



## Lake Huron Citizens Fishery Advisory Committee

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

### **Lake Huron Citizens Fishery Advisory Committee** **Jay's Sporting Goods Inc., Clare, Michigan** **Thursday, February 4, 2016** **Approved**

**Attendees:** Jim Baker, Tom Baird, Dave Borgeson, Kyle Broadway, Doreen Campbell, Lance Campbell, Randy Claramunt, Bryan Darland, Gary Decker, Jim DeClerck, Larry Desloover, Ed Eisch, Dave Fielder, Roger Greil, Todd Grischke, Dennis Gulau, Tom Hamilton, Ji He, Lindsey Henski, Kent Herrick, Jim Johnson, Tom Keerl, Ron Kinnunen, Gene Kirvan, Rick Kretzschmar, Frank Krist, Steve Lepeak, Ken Merckel, Craig Milkowski, Bob Miller, Gary Nelkie, Tess Nelkie, Judy Ogden, Brian Poindexter, Carson Prichard, Bob Reider, Brandon Schroeder, Julie Shafto, Steve Shafto, Mark Stephens, Aaron Switzer, Randy Terrian, Capt. Terry Walsh, Nicole Watson, Dennis White, Tod Williams, Tyler Williams, Todd Wills

**Welcome and Introductions:** Frank Krist called the meeting to order. Introductions were made.

#### **Progress report of assessing the potential of building a new spawning reef in Saginaw Bay (David Fielder, DNR Great Lakes Research Biologist):**

The Fisheries Division has a policy regarding artificial reefs, which supports reclamation or replacement of natural reef structures that may have been adversely affected by sediment accumulation or waste disposal, or where reef spawning habitat is a limiting factor in species recovery.

Lake whitefish, lake trout, and walleye require different habitats for each life stage. Rock reef habitat provides important spawning grounds. So, where were the historic reefs in Saginaw Bay? The Department reviewed two reports provided by commercial fishers highlighting historic reefs and spawning walleye. To determine the current status of the remnant reef habitat, the Department used an underwater sonar to map the rock habitat within the bay. Most rock habitat is within the Outer Bay, and because the Outer Bay is slow to warm up, it is too cold for walleye to spawn successfully. Within the Inner Bay, there are two remnant rock reef sites today, North Island Reef and Duck Reef. Also, two study sites have been identified for potential restoration, Coreyon Reef and the Saginaw River Mouth (see map below).

The walleye fishery in Saginaw Bay has recovered, and currently the rivers are meeting spawning needs. The question is why investigate the potential of reefs as additional sources of walleye production? It is risky to put all the eggs in one basket and if there is a disruption in river walleye reproduction the reefs furnish another source of juvenile fish which provides for a more stable fishery.

#### ***Objectives for the study include:***

1. Determine habitat suitability of remnant Outer Bay and proposed Inner Bay reef sites by assessing substrate condition, water quality and potential egg predators.
2. Evaluate reproductive usage by adult fish during both the spring and fall spawning periods.

3. Assess the genetic and phenotypic characteristics of the Saginaw Bay walleye and lake whitefish populations.
4. Develop and secure a plan to engage local stakeholders in Saginaw Bay reef restoration.



*Potential restoration sites are Coreyon Reef and the Saginaw River Mouth. North Island Reef and Duck Reef are remnant rock reef sites.*

The study is planned to continue for two years including the 2014/2015 and 2015/2016 seasons. To complete the physical habitat assessment, hummingbird side scan sonar was used. This showed bottom contour and hardness. Other field methods used included water quality monitoring, gillnet surveys, egg collections, micromesh gillnet sets, and laboratory sample collections. Purdue University completed much of these study elements. Additional information was obtained by using underwater cameras. Dave Fielder shared a video of remnant reef habitat at a proposed restoration site.

During the first season of sampling, Lake Whitefish had the highest spawning egg deposition at the remnant reef sites. At the Coreyon Reef, walleye had the highest spawning numbers. Does that mean that walleye are still trying to spawn there? Is the site worth restoring? Work is continuing to determine the answers to these questions.

The next step is developing a restoration proposal for at least one restoration site such as the Coreyon Reef. The proposal would include engineering, permitting, construction, and a post construction evaluation.

#### **Discussion of the Sea Grant Spring Lake Huron Workshops (Brandon Schroeder, Michigan Sea Grant):**

The Sea Grant workshops are a way to take the information from these meetings and disseminate it to the public and obtain their input. The work and commitment from this Committee is greatly appreciated.

