



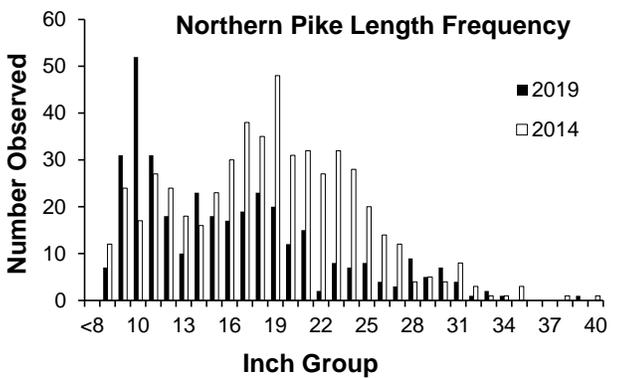
**WISCONSIN DNR
FISHERIES INFORMATION SHEET**

LAKE: KINGSFORD FLOWAGE and COWBOY LAKE

COUNTY: FLORENCE

YEAR: 2019

The Wisconsin Department of Natural Resources, completed a spring survey of the Kingsford Flowage and Cowboy Lake, Florence County. Fyke nets were set in early spring from 4/11-24 along with a single night of electrofishing on 6/3 to assess game and panfish populations. The Kingsford Flowage is located immediately downstream of Twin Falls Flowage, and is fed by water coming from Twin Falls Flowage and the Pine River. The Kingsford Flowage is listed at 491 acres and achieves a maximum depth of 32 feet. Cowboy Lake is connected to Kingsford Flowage and is considered a Michigan water, unlike Kingsford Flowage which is considered a boundary water.



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

Northern Pike



A mark-recapture survey was conducted to estimate the adult northern pike population in the Kingsford Flowage. During this survey we captured and measured 358 different northern pike (237 adults). The data obtained from this survey estimates the adult northern pike population at approximately 782 adults (1.6/acre). This is substantially lower than the 2014 population estimate of 1,611 adult northern pike (3.3/acre).

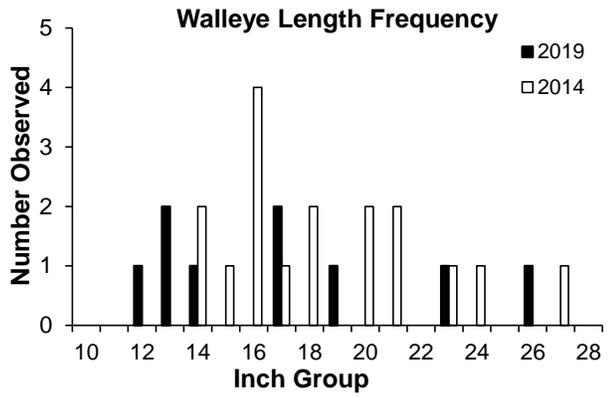
Size structure of northern pike is still good in Kingsford Flowage with 36.8% (47.0% in 2014) and 7.7% (5.3% in 2014) of the pike sampled being ≥ 21 and 30 inches respectively. The largest pike captured during our survey was a 39.1-inch female which weighed 15.8 pounds.

Walleye

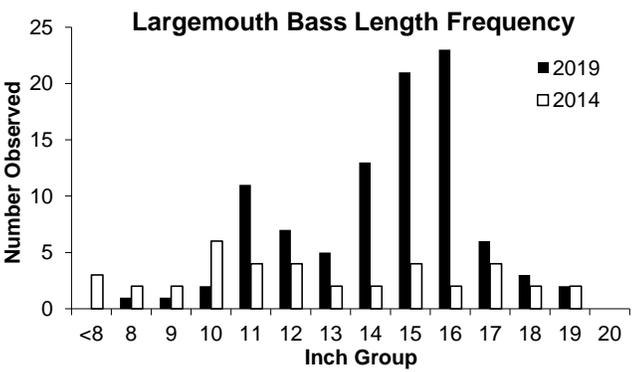


A mark-recapture survey of Kingsford Flowage's adult walleye population was not possible due to low catch rate during the spring survey (0.1 fish/ net-night), which has decreased since 2014 (0.2 fish/net-night). This data suggests a low population of walleye, however, it is entirely possible that the majority of the walleye population may have already migrated up the Pine River or below Twin Falls Dam, which could not be sampled with our gear due to high flow rates.

The size structure of this small sample of walleye was good with approximately 55.6% (88.2% in 2014) of the walleye captured being ≥ 15.0 (the legal length limit). The largest walleye captured was 26.8 inches.



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



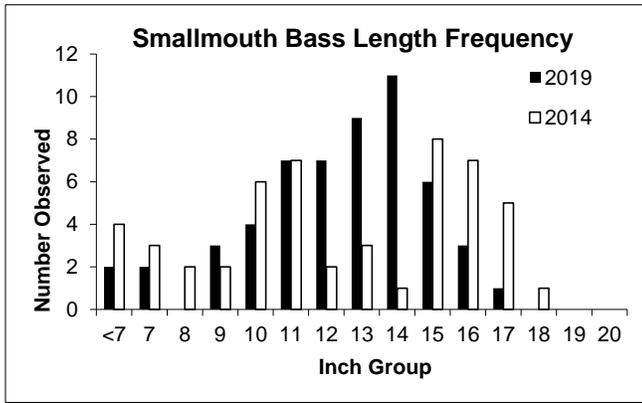
* Note: Adult bass are defined as all bass ≥ 8 inches long.

