



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.

Approved Minutes

Lake Huron Citizens Fisheries Advisory Committee (LHCFAC) Meeting Ralph A. MacMullan Center, Roscommon, MI Wednesday, January 11, 2012

Attendees: Jim Baker, Ron Beyer, Dave Borgeson, Chuck Bronte, Ron Christie, Jim DeClerck, Jim Dexter, Bud Donnelly, Rita Dubiel, Dennis Eade, Ed Eisch, Dave Fielder, Tom Goniea, Todd Grischke, Tom Hamilton, Lindsey Henski, Jim Johnson, Rick Kretzschmar, Frank Krist, Steve Lepeak, Eric MacMillan, Ken Merckel, Craig Milkowski, Doug Niergarth, Jack Noble, Judy Ogden, William Olar, Nick Popoff, Bob Reider, Ed Retherford, Brandon Schroeder, Dana Serafin, Julie Shafto, Fred Sterns, Jan VanAmberg, Terry Walsh, Gary Whelan, Dennis White and Tod Williams.

New Committee Members Appointed:

Mr. Rick Kretzschmar – Rick is a member of the Saginaw Bay Walleye Club and is very active with many types of outdoor activities including fishing in the open water and through the ice.

Captain Dennis White – Dennis is a member of the Area Sportsmen Club and is a Charter Captain fishing the St. Mary's River and northern Lake Huron. Dennis is currently working with Rogers Greil, manager of the Lake Superior State University Aquatics Laboratory, to study Atlantic salmon movement in the St. Marys River.

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

The minutes from the October 19, 2011 meeting were acknowledged and approved as is.

Quantifying the bycatch of Saginaw Bay's commercial trap net fishery – Eric MacMillan, Michigan State University:

The main bycatch species in Saginaw Bay during the study was walleye. The Bay was once the second largest commercial walleye fishery in the Great Lakes until the fishing collapsed around 1944. Besides walleye, the bycatch of lake trout, drum and suckers were determined.

Bycatch is the unintentional capture of fish and possibly other organisms not directly targeted by fishing. Total bycatch mortality consists of the initial fish mortality including floating and sinking dead fish removed from the nets. Total bycatch mortality also includes delayed fish mortality. The major component of bycatch mortality is dead floating fish and this was the aspect examined by this study.

Bycatch is not well understood. Past studies have been of short duration and bycatch is often not determined for many fisheries. For accurate population size estimations, however, bycatch must be incorporated.

Research Objectives:

- 1) Determine how much bycatch and bycatch mortality exists
- 2) Determine what factors influence bycatch and bycatch mortality
- 3) Determine seasonal bycatch totals

Management Implications:

- 1) Reduce bycatch uncertainty
- 2) Suggest ways to decrease bycatch and bycatch mortality
- 3) Application to other Great Lakes trap net fisheries

Results:

Inner Bay - There were 67 lifts with a total harvest of approximately 8,000 walleye, 4000 suckers, 3,500 freshwater drum, very few northern pike and a few lake trout. The two most important factors for increasing walleye bycatch per lift were the month fished and soak time (the time between net lifts). During the month of May, walleye bycatch was over 3 times higher than during June. During the months of July and August, the bycatch of walleye was low. Mortality of the walleye in the bycatch ranged from 30% to 40% during June to May and nearly 60% during July and August. As the depth increased, walleye mortality increased and additional soak time resulted in a larger bycatch.

Outer Bay - There were 91 lifts with a total harvest of about 3,500 lake trout along with a few walleye and burbot. The number of lake trout appearing in the bycatch per lift increased from about 3 during June, to about 20 during May, to about 45 during July to about 70 during August. Mortality of the lake trout bycatch ranged from around 2% in June, to around 10% during May, to around 25% during July, and to around 45% during August. The most important factor regarding lake trout bycatch survival was surface water temperature with mortality increasing as the temperatures increased. Few walleyes were part of the bycatch in the Outer Bay but mortality ranged from 80% to nearly 100% in these deeper nets.

Total Bycatch: The lake trout bycatch from May through August in the Outer Bay was 9,113 caught and 2,979 dead. The walleye bycatch in the Inner Bay was 51,206 caught and 23,475 dead. The total estimated walleye mortality for the entire fishing season from March through December was 102,000 fish.

Reducing Bycatch:

Reducing soak time (the time between net lifts) and adjusting the time of year fishing may reduce bycatch.

Reducing Mortality:

Mortality for walleye bycatch can be reduced by reducing the depth fished and mortality for lake trout bycatch can be reduced by fishing when the water surface temperature is cooler.

