



Northern Inland Lakes Citizens Fishery Advisory Committee

Established by the Michigan Department of Natural Resources to improve and maintain fishery resources through better communication and partnership.

Approved Minutes

Northern Inland Lakes Citizens Fishery Advisory Committee Tuscarora Township Hall, Indian River, MI Monday, October 14, 2013

Attendees: David Bock, Dawn Bodnar, Paul Borg, Keith Cheli, George Cripes, Kevin Cronk, Geo Crooken, Tim Cwalinski, Irv Dedow, Doug Dingey, Ron Dulak, Dennis Fauver, Maxwell Field, Mike Freudenmuth, Neal Godby, Todd Grischke, Patrick Hanchin, Kevin Haynes, Lindsey Henski, Seth Herbst, Rich Hill, Roger Jacobs, Rick Johnson, Brad Kessel, Frank Krist, Theresa Krist, Doug Larson, Jeffery Phillips, Ralph Pruder, Mac Richardson, Brian Roth, Roger Selvig, Brad Silet, Virgil Smith, Roy Tassava, Alan Terry, Clair and Michael Twohey, Terry Weber

Chair, Frank Krist and DNR Facilitator Tim Cwalinski

Frank Krist called the meeting to order. Attendees introduced themselves.

Understanding the sea lamprey population of the Inland Waterway and future impacts for chemical control: Michael Twohey, U.S. Fish and Wildlife Service Marquette Biological Station

Background:

The Cheboygan River is an important sea lamprey producing tributary to Lake Huron. The upper Cheboygan River (upstream from the dam in Cheboygan) has been infested with larval sea lampreys since the 1960s and has been treated with chemical lampricides every 3 to 4 years at a cost of approximately \$500,000. The sea lamprey trap at the mouth of the Cheboygan River (lower river) catches more sea lamprey than any other trap on the Great Lakes! Sea lamprey control agents had presumed that the upper river was infested with larval sea lampreys because of escapement of adult sea lampreys around the Cheboygan dam and lock facility. However, this hypothesis and the alternative theory that the upper river supports a landlocked sea lamprey population which completes the life cycle without going to Lake Huron had not been evaluated. The Cheboygan Work Group, consisting of two U S Fish and Wildlife Service sea lamprey control agents, a U S Geological Survey researcher, and a Secretariat of the Great Lakes Fishery Commission, was created to coordinate a strategic approach to determine whether there is a need to treat the upper Cheboygan River with lampricides. The work group is creating a proactive plan of research and pilot work to investigate why sea lampreys infest the upper river.

Step 1: Determine number, routes, and timing of adult sea lamprey escapement from the lower Cheboygan River below the Cheboygan Dam to the upper river above the Dam:

The question to be answered was whether escapement of sea lampreys from the lower river to the upper river was occurring and to what extent. Acoustic telemetry was used to track the movements of 148 tagged sea lamprey released at the US 23 bridge. It was hypothesized that when tagged lampreys escaped upstream above the dam then telemetry data would indicate how many escaped, where (possibly the lock) they moved pass the dam from the lower river and when they escaped to the upper river. Unexpectedly, the results did not support the hypothesis that sea lamprey move pass the dam since zero of the 148 tagged lamprey escaped upstream of the dam and instead about 65% were captured in the sea lamprey trap and the other 35% remained in the lower river. The acoustic telemetry study showed that routes of escapement from the lower river to the upper river are scarce and not frequently used indicating that escapement upstream of the dam is low or very rare. The results did not support the hypothesis that larval sea lamprey infestation in the upper river is due to adult lampreys escaping from the lower river.

Step 2: Determine if sea lamprey approach the lock gates:

In 2012 a DIDSON observation (acoustic camera that can be used to observe fish behavior) was conducted to determine the number of sea lamprey that encounter the downstream entrance to the lock and document any movement behavior associated with standard lock operation. Some sea lampreys were observed encountering the lock gates, but the number of lampreys approaching still has yet to be determined. Observing lamprey approaching the lock face does not provide evidence that they escape through the lock.

Step 3: Estimate the abundance of adult sea lamprey in the upper Cheboygan River using mark-recapture:

In 2013, another larger pilot study was conducted to determine the origin of sea lamprey in the Cheboygan River. The objectives were to determine if: 1) timing of lock operations correlates with lamprey captured in the upper river, 2) adult abundance in the upper Cheboygan River is similar to estimated escapement at the lock and dam, 3) adult sea lamprey differ in statolith microchemistry (a calcareous particle in the statocysts of invertebrates that stimulates sensory receptors in response to gravity) in the upper and lower Cheboygan River to determine if there is an upper river and lower river strain of sea lamprey, and 4) if adult sea lamprey differ morphologically in the upper and lower River. The Maple, Sturgeon, and Pigeon Rivers were netted to capture adult sea lamprey. Because it was believed that the number of lampreys in the upper river could be very few, 70 marked male sea lampreys were released in each of the three tributaries each week to ensure net capture efficiency could be calculated. The results were:

- 1) There is no strong evidence to suggest that timing of the lock correlated with unmarked lamprey captures.
- 2) Adult abundance in the upper river is very low (less than 500).
- 3) Adult sea lamprey differed in statolith microchemistry in the upper and lower Cheboygan River suggesting that there could be two strains of sea lamprey.

