

Mississauga #8 Fisheries UPDATE

Mississagi River Lake Sturgeon Assessment

January 2013

INTRODUCTION

Mississauga #8 First Nation is in the process of writing a fisheries management plan. This plan is to incorporate all waterbodies and fish species within their traditional territory including the Mississagi River. To support existing data, the First Nation proposed to collect Traditional Knowledge on historical population trends as well as continue the assessment of spring spawning Lake Sturgeon.

The Lake Sturgeon population in the Mississagi River has been previously studied every spring by the Anishinabek/Ontario Fisheries Resource Centre in 1999, 2000, 2001, 2002, 2003, 2010 and 2011.

As a result, Mississauga #8 First Nation with the cooperation of the Anishinabek/Ontario Fisheries Resource Centre, conducted a subsequent Lake Sturgeon Assessment on the Mississagi River in 2012. The objective of this project was to determine biological characteristics of the adult spawning population of the Mississagi River and to compare this data to the previous years.



A Lake Sturgeon about to be sampled.



Mississauga #8 First Nation member Carla Marcellus holds a Lake Sturgeon before releasing it back into Mississagi River.

METHODS

Field crews focused efforts in the Lake Sturgeon spawning areas within the Mississagi River.

Large mesh gill nets were set at strategic locations for a duration of approximately 20 hours (pre-spawn) to 2 hours (during spawn). All Lake Sturgeon were sampled for length, weight, age and sexual condition, and then PIT tagged before release.

Habitat of the spawning site was inventoried, including substrate and depth. Egg mats and drift nets were also deployed approximately 15 days after the peak of spawning activity to confirm spawning success.

RESULTS

A field crew was on the Mississagi River from April 30—May 28, 2012. A total of 134 nets were set in the Mississagi River chutes resulting in 140 Lake Sturgeon being captured and released. All Lake Sturgeon were sexed, weighed, measured and genetically sampled. The adult Lake Sturgeon were implanted with Passive Integrated Transponder (PIT) tags and fixed with Floy tags.

The egg mats were constructed with a fibrous/woven material fixed to a flat steel plate. This design was assembled to have the “sticky” Lake Sturgeon eggs adhere to the mats instead of settling onto the substrate. As a result, suspected Lake Sturgeon eggs have been collected and will be sent away for analysis to confirm species identification and spawning success.

CONCLUSION

Lake Sturgeon continues to remain a threatened species under the Ontario Ministry of Natural Resources Species at Risk in Ontario (SARO) list. A closed fishery remains in effect for lake Sturgeon. First Nation members who utilize the fish for subsistence and ceremonial purposes are still permitted to harvest unless otherwise advised by their First Nation.

A full technical report is currently being drafted and will include data from all years studied. The report will be finalized in 2013.



Releasing a Lake Sturgeon back into the Mississagi River.



For more information on this or other fisheries projects please contact the A/OFRFC:

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