



**WISCONSIN DNR
FISHERIES INFORMATION SHEET**

LAKE: MUSKELLUNGE

COUNTY: ONEIDA

YEAR: 2011

The Department of Natural Resources surveyed Muskellunge Lake, Oneida County, from April 22 through June 14, 2011, to determine the health of its fishery. The primary objective of the survey was to estimate the abundance of the lake's walleye and muskellunge populations. Muskellunge Lake is a spring-fed lake with predominantly sand substrate and a low-density walleye population. It has a surface area of 284 acres, 4.0 miles of shoreline and a maximum depth of 24 feet.

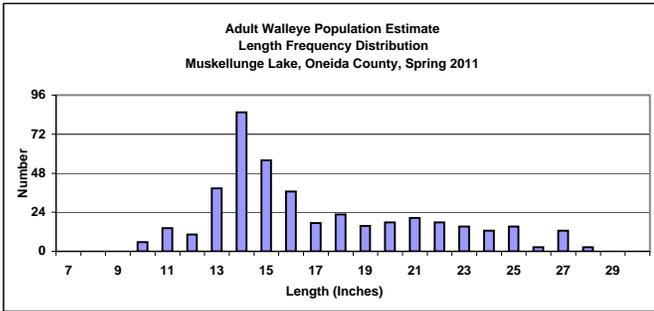


Figure 1. Length frequency distribution of 421 adult* walleye estimated to be in Muskellunge Lake, Oneida County, based on a spring 2011 survey.

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

Walleye

We conducted a mark-recapture survey of Muskellunge Lake's adult* walleye population from April 22-27, 2011. We captured and marked (fin clipped) 190 adult walleye in six days of fyke netting. A crew sampled Muskellunge Lake with an electro-fishing boat on April 27th and captured 82 adult walleye. Approximately 45% (37 of 82) of those walleye bore the fin clip given during fyke netting.

Based on those results, we estimated that Muskellunge Lake is home to 421 adult walleye (1.5/acre). Nearly 84% (351 of 421) of adult walleye were 14 inches long or larger. The largest walleye we captured was a 28.7-inch female.

Smallmouth Bass

We were unable to capture and mark a sufficient number of smallmouth bass from Muskellunge Lake to estimate the population size. We captured 31 smallmouth bass, 8 inches or larger, in all sampling conducted through June 14th. Thirty-two percent (10 of 31) of those smallmouth were 14 inches long or larger. The largest smallmouth we captured was 17.7 inches long.

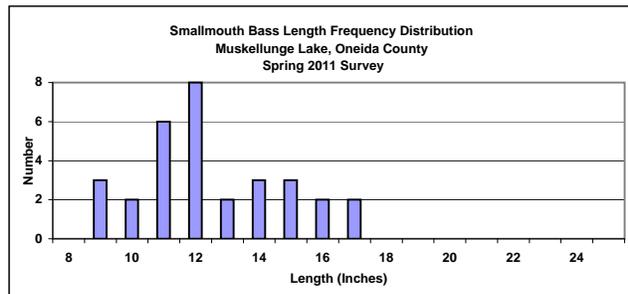


Figure 2. Length frequency distribution of 31 smallmouth bass \geq 8" captured during a fisheries survey of Muskellunge Lake, Oneida County, in spring 2011 .

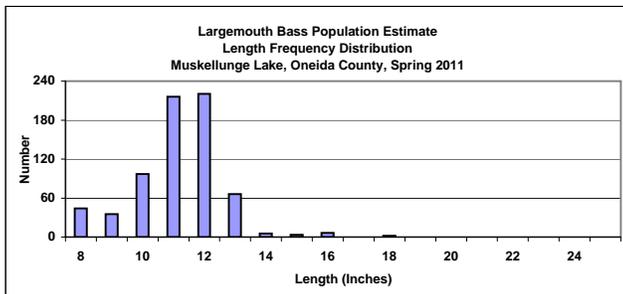


Figure 3. Length frequency distribution of 695 largemouth bass \geq 8" estimated to be in Muskellunge Lake, Oneida County, based on a spring 2011 survey.

* Note: All values given above are for largemouth bass 8 inches long or larger.

Largemouth Bass

We also completed a mark-recapture survey of Muskellunge Lake's largemouth bass population* from April 22 through June 14, 2011. We captured and marked (fin clipped) 169 largemouth bass through June 7th. An electro-fishing crew captured 34 largemouth bass on June 14th. Nearly 21% (7 of 34) of those largemouth had been marked in previous sampling.