The study results prompted a survey for evidence of a landlocked population. Anglers have been submitting pictures and sea lamprey samples. Evidence is increasing that the upper river system has at least a partial sea lamprey population that completes its life cycle in the upper river.

DNR boating access site requirements and the potential for improving additional sites in the Inland Waterway: Keith Cheli, DNR Parks and Recreation Division

The state of Michigan has six planning regions and one planner per region. Keith Cheli is the DNR District Planner for the Eastern Upper Peninsula and Northern Lower Peninsula. Within Keith's area there are 18 state parks, 100 boating access sites, 7 harbors, 70 state forest campgrounds, 1 major lock and dam, 3 linear trails and 2 major maintenance crews. Keith is involved with the design, planning construction and maintenance of these facilities. A fact sheet on boating in Michigan was distributed and is attached*

Keith reviewed several recent projects, including the Cheboygan Lock and Dam Access Site, the new Forks Boating Access Site, the rebuilt and upgraded Burt Lake Maple Bay Boating Access Site, Mullett Lake Village Boating Access Site and upgrades to the Black Lake Onaway State Park Access Site.

The renovation of the Cheboygan Dam and Lock Access Site cost \$4 million and the results were an excellent fishing site. This project provided much needed convenient access to prime fishing water for shore anglers and a boat launch above the Locks. There are about 52 car/trailer parking spaces and 26 car only parking spaces. The parking lot is paved. The Forks Access Site is located just below the junction of the Cheboygan and Black Rivers and has two launching piers with 75 paved parking spaces. The Maple Bay Burt Lake Access site project was completed this year and consists of a large paved parking lot with 38 parking spaces. The launch includes a double ramp with a skid pier. Adjustments have been made to the skid pier at the Onaway State Park Launch Site and planning is being done to improve launching capabilities, traffic flow and parking spaces. Keith is working with the Black Lake Association on this project.

Future projects along the Inland Waterway include dredging at Aloha State Park (Mullett Lake) and rebuilding the Jewell Road Boating Access Site (Mullett Lake).

The DNR Boating Access Site Design Guidelines were reviewed. Keith stressed that the guidelines are in place to create safe, consistent and efficient access. Public input is very important and there are multiple ways to get involved and share your input. By collaborating and working together, more can be accomplished.

Should we be seeking better pier fishing access for these large inland lakes? An update on assessing walleye spawning habitat in Mullett Lake: Roy Tassava, Mullett Lake Area Preservation Society:

Mullett Lake Fishing Pier Project:

There are many advantages to pier fishing. If you do not have a boat, pier fishing is an excellent alternative. Piers can introduce children and families to fishing without a major investment in equipment. PierMichigan.org lists over 40 piers available in Michigan, however, the Northern Lower Peninsula and inland lakes are severely lacking quality shore fishing opportunities. The Veterans Pier is being constructed on Burt Lake at Indian River and perhaps Mullett Lake has opportunities as well. Topinabee Park and Boy Scout Park were discussed as other possible future locations for a pier. Roy was encouraged by the Committee to continue his work on this important project.

Mullett Lake Walleye Spawning Habitat Inventory:

Kevin Prediger and Roy Tassava inspected Mullett Lake for appropriate walleye spawning habitat (gravel substrate). Kevin has lived along the Lake for many years and he is very familiar with the substrate features on the bottom. The west side of the lake had intermittent gravel with what appeared to be good gravel by Dodge Point. From Topinabee around the southwest corner of the lake, very little gravel existed until Sunken Island. Continuing around the south end of lake, gravel was present again near the outlet of Indian River. The northeast shore of Scott Bay had some gravel, along with intermittent parts of the entire east shore from Red Pine Point to Needle Point. Water depths from shore out to 4-6 feet were checked. If

walleye were looking for spawning habitat, there appears to be some present, but there are questions on its size, relative amounts (for a 17,000 acre lake), and quality of interstitial spaces between the stones. A map and a summary of the observations are attached.*

**An update on the progress of the Inland Waterway walleye study and its associated components:
Graduate Student Seth Herbst and Professor Brian Roth, Michigan State University**

Uncertainties regarding walleye numbers within the Inland Waterway sparked this study. The study focused on the walleye population in the entire Inland Waterway, movement dynamics, recruitment, early life history, diet and differences in growth between the lakes.