Conclusions:

More research is needed to better define the amount of bycatch and to confirm the best methods of reducing bycatch and mortality.

Identifying sources of walleye mortality in Saginaw Bay – Dave Fielder MDNR:

The commercial harvest of walleye was permitted historically in Saginaw Bay until the collapse in the 1940s. The recent disappearance of alewife, which ate walleye fry, allowed walleye reproduction to surge!

The Michigan DNR has been using a newly developed computer model known as a Statistical Catch at Age model to quantify the various mortality sources for Saginaw Bay walleye. The model tells us the number of walleye in the bay. At our peak in 2007, the model estimated that there were 8 million walleye! This

number has declined some, probably to a sustainable level. Stocking was stopped in 2006 since the vast majority of Saginaw Bay walleye are naturally reproduced.

By virtue of walleye movement to the main basin, the DNR believes that the primary sources of mortality exerted on Saginaw Bay walleyes are (1) the recreational fishery in the Bay and up and down the coast of Lake Huron in the Michigan waters, (2) some proportion are exploited by the commercial fisheries (trap net and gillnet) in the Ontario waters of the southern main basin, (3) some proportion are believed to be exploited by the tribal gillnet fishery in the northern most reaches of the Lake Huron and (4) some walleyes are killed as commercial bycatch in the State licensed commercial fishery that operates in Saginaw Bay (newly quantified by Eric MacMillan's study at MSU).

In his presentation, Dave sought to compare the relative magnitude of these sources of walleye mortality and depict the overall walleye population size from the model. He cautioned that the model is still preliminary and that further refinement may alter the estimates and change their interpretation. At present, however, he noted that the total exploitation rate exerted on Saginaw Bay walleye by all sources including commercial by-kill does not appear to threaten the current healthy population. The Statistical Catch at Age model made use of the MSU estimates both the primary value for May through August and also the larger expanded yearly total estimate. Dave Fielder cautioned that the model's calculations for the estimate of by-kill before 2010 had considerable uncertainty since several assumptions were made. Dave's presentation included some graphics that attempted to indicate the relative size of harvest or by-kill for each source of mortality. Dave indicated that there are several research projects that are currently being conducted on Saginaw Bay walleye that will shed more light on the subject in the near future and help refine the model's estimates. In addition, anticipated is a decision analysis method that will be a tool to help fishery managers evaluate various management options.

Todd Grischke, Lake Huron Basin Coordinator, remarked that the commercial by-kill of walleye in the Bay is not a new phenomenon and that there is just a measure of it for the first time. He pointed out that there may be some options to regulate trap net soak time and other potential options in the future in an attempt to minimize by-kill but no decisions have been made regarding changes to management of the Saginaw Bay walleye fishery

Question and Answer session for Eric MacMillan's and Dave Fielder's presentations:

1) How many commercial licenses are there in Saginaw Bay?

There are 20 licenses (14 trap net licenses) on the Inner Bay. However, only 10 are actively fishing. The Outer Bay has two licenses (10 nets each) that are both trap net fisheries.

2) Soak time was clarified as the time the net is in the water between lifts.

3) It was suggested by an Advisor that a buy-out of some commercial fishing licenses in the Inner Bay would reduce conflicts and be better for economy.

4) There was a discussion of the next step that might be taken to reduce bycatch and it appears that more onboard monitoring is needed to better evaluate alternatives such as soak time and seasonal adjustments.

An update and video of the new artificial reefs in Thunder Bay – Jim Johnson, MDNR:

The Thunder Bay Reef Restoration project investigated three problems: 1) the extent that lake trout and whitefish require clean rocky substrates for egg incubation, 2) why lake trout reproduction is low and 3) why whitefish reproduction has declined to near zero since 1998.

Cladophored Reefs:

Jim presented a video that showed a *Cladophored* reef that was once used for spawning. Jim developed the term *Cladophored* by illustrating how a clean rocky reef that was recently exposed to a profuse growth of the

filamentous algae known as *Cladophora* was *clobbered* into an unrecognizable mass of weeds thus becoming Cladophored. Prior to the food web changes, these rocks were clean but since 2003, much prime spawning habitat has been Cladophored.

Goals:

The Reef Restoration project had four goals: 1) mitigate for loss of reef habitat, 2) improve spawning habitat and reproduction of lake trout, 3) enhance spawning habitat for walleye and whitefish and 4) and provide habitat attractive to smallmouth bass and other bottom dwelling species.

