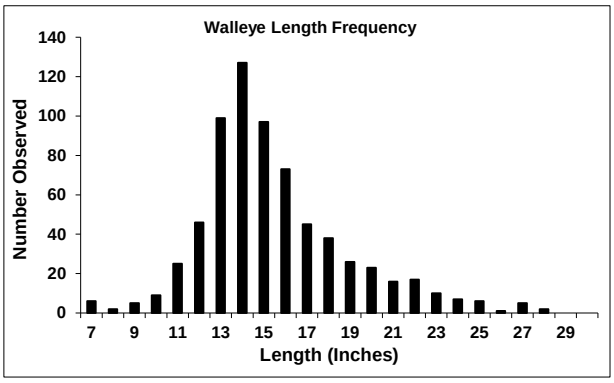
WISCONSIN DNR
FISHERIES INFORMATION SHEET

LAKE: Brule River Flowage/Paint Pond **COUNTY:** Florence **YEAR:** 2015-16

The Wisconsin Department of Natural Resources conducted a comprehensive survey of the Brule River Flowage/Paint Pond, Florence County, to assess game and panfish populations. This flowage is considered a WI-MI boundary water (from the Brule River downstream) and a state of Michigan water (north of the Brule River). The flowage is located a few miles north of Florence and is fed by the Brule and Paint Rivers. The entire flowage covers approximately 550 acres and achieves a maximum depth of 64 feet.



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

Walleye

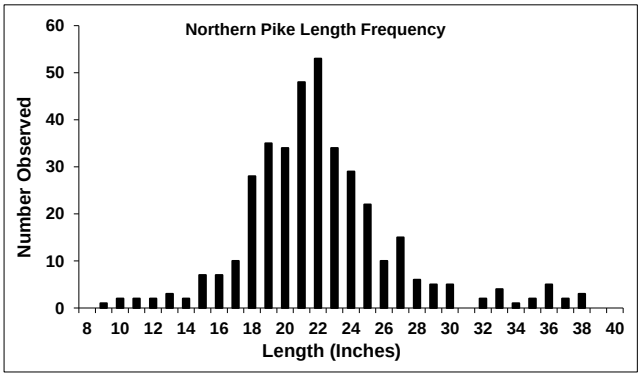
A mark-recapture survey of the adult walleye population was conducted from 4/8-4/19/2015. During this survey a total of 440 different adult walleye were captured via netting and electrofishing surveys and marked with a fin clip. On 4/18 the northern half of the flowage (including the navigable portions 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. We used these data to estimate the adult walleye population in this flowage to be approximately 1,548 adult fish (2.8/acre). At just under 3 adults per acre this population is considered to be of moderate abundance.

Walleye size structure in this flowage is considered 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.

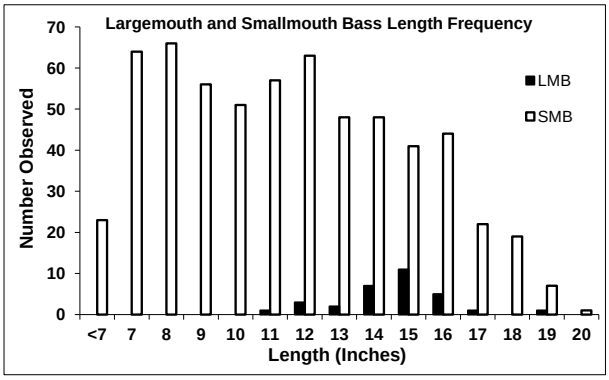
Northern Pike

A mark-recapture survey was conducted to estimate the adult northern pike population in this flowage in the spring of 2015. 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). At just over 1 adult per acre this population is considered to be of low abundance.

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 observed, a 41.8-inch female, was captured during muskellunge sampling.



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



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

Smallmouth and Largemouth Bass

Smallmouth and largemouth bass populations were assessed via electrofishing on three nights between 5/19 and 5/28/2015. A total of 20.7 miles of shoreline was surveyed, covering a variety of habitat types within the flowage, including the river mouths.