The Committee discussed venues, number of workshops to be held, dates, times, and content. The committee agreed to four Sea Grant workshops this year for the Lake Huron Basin. The meetings will be held in Cedarville, Alpena, Bay City, and Ubyly. Dates are yet to be determined. Brandon Schroeder will send tentative dates with potential agenda topics to staff involved.

**Update on the Atlantic Salmon Program (Todd Grischke, DNR Fisheries Division Lake Huron Basin Coordinator and Aaron Switzer, Manager Platte River, Oden and Harrietta State Fish Hatcheries):**

Frank Krist took a moment to recognize Dennis White, a member of the Committee and a guide on the St. Marys River. Dennis took the time to record every Atlantic salmon he and his clients caught in the St. Marys River this season along with the type of clip, size and other information. Roger Greil was acknowledged also by Frank and Todd. Without Roger's expertise, advice and teaching ability, we would not be where we are today with the Atlantic salmon program.

Aaron gave a production update. The number of Atlantic salmon stocked in 2015 was lower than anticipated because of bacterial issues, water temperature problems (working with temperature fluctuations of surface water is a challenge), and stresses with marking and tagging. There is a saying with Atlantic salmon, "Do not give them an excuse to die; they will take it". In 2016, the fish were treated with a prophylactic to reduce bacteria, however, the number of Atlantic salmon to stock will be lower than anticipated again this spring.

The possibility of hand marking and hand tagging Atlantic salmon to reduce stress is being explored. Atlantic salmon seem to handle manual marking better than moving them through the automatic marking trailer. An advantage of hand marking and tagging is it allows working with the fish at a lower water temperature. The Atlantic salmon need to be a certain size when being processed in the marking trailer, but unfortunately this is during mid-summer when the temperatures are high, which is the worse time to handle the fish. Hand marking at cooler water temperatures will reduce bacterial impacts.

Growth progress in 2016 is seeing improvements but the Platte River Hatchery is using surface water which makes controlling water temperature difficult because of temperature fluctuations. However, this was a mild year and warm water was more prevalent which increased the growth rate of the fish. The fish at stocking time will be the largest yet at 6.5 to 7 inches in length. Efforts will be coordinated with the local biologists to plant at optimal water temperature but there is a limitation how long the fish can remain in the hatchery.

All Atlantic salmon are clipped and currently State stocked fish are starting to appear in the creel data. Compared to the returns from the fish stocked by the University, the State stocked Atlantic salmon returns are low but compared to two years ago the State returns are improving.

At the next advisory meeting, Roger Greil will return with a thorough discussion of the Atlantic salmon program at Lake Superior State University. The DNR's program is new, while the University program has been operating for about 30 years. Efforts to better copy the success of the University's plant in the St. Marys River will be discussed at the April 13 meeting along with other aspects of the Program. This will be an extended session with ample time for comments and questions.

**Brief updates on Lake Huron lake trout issues (Todd Grischke, DNR Fisheries Division Lake Huron Basin Coordinator):**

***Potential reduction or elimination of lake trout stocking:*** The Lake Huron Technical Committee did much work putting together criteria that managers can use when considering to cease or reduce stocking of lake trout in Lake Huron. Currently, few stocked lake trout survive and wild reproduction dominates. As the State and 5 Tribes begin negotiations on the new 2020 Great Lakes Agreement, discussions regarding stocking and future directions of the lake trout program will likely commence.

The Lake Huron Technical Committee met a few weeks ago to complete the reduce lake trout stocking plan recommendations. In March, at the Lake Committee meetings in Milwaukee Wisconsin, the results will be considered by the Lake Huron Committee to determine if the plan will be adapted. The outcome will be reported to the Advisory Committee at our April meeting. If adapted, the changes will be phased in. Lake trout are reared in Federal facilities and the fish take 18 months to rear.

***Over the next couple of years, there is the need to examine the data with the possibility of opening the lake trout season the entire year:*** As lake trout numbers increase and the fish are showing up near shore in the fall, shore and small boat anglers would like more fishing opportunity for lake trout. Since 2011 multiple regulation changes have been made. In 2011, regulations changed in various regions of Lake Huron. In 2012, because of harvest issues more changes were made. Between 2012 and 2013, regulations were simplified. In 2016, the same lake-wide regulations for lake trout went into effect. Within 4 years, we have made 4 significant changes. Currently, we are in a good spot with simplified regulations and meeting harvest goals.

