

Survey of Lake Sturgeon in the St. Clair River and Lake St. Clair

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Background

The lake sturgeon populations have either been lost or greatly reduced in numbers from much of its former range in the Great Lakes and is currently listed as a threatened species by both the State of Michigan and the federal government of Canada. The St. Clair System sturgeon population supports one of the few large populations that supports an expanding recreational fishery with special regulations in place to limit harvest. With very little angler harvest occurring, monitoring the status of this population is dependent upon fishery-independent assessment efforts. Additional sources of mortality, such as poaching and boat strikes, continue to threaten the long-term trajectory of the population. Great Lakes Restoration Initiative funded habitat restoration projects are also underway to increase spawning habitat for lake sturgeon in the St. Clair River. Continued monitoring of the status of the St. Clair System sturgeon population is needed to evaluate the long-term success of these habitat restoration efforts, as well as to evaluate the ongoing effects of invasive species and long-term perturbations such as climate change.

The purpose of this study is to annually document the status and trends of the St. Clair System lake sturgeon population to inform fisheries biologists on the best options for the management of this unique population and the associated fishery. This survey uses a variety of gear types including setlines, trawls, and gill nets (Photo 1).



Photo 1. Lake sturgeon captured using a trawl from the Research Vessel (R/V) Channel Cat.

What are the key recent findings?

Lake Sturgeon captured during this year's survey ranged from 9.6 inches to 74.3 inches total length and the population continues to be viewed as stable and healthy. About 80% of the Lake Sturgeon sampled were outside the legal harvest slot size (42 inch to 50 inch) and were protected from harvest. Lake Sturgeon younger than age 3 have been rarely encountered during survey efforts with setlines or trawls. Efforts to identify habitat requirements of juvenile Lake Sturgeon have been impeded by our inability to consistently locate or collect young Lake Sturgeon. We suspect Lake Sturgeon younger than age 3 inhabit deep channel areas of the St. Clair delta where our assessment gear is not effective at sampling.

Through 2014, a total of 375 unique sturgeon have been recaptured a combined 540 times, representing approximately 13% of 2,871 fish tagged and released since 1996. There have been 113 unique fish with multiple recaptures, including one individual fish with 8 recaptures and 11 individuals with at least 4 recaptures recorded. Recapture

numbers in 2014 were the 3rd highest for the time series. Since small hooks were included in the setline gear in 2004, recaptures have been higher than during the years from 1996 to 2003 when only large hooks were standard on the setline gear. Setlines have been the single largest source of tag recoveries during this study, followed by sport fishing and commercial fishing.

Where can I find the detailed results?

The Michigan Department of Natural Resources Fisheries Division's Lake St. Clair Fisheries Research Station publishes an annual report describing the results of ongoing surveys, including this sturgeon survey. This report is available on the web by visiting http://www.michigan.gov/dnr/0,4570,7-153-10364_52259_10951---,00.html and clicking on "Lake St. Clair". Additional study information is available at http://www.michigan.gov/dnr/0,4570,7-153-10364_52259_19056-333302--,00.html.

What does this project do for fisheries managers and anglers?

Fisheries managers use the information from this project to evaluate and adjust fishing regulations, such as minimum and maximum size limits and annual harvest limits, which specify the size and number of lake sturgeon that an angler can harvest in one year but still allow this key population to expand in size (Photo 2).



Photo 2. A juvenile lake sturgeon that is protected by current fishing regulations.