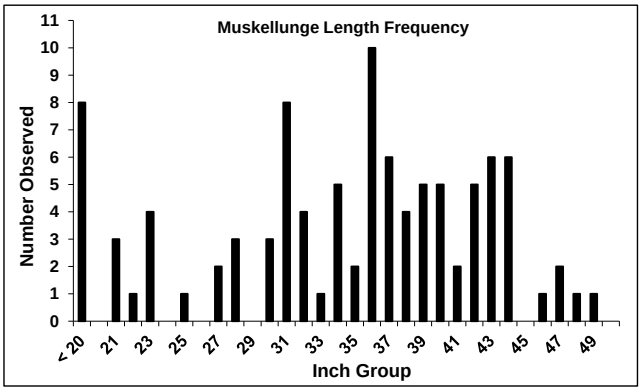
Smallmouth bass were captured at a rate of 24.6 adults (≥ 8") per mile while largemouth bass were captured at 1.1 adults per mile. A catch rate of nearly 25 adult smallmouth per mile is very high, and puts this flowage near the top for smallmouth abundance in this region of Wisconsin.

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.

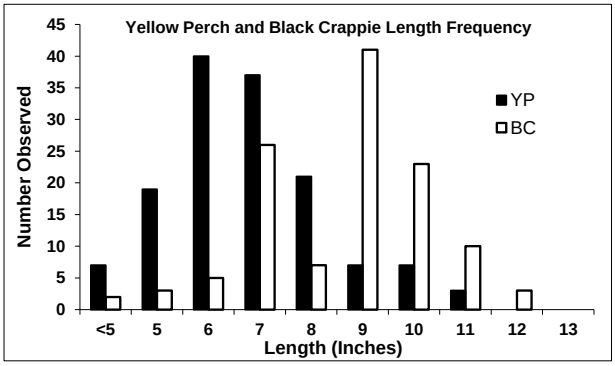
Muskellunge 

It is a two year process to estimate the abundance of muskellunge in a given waterbody. During 2015 a total of 81 different muskellunge were captured, 63 of which were ≥ 30 inches and marked with an identifiable fin clip and internal tag. A second sample of 29 muskellunge was captured during 2016, 22 of these fish were considered to be ≥ 30 inches during 2015. A total of 10 fish captured during 2016 bore the mark given during the 2015 surveys. We used these data to estimate the adult (≥ 30 inches) population to be approximately 132 fish (0.24/acre), which is considered a moderate density of muskellunge.

Every individual muskellunge (99 fish) was measured and the length at initial capture was used to assess the size structure of the population. After excluding the fish captured < 20 inches, 31.9% of the muskellunge captured were ≥ 40 inches, and 5.5% were ≥ 45 inches, with the largest fish sampled being 49.2 inches long. The size structure of this population is considered good, although it is slightly below average when compared to other muskellunge populations in Florence and Forest Counties.



* Note: Adult muskellunge are defined as all fish ≥ 30 inches long.



Yellow Perch  **and Black Crappie** 

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 low in abundance.

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

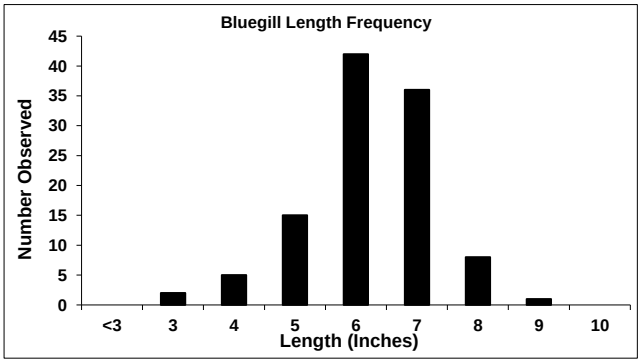
Black crappie were captured at a rate of 0.3 and 0.2 fish/net-night during the early spring and muskellunge netting surveys. These data suggests that black crappie are also of low abundance in this flowage.

A total of 120 black crappie were measured to assess the size structure of the population. The size structure of black crappie is good, with 64% of the fish sampled being ≥ 9 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 population of bluegill is considered to be of very low abundance when compared to other populations 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 approximatey 80% and 8% of the fish measured being ≥ 6 and 8 inches, respectively.



Other Species

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 conducive for a netting survey. At this time, we do not recommend any changes to public access, fishing regulations or aquatic plant management.

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

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