With angler interest to open the season after October 1, the question becomes, can that be accomplished without overharvesting? Collecting information over the next few years will show how the new regulation changes are impacting the harvest. In addition, time is needed to evaluate the changes occurring while primary reproduction is changing from hatchery stocked lake trout to wild production. Although lake trout are plentiful, more time is needed before considering extending the season

**Modifications to creel assignments and port coverage for 2016 (Dave Borgeson, Fisheries Division Northern Lake Huron Management Unit Supervisor):**

The creel program provides extremely valuable data. Internally it was discussed if the creel data could be obtained in a more effective manner. Collecting data over time at specific sites allows trends in harvest to be determined. It was discussed if the trends could still be determined but also expand the survey to other ports with the current staff.

The Quantitative Fisheries Center at MSU conducted a review and developed an “Analysis of Creel Effectiveness”. The report indicated, 1) one person split between two sites provides sufficient coverage to provide a defensible estimate, and 2) covering a site at least every 3 years allows enough coverage to extrapolate defensible estimates. Therefore, with the retirement of an employee, the time is right to see if there is a chance to obtain more spatial coverage in Northern Lake Huron. In 2016 and forward, efforts are being made toward rotating certain ports within a three year rotation.

**Can a practical and effective method be developed to survey goby abundance in the Great Lakes? (Randall Claramunt, Research Biologist, DNR Charlevoix Fisheries Research Station):**

Randy conducted research in Lake Michigan to determine if there are more gobies than what the current surveys in all the Great Lakes have been indicating. Are gobies the new alewife? How many gobies are

in the lake? There are many collaborators trying to answer those questions but Randy wanted to stimulate the discussion so he undertook a new approach of investigating round gobies.

The current survey method of bottom trawling with nets over soft bottoms is providing erratic and low estimates of gobies. However, gobies are consumed by almost every predator in Lakes Michigan and Huron. This indicates that there could be many more goby in Lakes Michigan and Huron than what the survey results are indicating.

Randy mounted a GoPro Camera on a bottom trawl and pulled the net near the bottom. It was noticed that almost no gobies were found until the net approached rocky areas. When the net was in the midst of the rocky habitat the number of gobies climbed dramatically. It is apparent that the current goby survey method of netting over soft bottoms was sampling in areas where there are few gobies. The results of the annual forage survey in 2014 estimated that there were only about 2 kilotons (4,409,245 pounds) of gobies in Lake Michigan. Randy then calculated a goby abundance estimate from the information that he acquired by viewing gobies in their preferred rocky habitat and then projected those higher abundance levels over the shallow and deep areas of Lake Michigan with similar rocky habitat. The result indicated that there could be nearly 1,000 kilotons (2,204,622,622 pounds) of gobies in Lake Michigan! The calculated amount of gobies is 500 times higher than the estimates produced from the current survey method. This massive amount of calculated gobies is similar to the amount of alewives that were present in Lake Michigan during the peak years.

Randy's results need to be verified by developing an effective method of surveying gobies over rocky habitat and also more accurately determining the bottom types in Lake Michigan and the other Great Lakes. Having a reliable estimate of the goby abundance in each lake is critical for managing the fisheries because in Lakes Michigan and Huron the gobies appear to be the abundant forage fish.

Randy's work has created much interest in moving forward with learning more about gobies including developing an effective survey method. Currently, USGS, the MDNR, and other agencies are collaborating and beginning to move forward on this project.

### **Law Enforcement and Fisheries Division Manager Updates:**

**Larry Deslover, Law Enforcement Division** – Law Enforcement participated in Aquatic Invasive Species work from Detroit to Grand Rapids. The electronics on our boats are being updated.

**Dave Borgeson, Northern Lake Huron Unit Supervisor, Fisheries Division** – Black Lake sturgeon season starts this weekend. We have been keeping an eye on the ice all week and it will be adequate. Our unit will be getting two state workers this summer and these positions are very helpful for our field crew. In addition, we will be hiring an inland creel clerk to survey Mullett Lake this year to provide data for assisting in determining walleye allocations for State and Tribal users.

**Todd Grischke, Lake Huron Basin Coordinator, Fisheries Division** – There have been multiple shifts at the department level: Director Creagh became DEQ Director, William Moritz is Acting DNR Director, William O'Neill is Acting DNR Deputy Director, and Debbie Begalle is Acting Forest Resources Division Chief. These assignments may last only a few months, or be indefinite. Fisheries Division is in the process of hiring an Assistant Chief. Fisheries Division has not had an Assistant Chief since 1993.

