



**WISCONSIN DNR
FISHERIES INFORMATION SHEET**

LAKE: TWO SISTERS

COUNTY: ONEIDA

YEAR: 2011

The Department of Natural Resources surveyed Two Sisters Lake, Oneida County, from May 1 through May 15, 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. Two Sisters Lake is a deep, clear spring lake with predominantly sand and gravel substrate and a moderate-density walleye population. It has a surface area of 719 acres, 9.3 miles of shoreline and a maximum depth of 63 feet.

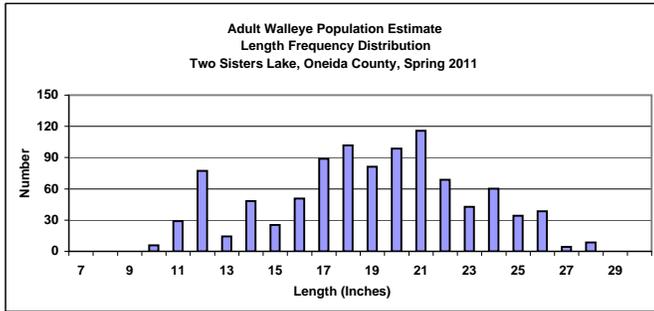


Figure 1. Length frequency distribution of 995 adult* walleye estimated to be in Two Sisters Lake, Oneida County, based on a spring 2011 survey.

* 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 Two Sisters Lake's adult* walleye population from May 1-6, 2011. We captured and marked (fin clipped) 282 adult walleye in six days of fyke netting. Two crews sampled Two Sisters Lake with electro-fishing boats on May 6th and captured 90 adult walleye. Nearly 29% (26 of 90) of those walleye had been marked during fyke netting.

Based on those results, we estimated that 995 adult walleye (1.4/acre) inhabited Two Sisters Lake. Approximately 82% (820 of 995) of adult walleye were 15 inches long or larger. The largest walleye we captured was a 28.2-inch female.

Smallmouth Bass

Smallmouth bass were not a primary target of our survey of Two Sisters Lake. Sampling occurred prior to peak smallmouth spawning. We captured 11 smallmouth bass, 8-inches or larger, during our fyke netting and electro-fishing sampling. Four of those smallmouth were 14 inches long or larger. The largest smallmouth we captured was 15.2 inches long.

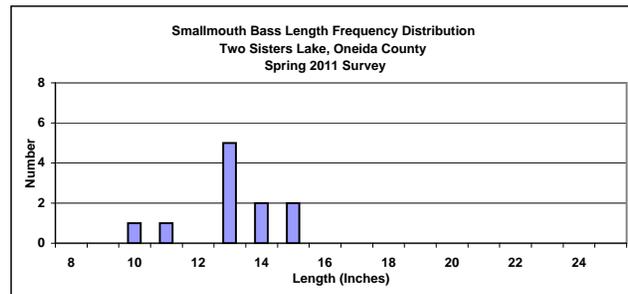


Figure 2. Length frequency distribution of 11 smallmouth bass \geq 8" captured during a fisheries survey of Two Sisters Lake, Oneida County, in spring 2011.

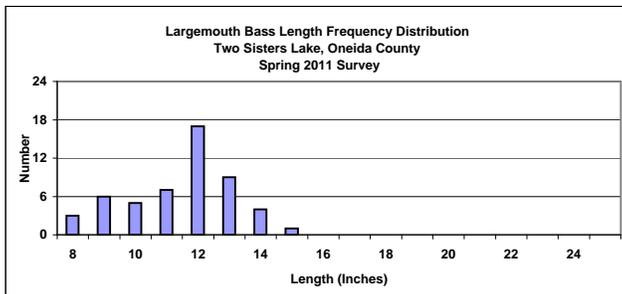


Figure 3. Length frequency distribution of 52 largemouth bass \geq 8" captured during a fisheries survey of Two Sisters Lake, Oneida County, in spring 2011.