From those results, we estimated that Muskellunge Lake was home to 695 largemouth bass, 8-inches or larger, (2.4/acre). Only 17 of those largemouth were 14 inches long or larger. The biggest largemouth bass we captured was 18.7 inches long.

Northern Pike

We captured 144 adult* northern pike in fyke nets fished in Muskellunge Lake from April 22-27, 2011. Five of those adult northern pike were 26 inches long or larger. The largest northern pike we captured was a 32.2-inch female.

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

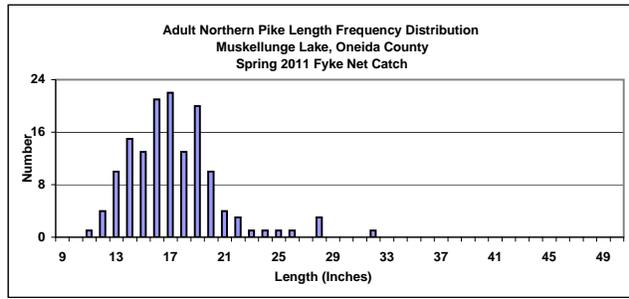


Figure 4. Length frequency distribution of 144 adult* northern pike captured in fyke nets during a fisheries survey of Muskellunge Lake, Oneida County, in spring 2011.

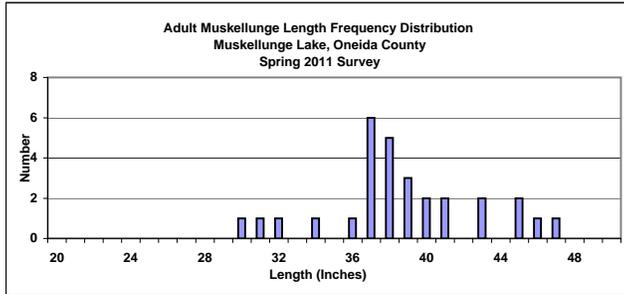


Figure 5. Length frequency distribution of 29 adult* muskellunge captured during a fisheries survey of Muskellunge Lake, Oneida County, in spring 2011.

Muskellunge

We captured 29 adult* muskellunge during our fyke netting and electro-fishing sampling of Muskellunge Lake. Nearly 90% (26 of 29) of the adult muskellunge we captured were 34 inches long or larger. Roughly 35% (10 of 29) of those muskellunge were 40 inches long or larger. The largest muskellunge we captured was a 47.5-inch female.

* Note: Adult muskellunge are defined using PSD stock size as all sexable muskellunge and muskellunge of unknown sex \geq 20 inches. long.

Other Species

We captured eight species of fish in our fyke netting and electro-fishing sampling of Muskellunge Lake in addition to the game fish mentioned above. Bluegill and yellow perch were the most abundant species in our fyke net catches. We caught moderate numbers of black crappie and pumpkinseed. We also captured golden shiner, rock bass, white sucker and yellow bullhead. In-water sampling will conclude with a survey of young-of-year walleye in fall 2011.

We are also conducting a creel (angler harvest) survey on Muskellunge Lake this year. Creel clerk Dean Johnson will count and interview anglers and examine their catch throughout the 2011 open-water fishing season.

Table 1. General Fishing Regulations for Muskellunge Lake, Oneida County, 2011

FISH SPECIES	OPEN SEASON	DAILY LIMIT	MINIMUM LENGTH
Walleye	May 7 - March 4	3	No minimum, only one over 14"
Largemouth and Smallmouth Bass	May 7 - June 17 (C&R) June 18 - March 4 (Harvest)	None 5 in total	14 inches
Muskellunge	May 28 - Nov. 30	1	34 inches
Northern Pike	May 7 - March 4	5	None

A brief summary of selected fishing regulations for Muskellunge Lake is included above (Table 1). While the regulatory information provided was current at the time the surveys were conducted, it is not comprehensive and should not be used as a substitute for the current fishing regulation pamphlet. You may obtain a copy of current fishing regulations when you purchase your fishing license, or download a copy from our web site at:

<http://www.dnr.wi.gov/fish/regulations/>

This report is interim only; data and findings should not be considered final. Results of creel surveys should be available by June 2012. Watch for survey summaries at: <http://dnr.wi.gov/fish/nor/northern.html> or contact:

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