We are wrapping up our cormorant recommendations. We are asking for a tweak within the Les Cheneaux Islands to bring numbers down a little, and for Saginaw Bay we are recommending reducing the cormorant population by 50% of peak nest counts.

Please continue to spread the word on Saginaw Bay regarding the regulation change on size and bag limit for walleye.

***Todd Wills, Lake Erie & Lake Huron Great Lakes Research Station Manager, Fisheries Division – Vessel updates:***

- The R/V *Chinook* was hauled out in mid-October, winterized, and shrink-wrapped. Discussions continue on a permanent home for the vessel after the commissioning of the R/V *Tanner* during the spring.
- Station staff members have participated in multiple site visits to Andersen Boat Works to monitor construction of the R/V *Tanner*. The final shape of the vessel is complete with the framing and plating of the pilothouse and cutting of window openings.
- Current work on the R/V *Tanner* is focused on electrical, hydraulics, and deck equipment layout.

**Major meetings attended (staff and venue):**

- BioSonics hydroacoustics workshop (He and Wills-Seattle, WA)
- State of Lake Huron meeting (He, Fielder, and Wills-Alpena)
- Fisheries Division all-staff meeting (Everyone-Bellaire)
- Great Lakes Captain's Association (Diamond and Wellenkamp-Traverse City)
- Midwest Fish and Wildlife Conference (Barr, He, Fielder, Wills, Wellenkamp-Grand Rapids)

**Office/lab/workshop/building activities:**

- Biologist staff continued data summarization/analysis from 2015 fieldwork.
- Biologist staff also spent time on topics including walleye/yellow perch regulation changes for Saginaw Bay, lake trout status and model updates, use of OTC for marking walleye fry, and a review of Lake Huron biodata requirements for the Statewide Angler Survey Program.
- Preparation of annual federal aid progress reports was completed, which also included preparation of research project briefs for public distribution and the research station website.
- Substantial progress in laboratory activities associated with 2015 fieldwork continues.
- Keys for the Hunt Creek Fisheries Research Station were officially shared with Lake Superior State University beginning October 1, 2015.

**Outreach Activities:**

- Station staff and science were well-represented at the 2016 Midwest Fish and Wildlife Conference in Grand Rapids. Fourteen presentations were authored or co-authored by Alpena staff, who also assisted by moderating sessions, assisting with audio/visual needs, and participating in student/professional mentoring events.

***Ed Eisch, Fish Production Manager, Fisheries Division*** – Been busy working on net pen aquaculture. Hatcheries are going well with everything on target.

***Jim Baker, Southern Lake Huron Unit Supervisor, Fisheries Division*** –

- After 10 years of planning and seeking funding, the Frankenmuth rock ramp on the Cass River is finally a reality. It was a partnership between the City of Frankenmuth and the U.S. Army Corps of Engineers.

- The total cost of the project was \$3.5 million; of which the U.S. Army Corps of Engineers provided 65% and the local match was 35%.
- The rock ramp connects 73 miles of the Cass River and its tributaries for fish passage and spawning habitat.
- Shiatown Dam on the Shiawassee River is slated for demolition this coming summer. A rock ramp will be installed there also to maintain some gradient control.
- Corunna Dam on the Shiawassee River, downstream of Shiatown, has failed. The City of Corunna is currently seeking funding to move forward with removal of the structure. (The Corunna Dam is a very low head structure and total removal should not cause serious erosion of upstream channel, banks and riparian properties.)
- Electrical work on the Auburn West Rearing Pond is completed. The work required replacement of 1800 feet of buried electrical power cable, a new power pole at 9 Mile Road, and a new motor starter, to the tune of \$18,000. In addition, electrical upgrades have been made to the pump at the Kawkawlin Rearing Pond to bring it up to code. These upgrades cost an additional \$2000. We should be operational in all of our rearing ponds for 2016.
- Our biologists and tech crew are involved in routine winter activities; aging fish, maintaining equipment, and writing up lake and stream surveys.
- Ice fishing on Saginaw Bay and the Saginaw River is at a standstill until (and unless) the ice freezes again. (There was some boat fishing going on over the past few days.) Ice fishing had barely got going on the bay when the ice blew out on January 28th.

#### Atlantic Salmon at Lexington:

Fisheries Division began planting Atlantic Salmon in Lexington harbor in 2013 as part of a lake-wide experiment to see if Atlantics could adapt to the current Lake Huron food web and partially replace Chinook Salmon in the blue-water fishery. (Chinook populations declined sharply after the collapse of alewife in 2003.) Other Atlantic Salmon plant sites included the St. Mary's River, the Thunder Bay River at Alpena, and the Au Sable River at Oscoda.