Largemouth Bass



The largemouth bass population was assessed via electrofishing on the night of June 3rd. A total of 4.28 miles of shoreline was surveyed covering a variety of habitat types within Kingsford Flowage and Cowboy Lake. Largemouth bass relative abundance increased to 10.7 adults ($\geq 8"$) per mile from 3.9 per mile in 2014. Largemouth bass were found mostly in Cowboy Lake and in the downstream portions of the flowage.

A total of 95 largemouth bass were measured to assess size structure. Size structure of this population is very good with 71.6% and 35.8% of fish captured being ≥ 14 and ≥ 16 inches. In 2014, only 44.4% and 27.8% of fish captured were ≥ 14 and ≥ 16 inches.



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

Smallmouth Bass



The smallmouth bass population was assessed during the same survey used to assess largemouth bass. Relative abundance of adult smallmouth bass was measured at 12.6 per mile suggesting an increase in abundance from 2014 (7.6 adults/mile). Smallmouth bass were primarily found in the upstream portions of the flowage.

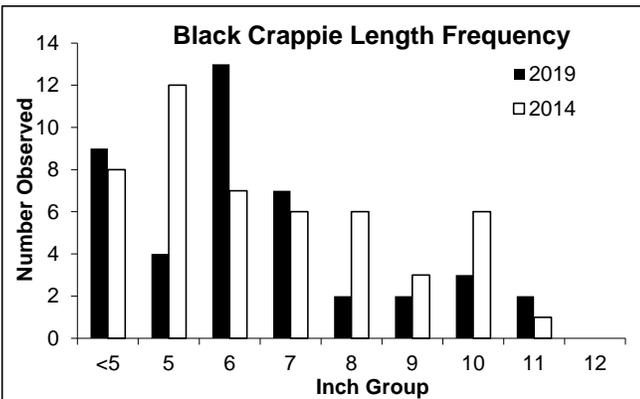
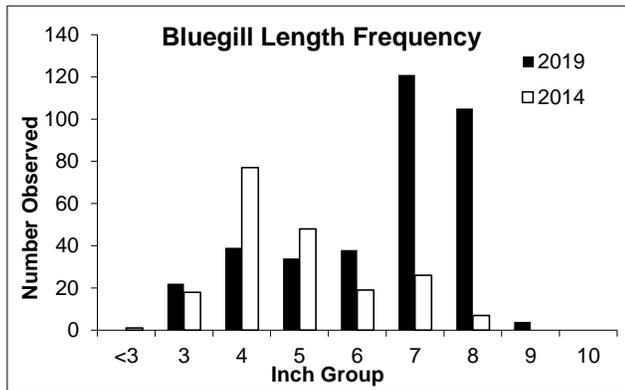
The size structure of the smallmouth bass population is slightly below average with 39.6% and 7.5% of fish sampled being \geq 14 and \geq 16 inches. In 2014, 46.8% and 27.7% of fish sampled were \geq 14 and \geq 16 inches, which was equal to the area average.

Bluegill



Bluegill was the most abundant panfish species captured during our early spring assessment of Kingsford Flowage, with a catch rate of 3.8 fish per net-night. This is a low catch rate for bluegill in this region, which suggests a low abundance of this species

A total of 363 bluegill were measured during the spring survey to assess the size structure of the population. The size structure of bluegill is very good, with approximately 73.8% and 30% of fish measured being \geq 6 and 8 inches respectively.



Black Crappie



Black crappie were the second most abundant panfish species during our early spring assessment (0.5 fish/net-lift). This data suggests that black crappie are also not very abundant in Kingsford Flowage.

All black crappie captured, a total of 42 fish, were measured to assess size structure. The size structure of black crappie in the Kingsford Flowage is poor. Size structure decreased slightly from 17.1% (2014) \geq 10.0 inches, to 15.2% this year.

Other Species

No muskellunge were captured during this survey. There appears to be a very low population of muskellunge in Kingsford Flowage, however it would not be considered a "fishable" population. The Wisconsin DNR began stocking muskellunge in this flowage in 2014, as these fish mature a significant population should develop.

Other species caught during the surveys were pumpkinseed, yellow perch, rock bass, yellow bullhead, black bullhead, and golden shiner. These species were caught at a very low abundance compared to the species described above.

Comments

Flowages like Kingsford Flowage are tough to properly assess due to early ice out, water temperatures controlled by inflow and the ability of fish to migrate to areas that are inaccessible due to high flows and shallow water.

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

Greg Matzke, Fisheries Biologist
 Wisconsin Department of Natural Resources
 (715) 528-4400 Ext: 5 Email: Gregory.Matzke@Wisconsin.gov
 Drafted: October 3rd, 2019
 By: Anne Schmitz

Jennifer Johnson, Fisheries Biologist
 Michigan Department of Natural Resources
 (906) 563-9247 Ext: 113 Email: JohnsonJ17@Michigan.gov