Lake Erie Lake Sturgeon Working Group Notes

October 7, 2015

Tifft Nature Preserve

1200 Fuhrmann Blvd, Buffalo NY 14203

Participants: James Boase, Justin Chiotti, Mike Thomas, Jonah Withers, John Sweka, Rachel Neuenhoff, Lori Davis, Chris Legard, Zy Biesinger, Dimitry Gorsky, Jason Barnucz, Rob Hunter, Michael Clancy, Dawn Dittman, Joe Krieger, Curt Karboski (see attachment for contact information)

General: Jim Boase provided some background information on the work being conducted around the Lake Erie basin and the need for the development of a Lake Sturgeon Working Group. It is expected that the working group will meet annually to discuss lake sturgeon issues within the Lake Erie basin. Working group notes and materials will be posted on the Great Lakes Lake Sturgeon website and presented to the Lake Erie Committee upon request. Representatives for agencies conducting lake sturgeon work around the basin were identified and this information will be updated to the Great Lakes Lake Sturgeon Website for communication purposes.

Michigan DNR: Mike Thomas presented lake sturgeon work being conducted by the Michigan Department of Natural Resources. Mike highlighted the MDNR's setline and trawl surveys conducted in Lake St. Clair and lower St. Clair River, discussed angling regulations, and the importance of the recreational fishery. Mike also provided information regarding aging accuracy of lake sturgeon > 40 inches in total length. *See attached presentation for more details.*

Ontario Ministry of Natural Resources: Rich Drouin provided Justin Chiotti with information regarding lake sturgeon work conducted by the Ontario Ministry of Natural Resources. The OMNR is collaborating with the University of Windsor to measure stable isotopes in different layers of the spine to get a temporal or life time look at the feeding ecology of the sturgeon in the Detroit River and Lake Erie. The OMNR continues to collaborate with the Ontario Commercial Fishing Association (1990-present) as part of the fall index program. Since 1990 they have observed a total of 50 sturgeon (1/year average) most captured in the western basin of Lake Erie. The Ontario Commercial Fishery is required to submit daily catch reports (DCR's) when landing fish as part of their license condition including discard and released fish. Since 2011, 300 DCR's have reported sturgeon (around 77/year) this is less than < ½% of the total DCR's submitted (8,000 – 10,000/year). Most sturgeon are captured in 3.25 – 5.0" gill nets. *See attached presentation for more details.*

Department of Fisheries and Oceans Canada: Jason Barnucz provided information regarding lake sturgeon work being conducted by DFO in Lake Erie.

U.S. Geological Survey Great Lakes Science Center: Rob Hunter provided information regarding lake sturgeon work by the USGS GLSC. Rob provided egg density and location information for work being conducted in the St. Clair-Detroit River System (SCDRS). Rob also presented larval lake sturgeon information specific to reef projects being conducted in the SCDRS. Rob also discussed the reef restoration projects being implemented in the SCDRS to increase lake sturgeon spawning habitat.

U.S. Fish and Wildlife Service Alpena FWCO Update: Justin Chiotti and James Boase presented information from the USFWS Alpena FWCO. Justin discussed the population assessment work being conducted in the SCDRS through lake sturgeon mark-recapture assessments. The Alpena FWCO is collaborating with the University of Windsor to assess the importance of sperm quality in the Detroit River. Justin provided the group with an update of the lake sturgeon telemetry project (multi-agency project, led by USGS) being conducted in the SCDRS (279 lake sturgeon implanted with transmitters since 2015). The Alpena FWCO is utilizing ultrasound to determine the sex and maturity of adult lake sturgeon during the spring spawning season. The Alpena FWCO along with partners are in the process of developing lake sturgeon restoration targets for the SCDRS. Justin also described the lake sturgeon reef enhancement projects being implemented in the SCDRS along with juvenile lake sturgeon work being conducted in this system. *See attached presentation for more details.*