Largemouth Bass

Largemouth bass were also an incidental catch in our survey of Two Sisters Lake. However, we did capture 52 largemouth bass, 8 inches or larger, during our fyke netting and electro-fishing sampling. Approximately 10% (5 of 52) of those largemouth were over 14 inches long. The biggest largemouth bass we captured was 15.1 inches long.

Northern Pike

We captured 40 adult* northern pike during our fyke netting and electro-fishing sampling of Two Sisters Lake from May 1-6, 2011. Ninety-five percent (38 of 40) of the adult northern pike we captured were less than 26 inches long. The largest northern pike we captured was a 26.7-inch female.

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

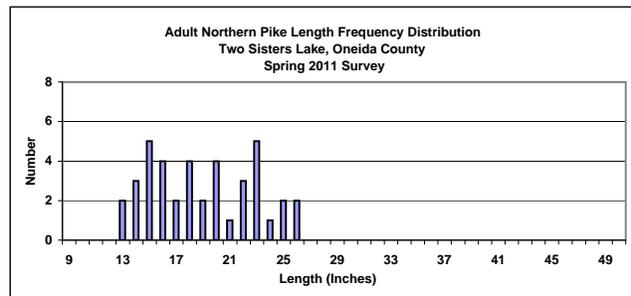


Figure 4. Length frequency distribution of 40 adult* northern pike captured during a fisheries survey of Two Sisters Lake, Oneida County, in spring 2011.

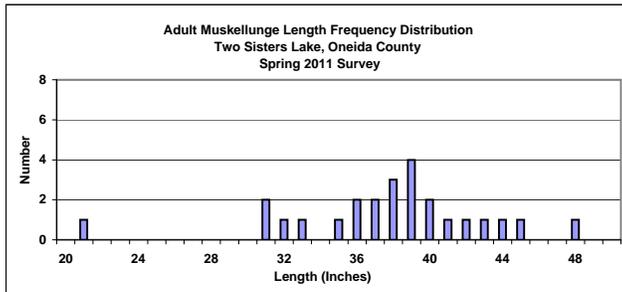


Figure 5. Length frequency distribution of 25 adult* muskellunge captured during a fisheries survey of Two Sisters Lake, Oneida County, in spring 2011.

Muskellunge

We captured 25 adult* muskellunge during our fyke netting and electro-fishing sampling of Two Sisters Lake. Eighty percent of the adult muskellunge (20 of 25) we captured were 34 inches long or larger. Thirty-two percent of those muskellunge (8 of 25) were 40 inches long or larger. The largest muskellunge we captured was a 48.2-inch female.

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

Other Species

We captured 10 species of fish in our fyke netting and electro-fishing sampling of Two Sisters Lake in addition to the game fish mentioned above. Bluegill and rock bass were the most abundant species in our fyke net catches. We captured moderate numbers of black crappie and yellow perch. We also caught common shiner, golden shiner, pumpkinseed, redbreast, 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 Two Sisters Lake this year. Creel clerk David Stahmer will count and interview anglers and examine their catch throughout the 2011 open-water fishing season.

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

FISH SPECIES	OPEN SEASON	DAILY LIMIT	MINIMUM LENGTH
Walleye	May 7 - March 4	3	15 inches
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	40 inches
Northern Pike	May 7 - March 4	5	None

A brief summary of selected fishing regulations for Two Sisters 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:

Dennis Scholl, Treaty Fisheries Supervisor
Wisconsin Department of Natural Resources
8770 Highway J
Woodruff, WI 54568
(715) 356-5211 Ext. 210
Email: Dennis.Scholl@Wisconsin.gov

For answers to questions about fisheries management activities and plans for Two Sisters Lake, Oneida County, contact:

John Kubisiak, Fisheries Biologist
Wisconsin Department of Natural Resources
107 Sutliff Avenue
Rhinelander, WI 54501
(715) 365-8919
Email: JohnF1.Kubisiak@Wisconsin.gov