Early Life History:

Larval (newly hatched) walleye surveys have been conducted on all Inland Waterway lakes and streams. These surveys were needed to determine if there was enough food for juvenile walleye survival, especially in the presence of invasive species in the system. Walleye eggs hatch between gravel and cobble in shallow water in streams and lakes and the resulting larval walleyes begin their life as “fish” plankton. Movement of these newly hatched walleye is dependent on the water current and food must be available as soon as the larval walleye yolk sac is absorbed. Survival depends on an adequate food supply adjacent to them with good numbers of large bodied zooplankton being optimal for survival. The ideal size of zooplankton is approximately 1 millimeter in length with an abundance of about 100 individuals per liter of water. Burt Lake has the highest level of large bodied zooplankton and the most abundant spawning habitat, so it is not surprising that recruitment (spawning success) is best there. Overall, the Waterway is relatively unproductive, clear water which is low in phosphorus and chlorophyll-a compared to systems down south where there has been more impact by development and agriculture. Large bodied zooplankton is less abundant in the Waterway than in systems where productivity is higher. There is varying amounts and sizes of zooplankton in the Waterway.

The top three larval walleye producers in the Waterway were the Sturgeon River (best), Burt Lake and Black River. Crooked, Mullett and Pickerel Lakes produced significantly less larval walleye than the above three. Over the 3 years of the study, the numbers produced annually fluctuated greatly even at the same sites. Compared to highly productive waters like Lake Erie, larval walleye production in the Waterway is low. In addition, the zebra mussels appear to be reducing productivity in the Waterway which could be contributing to a reduction in larger zooplankton.

Differences in Diet between the Lakes and Seasons:

The goal of the diet study was to determine what walleye are eating throughout the Waterway. Stomach collection from anglers and tournaments were good for some parts of the Waterway. Generally, spring diets contained more aquatic insects while fall/winter diets included significant increases in gobies. However, sample sizes for all waters in the winter are very low. Stomachs will still be collected through the winter so anglers should continue to provide samples since they are needed very much. Below is a summary of the results.

Spring Diet:

Mullett Lake

Yellow perch 62%.3
Aquatic insects 24.6%

Burt Lake

Aquatic insects 62.5%
Crayfish 17.3%
Yellow perch 10.3%
Round goby 6.6%

Crooked Lake

Aquatic insect 58.7%
Unknown fish 29.1%
Crayfish 6.3%

Pickerel Lake

Aquatic insects 53.3%
Crayfish 43.6%

Summer Diet:

Mullett Lake

Yellow perch 38.8%
Unknown fish 19.3%
Round goby 17.2%
Crayfish 6.9%
Alewife 6.9%

Burt Lake

Round goby 36.4%
Crayfish 22.1%
Yellow perch 21.1%
Aquatic Insects 10.3%

Crooked Lake

Crayfish 52.1%
Yellow perch 13.3%
Aquatic insect 12.6%

Pickerel Lake

Crayfish 54.8%
Aquatic insects 15.1%
Unknown fish 12.8%
Yellow perch 9.8%

Fall Winter Diet:

Mullett Lake

Round goby 77.3%
Yellow perch 10.2%

Burt Lake

Round goby 42.9%
Yellow perch 33.3%
Unknown fish 15.4%

Crooked Lake

Unknown fish 84.7%
Misc. minnows 7.5%
Yellow perch 7.0%

Pickerel Lake

Not enough data

**Inland Waterway spring walleye stocking and fall Juvenile assessments: Tim Cwalinski DNR
Maxwell Field LTBB and Neal Godby DNR**

Black Lake was stocked with spring fingerlings in 2010, 2011 and 2012, while Mullett Lake was stocked in 2010, 2011, and 2013. Fall walleye recruitment surveys by DNR and LTBB continue throughout the Waterway. These surveys are done at night along shore in shallow water by passing DC electric current around the boat. The target of the surveys are Age 0 walleye that were stocked or hatched in the spring and are about 5 to 7 inches long in the fall when the surveys are conducted. The results allow technicians to

evaluate the number of juvenile walleye surviving at the end of the growing season and to create an index. This index is mainly useful when comparing multiple years within the same lake.