Ohio DNR and University of Toledo: Justin presented information on behalf of the Ohio DNR and University of Toledo. Jessica Sherman (PhD candidate) is developing a lake sturgeon habitat suitability model for the Maumee River. Jessica along with another student (Brian Schmidt) are mapping the substrate composition using sides can sonar and will use this information along with the other variables she is collecting to develop a habitat suitability model for the Maumee River. This work will then be fed into a lake sturgeon restoration plan also being developed by Jessica, the Ohio DNR, and USFWS. *See attached presentation for more details.*

New York DEC Update: Chris Legard presented information on behalf of the NYDEC. Chris talked about the gill netting and setlining work being conducted in Buffalo Harbor to collect sturgeon. He also mentioned that eggs mats were deployed to document spawning locations. Chris mentioned there has been a grouped formed "Eastern Lake Erie Lake Sturgeon Working Group" that is developing goals and objectives regarding the lake sturgeon population status in New York waters of Lake Erie. *See attached presentation for more details.*

U.S. Fish and Wildlife Service LGLFWCO Update: Conducted in conjunction with U.S. Fish and Wildlife Service NEFC update below.

U.S. Fish and Wildlife Service NEFC: Lori Davis, Rachel Neuenhoff, Jonah Withers, and John Sweka presented information on behalf of the Northeast Fishery Center. Information was presented regarding gill net and setline assessments in Buffalo Harbor. Acoustic telemetry is being used to identify migration and movements of lake sturgeon and identify other areas of activity. In 2015, 19 transmitters were implanted into lake sturgeon. Habitat is being mapped in Buffalo Harbor using side scan sonar. Nine satellite tags were tethered to sturgeon in the spring of 2015 to monitor sturgeon movement and migration when sturgeon are not proximate to acoustic receivers. Lake sturgeon fin rays are being aged to note age and growth. To improve accuracy, sturgeon are being marked with physical and chemical markers OTC , Floy tags, and PIT tags to facilitate partial age validation. Genetic samples are being collected to determine the genetic stock. The NEFC is also working with Joe Krieger (PhD candidate at U of Michigan) to assist in the development of a habitat suitability model for the Niagara River.

Basin-wide Juvenile Assessment Update: Rachel Neuenhoff and Justin Chiotti presented information on the basin-wide assessment that was conducted in Lake Erie in 2014. A total of 12 tributaries were sampled during the fall of 2014. No lake sturgeon were captured. In the summer of 2013, 15 lake sturgeon were captured near the mouth of the Detroit River and in Lake St. Clair using these same methods. A report for this work is currently being developed, and methods to assess juvenile abundance in the Lake Erie basin continue to be discussed.

Maumee Lake Sturgeon Restoration Program: The potential for a lake sturgeon reintroduction program on the Maumee River was discussed. A habitat suitability model (Jessica Sherman) and restoration plan (U of Toledo, Ohio DNR, USFWS) is currently being developed for this system and funds are being sought to fund a rearing facility. This is a collaborative project between the Ohio DNR, USFWS, Michigan DNR, Ontario Ministry of Natural Resources, University of Toledo, and Toledo Zoo.

Action Items:

1) Develop a Lake Erie Lake Sturgeon Working group annual report which will contain information of projects being conducted within the basin and points of contact for each project.

2) Points of contact for each agency will be placed on the Great Lakes Lake Sturgeon Website.

3) Place Lake Erie Lake Sturgeon Working Group presentations of Great Lakes Lake Sturgeon Website.

4) **Justin** – Send out Lake Superior Lake Sturgeon Working Group PIT tagging protocol.

5) **Dimitry** and **Dawn** send out lake sturgeon gastric lavage protocols.

6) **Jason** will send out OMNR lake sturgeon rehabilitation strategy.

7) **Justin** will send out lessons learned publication for reef construction projects in the St. Clair-Detroit River System. This is not complete yet and will be distributed when it is finalized.

8) **Jonah** will contact Darryl Hondorp about using OTC.

9) **Jonah** will be working on database development for lake sturgeon capture locations.

10) **Justin** will send out table with historical population status……and the group will rank them according to priority for restoration.