Unfortunately, we saw no return of Atlantics to Lexington in 2014, however, in late October of 2015, our creel clerk at Lexington reported several Atlantics caught and more observed jumping in the harbor.

We electrofished Lexington Harbor on November 2nd and collected 10 mature Atlantics while observing many more. They are very energetic and hard to net! The fish we boated averaged 20 to 24 inches in length and 4 to 5 pounds in weight and were in beautiful condition. Their size and our knowledge of Atlantic Salmon biology in Lake Huron indicate they were most likely from the 2014 Lexington plant.

As our Hatcheries Section continues to improve its ability to raise Atlantic Salmon, we are hopeful of seeing improved returns of Atlantics in future years.

## Atlantic salmon AD clipped DNR planted fish and stocking location for 2015

Catch Date	Catch Location	Length (in)	Stocking Location	Stocking Date	Average Length
8/15/2015	Rockport	20.2	Lexington	5/13/2014	4.88
5/17/2015	Tawas	19.0	Lexington	5/13/2014	4.88
4/13/2015	Marine City	18.0	Lexington	5/13/2014	4.88
4/15/2015	Port Huron	28.0	Lexington	5/13/2014	4.88
9/10/2015	Alpena	25.0	Lexington	5/13/2014	4.88
11/28/2015	Lexington	21.0	Lexington	5/13/2014	4.88
10/19/2015	Lexington	25.1	Lexington	5/13/2014	4.88
10/24/2015	Lexington	21.9	Lexington	5/13/2014	4.88
11/3/2015	Au Sable Rv		Au Sable Rv	2014	
9/24/2015	Lexington		Lexington	5/13/2014	4.88
8/2/2015	Detour	19.0	St. Marys Rv	2013	
10/6/2015	Rogers City	15.6	St. Marys Rv	2014	

### **Determining natal origins of juvenile Steelhead using otolith chemical analysis (Jory Jonas DNR Fisheries Research Biologist Traverse City Field Office, graduate student Nicole Watson presenting and graduated students Carson Pritchard and Kyle Broadway observing):**

Using laser ablation otolith chemical analysis, steelhead can be matched to their river of origin. Great Lakes steelhead is an ecologically and economically important species that originates from stocked and wild fish. There are multiple tributaries around Lake Michigan that produce unequal contributions of wild steelhead and gaining knowledge of the number of fish produced in each stream is important. This information will help ensure that streams that are the more significant producers of wild steelhead are managed and protected to optimize wild production.

Steelhead are aged by using otoliths (fish ear bones) which have concentric growth rings similar to tree rings. In addition, chemical analysis of the otoliths can be matched with the chemistry of streams to determine with high probability where a fish was produced in the wild. There is unique geology around the Great Lakes which gives streams unique chemistry that is incorporated into the steelhead otoliths.

The long term goal is to determine the natal origin of adult fish in Lake Michigan and the other Great Lakes. Field sampling will continue this year and from 2013-2016 over 40 streams will be analyzed.

### **The status of the State review of potential cage aquaculture in the Michigan waters of the Great Lakes followed by a discussion (Ed Eisch, DNR Fish Production Program Manager and Todd Grischke, DNR Fisheries Division Lake Huron Basin Coordinator):**

Much attention to aquaculture has been expressed by governmental, public, industrial, and legislative interests. Michigan has 43 active registered aquaculture facilities including 24 ponds, 14 flow-through systems and 5 recirculating operations. The aquaculture industry has expressed a desire to grow, and two specific Great Lakes net-pen proposals have been suggested but reviews of these projects were delayed until Great Lakes net-pen aquaculture could be evaluated. The Quality of Life Departments including the DNR, DEQ and MDARD are finalizing a review of the environmental, economic, regulatory and social aspects of such operations. All reports and related information available at [www.michigan.gov/aquaculture](http://www.michigan.gov/aquaculture). The following are some of the items being examined and activities taking place:

- 1) **Regulatory authority**-State and federal permits & licenses –There are also several binational agreements to consider; Great Lakes water quality agreement, Great Lakes Commission, etc.
  - a. An Attorney General review, based on the current law suggested that commercial net pens cannot legally operate in the Great Lakes (unofficial opinion).

