.

Muskellunge have been tagged with internal tags in this flowage going back to 2010. This data will allow us to better understand growth rates and longevity of muskellunge in this system. Here are a few examples that show the differences in growth rates between individual fish. A 23.3" fish of unknown sex in 2010 was captured in 2015 and measured 40.8 inches, while a 48.1" female captured in 2011 only grew 0.5 inches in 4 years, having been caught at a length of 48.6" this spring.



Smallmouth and Largemouth Bass

Smallmouth and largemouth bass populations were assessed via electrofishing on the nights of 5/19, 21 and 28. A total of 20.7 miles of shoreline was surveyed, covering a variety of habitat types within the flowage and river mouths.

Smallmouth bass were captured at a rate of 24.6 adults ($\geq 8"$) per mile while largemouth bass were captured at 1.1 adults per mile. A catch rate of nearly 25 adult smallmouth per mile is very high, and puts this flowage near the top for smallmouth abundance in this region of Wisconsin.

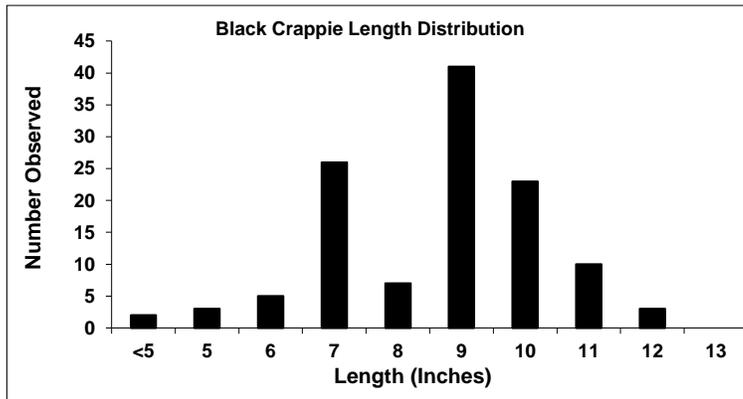
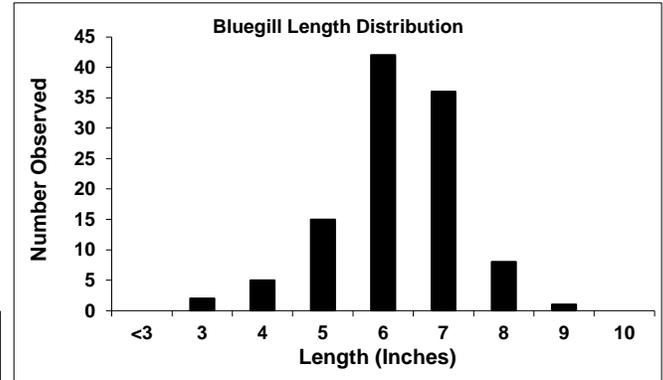
A total of 610 different smallmouth bass were measured to assess size structure. Size structure was quite good in this flowage with 30% of the fish captured being ≥ 14 inches. While largemouth are much less abundant, the size structure of their population is very good with 81% of the fish sampled being ≥ 14 inches.

Bluegill



Panfish were not captured in high numbers during any survey of this flowage, suggesting that all species of panfish are of low abundance. However, bluegill appear to be the most abundant panfish species, captured at a rate of 5.5 fish per net-night during our late spring assessment. This is a very low catch rate for bluegill in this region.

A total of 109 bluegill were measured during our late spring survey to assess the size structure of the population. The size structure of bluegill is good, with approximately 80% and 8% of fish measured being ≥ 6 and 8 inches, respectively.



Black Crappie



Black crappie were captured at a rate of 0.3 and 0.2 fish/net-night during our first two spring netting surveys. This data suggests that black crappie are also not very abundant in this flowage.

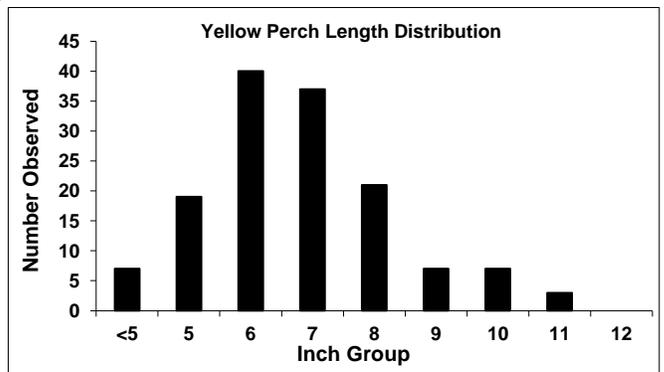
A total of 120 fish were measured to assess size structure of the population. The size structure of black crappie is good, with 64% of the fish sampled being ≥ 9 inches.

Yellow Perch



Yellow perch were the most abundant panfish captured during the early spring fyke net survey. However, at a catch rate of 0.6 fish/net-night, this population is also low in abundance.

A total of 141 yellow perch were measured to assess size structure of the population. Size structure of yellow perch was fair-to-good, with 27% of the fish being ≥ 8 inches in length.



Other Panfish

Pumpkinseed and rock bass were also captured in low numbers during our spring surveys, suggesting relatively low abundance levels similar to black crappie and yellow perch. However, rock bass may be at a higher abundance than what is suggested by the spring netting surveys since a sizeable population was observed during electrofishing surveys of the southern part of the flowage. The southern part of the flowage was sampled less intensively during our netting surveys because the topography was not compatible with setting fyke nets.

For answers to questions about fisheries management activities and plans for this Flowage contact:

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

Jennifer Johnson, Fisheries Biologist
 Michigan Department of Natural Resources
 Email: JohnsonJ17@Michigan.gov