The 2013 Black Lake fall assessment of age 0 fish shows low to no natural reproduction occurring and this may continue in the future. However, survival of spring fingerling stocked walleye in the three years when they were stocked has been very good and they are beginning to appear in the fishery. Mullett Lake continues to have a low level of natural reproduction, while stocking spring fingerlings acts as a supplement to the overall population. This lake also receives adults from Burt Lake each year. Mullett Lake was stocked with a very large number (466,000) of spring fingerlings by DNR in 2013, yet our juvenile index only showed a slight bump in fall age-0 catch rates. Burt Lake had an excellent year class of wild fish in 2013. The fall catch per unit effort of age 0 walleye in Burt Lake was typically 10-20 per hour in past years, yet it was 31/hour in 2013. Catch rates at Pickerel and Crooked Lakes of juvenile walleye in the fall are up and down over the years. However, extremely strong year classes can be produced at these two water bodies on occasion which help support the fishery.

Maple River habitat projects and Lake Kathleen Dam status and impacts on Waterway lakes: Neal Godby, DNR

The West and East Branch of the Maple River converge at Lake Kathleen to form the mainstream Maple River. This is a highly productive stream for steelhead and brown trout. Lake Kathleen is owned by a single property owner who has expressed interest in removing the dam. The landowner has paid for a feasibility study. Although removing the dam would provide upstream habitat for trout, federal support does not exist due to the dam assisting with sea lamprey control so no federal funding currently exists for this project. One option is that the road is scheduled for improvement and if a sea lamprey trap was installed, the federal government may support the project. Additionally, protected species like the Hungerford's Crawling Water Beetle and Michigan Monkey Flower are present at Lake Kathleen which makes changes more challenging since special work procedures are needed to protect these species.

Fishing reports for the season and general comments:

Black Lake:

Fishing pressure continues to increase. Anglers are doing very well on walleye. During a typical evening 6-8 walleye may be caught while 2-3 of those fish are legal size. Thus, there is a balance of legal and sub-legal walleye in the fishery and the results of three years of stocking are becoming apparent. The hope is that as the stocked fish mature natural reproduction will begin to increase significantly.

Burt Lake:

Fishing is steady with good numbers of both 13-14" fish and legal size fish being caught. There are good year classes of walleye upcoming. The fall juvenile survey showed good survival of the 2013-year class that hatched this spring.

Crooked/Pickerel Lake:

Smallmouth bass and bluegill catches are excellent at Pickerel Lake. Sub-legal walleye, according to one lake resident, are commonly caught at Pickerel Lake; rare is a legal walleye. There was no representation from Crooked Lake at this meeting. Since the walleyes are slow growing and mature at a smaller size there was interest in discussing at a future meeting, the potential of reducing the size limit in Pickerel and Crooked Lakes. It was noted that there are often many cormorants in the area. The first step before management of the birds can begin, is to document the number of birds present by dates.

Mullett Lake:

Participants commented on good perch, steelhead, walleye, trout and northern pike fishing in 2013. Several anglers noticed the appearance of spiny water fleas this summer, see attached* fact sheet. Walleye fishing is better than in recent years with multiple year classes available. Rainbow trout fishing was great in the summer and the fish were full of mayflies, crayfish and spiny water fleas. An occasional brown trout could also be caught. Fishing pressure overall is very low on the south end while the north end receives more.

LTBB Hatchery Update:

Doug Larsen, manager of the LTBB new hatchery said they will be raising walleye, lake sturgeon and possibly cisco. One goal with obtaining walleye eggs is to obtain the eggs from the lakes where the fish will be stocked to propagate the existing genetic strain. Progress is being made with the lake sturgeon section and they hope to work with the DNR to increase stocking of sturgeon in the Waterway and other locations.

DNR Fishery Division and Tribal updates:

Todd Grischke, Lake Huron Basin Coordinator:

In 2015 the DNR is moving to a two year fishing guide. Regulation changes will need to be in the hopper in the next 8 months to make it to the next edition of the guide. The license fee package was signed by the Governor and takes effect March 1, 2014. The major change anglers will see is one fishing license, an all species license for \$26 (the 24 and 72-hour licenses will remain). The Fisheries Division Strategic Plan was finished in April. The Division is just completing the tactics for the plan which provide the specifics on implementing the work, a copy of the tactics is attached*. Fisheries will be moving forward with hiring some positions and building capacity for the grant programs.

Max Field, LTBB

Tribal crews are electrofishing through the end of October. The Tribal Hatchery opened in July and as Doug stated above, much progress is being made. They are looking to stock walleye as soon as 2014.

Establish meeting dates for 2014:

The Northern Inland Lakes Citizen Fishery Advisory Committee will continue meeting two (2) times per year. Mid-April and Mid-October will be scheduled. Frank Krist will coordinate with Todd Grischke and forward the dates to committee members.

Adjourned 3:55 pm

***The handouts may be obtained by emailing Frank Krist at krist@speednetllc.com**

Meeting Dates for 2014:

Friday April 18, 2014

Tuesday October 14, 2014