2) ***Economic and scientific analysis***

The reports highlighted the following areas of uncertainty:

- a. Economic benefits and potential costs
- b. Environmental and ecosystem impacts
- c. Fish health and disease concerns
- d. Effects of fish escapes on wild populations
- e. Human health concerns
- f. Siting considerations
- g. Gaps in existing scientific literature

3) ***Public Engagement*** – a public meeting held on November 19, 2015 in Gaylord had 62 registered participants, 31 attendees provided spoken comment, nearly 1700 written comments were received (90% were food and water watch form letters), 117 additional written comments including letters from Illinois, Indiana, tribal nations, nongovernmental agencies, and eleven letters in support of the concept.

- a. Public concerns expressed included: effect of effluent on the environment, genetic implications of escapes, fish disease, inconsistent with public trust doctrine, competing recreational uses of the Great Lakes and concern related to antibiotic residue.
- b. Concerns expressed by stakeholder groups: fish disease, non-native fish introductions, unfair competition with more environmentally friendly aquaculture systems, perception of factory farming in Great Lakes and many of the same concerns as general public.
- c. Those in support: economics, job creation, Michigan can do more to fill growing global need for high quality protein.

4) ***Legislative Activity***

- a. Senate Bill 526
- b. Senate Bills 681, 682, and 683
- c. House Bills 5166, 5167 and 5168
- d. House Bill 5255

**Note:** since the Advisory meeting, the Quality of Life Departments recommended that net-pens should not be used in the Great Lakes. Those recommendations and the reasons for the decision may be viewed at this link: [http://www.michigan.gov/documents/mdard/Synth-Paper- NetPENS-09Mar2016\\_516439\\_7.pdf](http://www.michigan.gov/documents/mdard/Synth-Paper-NetPENS-09Mar2016_516439_7.pdf)

***Questions and comments from participants on net-pen aquaculture:***

***Jim Johnson and Frank Krist*** – discussed a handout ‘Some problems with cage aquaculture in the Great Lakes’ which weighs out concerns of research impacts based on science. There are four sections: public trust doctrine, water quality, fish health, and genetics. There are links to the references used in the report.

***Ken Merkel*** – New poll results and survey from January 2016 showed that the majority of demographics statewide are in opposition to Great Lakes net-pen aquaculture.

***Tom Keerl***- The science needs to be done. You need to go through the due diligence and review the science.

***Rick Kretschmar*** – 100% against Great Lakes net-pen aquaculture. He does not want to risk what we have in the Great Lakes and this is not something you ever want to consider having in the Great Lakes.

**Kent Herrick** – In Ontario, no new permits are being issued, they are very slow to adapt new regulations or change. However, grandfathered facilities are growing and expanding. This is going on, and not going away. It is better to understand it before if or it comes here. Great Lakes environment may not be conducive to a large number of facilities but we need to understand the benefits and concerns and become educated.

**Tom Baird** – The Anglers for the Au Sable has litigation against the Grayling Fish Farm and the hearing is proceeding. Net pens raise similar disease and other issues. This was a great discussion and the presentation and discussion was appreciated.

**Judy Ogden** – There is very little benefit of Great Lakes net pen aquaculture to the citizens of the state but there are high risks.

**Jim Johnson** – If operations were to achieve only a 10 million pound capacity, there would be an increased demand on inland hatcheries for feed and that would drive up the costs of operation for existing hatcheries, including the DNR facilities.

**Frank Krist** – Norway’s many years of experience with net-pens should reviewed to see the problems encountered. Norway is very transparent and produces a disease report annually and the net-pen facilities experience yearly losses from disease and in some years the losses exceed 15%. This is in spite that Norway has over 30 years of experience coping with disease and the pens are flushed with tides from 6 to 10 feet high. Currently, Norway is dealing with over 20 different diseases. Similar net-pen disease problems are often encountered in many other countries.

**Jim DeClerck** – **motioned** for the Committee to send a letter recommending opposition to commercial net-pen aquaculture to the Governor and Legislators that are sponsoring net-pen aquaculture bills. The Committee members present unanimously accepted that motion. Frank sent the letters out as directed.

## **Adjourned**

Next meeting dates:

- ❖ Wednesday April 13, 2016 at Jay’s Sporting Goods Inc. in Clare
- ❖ **Joint Lake Huron and Lake Michigan Advisory meeting, Wednesday June 22, 2016 location to be decided**
- ❖ Wednesday October 12, 2016 at Jay’s Sporting Goods Inc. in Clare
- ❖ All meetings will begin at 10 am and be completed by 3 pm.