Number and Size of the New Reefs:

There were two years of preconstruction investigation of existing reefs, mapping and studying reef design. The study will continue for a total of 5 years to compare artificial and native reefs. We have successfully placed 1.82 acres of added artificial spawning habitat in Thunder Bay just offshore of the Cement Plant. The reefs were either 5 or 10 feet high and there were 8 round reefs 30 feet in diameter, 24 study reefs 35 x 75 feet and 1 large reef 300 x 75 x 5 feet.

Monitoring for 3 Years:

The reefs will be monitored for the next 3 years with egg traps and bags during the fall, fry traps in the spring and fall survey netting for spawning lake trout and whitefish. A netting of spawning lake trout and whitefish on the reefs was conducted in October and November of 2011. Most of the spawning lake trout and whitefish were caught on the degraded and weed covered natural East Reef including 224 wild lake trout, 153 hatchery lake trout and 92 whitefish. In addition, other species were caught on the reefs including 399 rock bass, 336 smallmouth bass, 199 sucker, 89 walleye and 50 burbot.

Questions to be Answered:

There were very few lake trout and whitefish caught on the new reefs therefore; if you build a reef, will they come to spawn? Is there an odor that attracts the spawners to the old reef? Are the fish using precise navigation abilities to return to the same location? Is there something about the new reefs that repel the spawners? How long before the new reefs become degraded by weeds? Can fish reproduce successfully on the Cladophored (weed covered) reefs? What is the best design for the new reefs? These are questions that we hope to answer.

Mass marking currently of Chinook salmon and lake trout with potentially other species – Charles Bronte, USFWS:

This is a comprehensive, coordinated fish tagging/marking and data recovery program. All of the state and tribal fishery management agencies in the Great Lakes region are supporting the project. This program will provide better information on performance of hatchery reared salmon and trout and make it easier to determine fish of wild origin. The fishery is too valuable not to have the best information possible to make management decisions. This program will provide knowledge about natural reproduction of native and non-native salmonines; movement; contribution to sport, tribal commercial and subsistence fisheries; identify fish and hatcheries that have the greatest returns to the fishery and determine accurate year class strength.

The tagging technique is the insertion of a tiny metal Coded-Wire-Tag into the nose of fish with a clipped adipose fin. This process is conducted automatically by a Northwest Marine Technology AutoFish SCT Mass Marking Trailer. The trailer automatically sorts fish by size, measures the fish, records the data, clips the adipose fin and inserts a Coded-Wire-Tag tag at a rate of 5000-8000 fish per hour. The fish are never dewatered!

The program has been funded yearly through earmarks and the Great Lakes Restoration Initiative. Earmarks are no longer allowed so with no base funding after 2012 there is no financial support on the horizon. To

finish capitalization of the program, \$4.8 million is required. To operate the entire program annually (tagging, salaries, head recovery, database management service, etc) approximately \$5.9 million is required each year.

During 2011, all of the hatchery produced lake trout and Chinook salmon stocked in Lakes Michigan and Huron were mark by the program. If a base funding source is obtained there is the potential of marking other species such as steelhead.

An update on the fall yearling brown trout study and committee recommendations for future brown trout stocking in Lake Huron – Jim Baker and Jim Johnson, MDNR:

Last year, 2011 was the third year of stocking fall yearling jumbo brown trout. The plan included stocking fish for three years and evaluating the return for an additional 2 years. The stocking sites included Alpena (20,000), Tawas (20,000), Harbor Beach, (20,000), Rogers City (5,000), Port Sanilac (10,000), and Lexington (10,000). Stockings totaled 85,000 per year. The yearling fish were raised an extra 5 months in the hatchery from a size of 6 to 7 inches to 11 to 13 inches. To justify the cost of these large stocked fish, a goal of at least a 5% return to the anglers at each stocking site was established.

It was hoped that these much larger fish would be too big for most predator fishes to eat and by stocking late in the fall it was also hoped that the fish-eating birds would have already migrated south for the winter. The onshore migration of vast numbers of emerald shiners gave hope that there would be an abundant food supply for the newly-stocked brown trout. The thinking was that if the brown trout could make it through their first winter, learn to feed, grow, and disperse away from the stocking sites, brown trout might again find a place in the Lake Huron fish community.

Brown trout rarely live beyond 3 years and over 70% of the brown trout return to be harvested as 2-year-old fish after spending only one winter in the Lake. Because of this, at the end of 2011 the survival and growth rates for the vast majority of fish stocked during 2009 and 2010 could be estimated. The criteria set for success was to count harvested brown trout that were at least 16 inches long to ensure that the fish survived at least the first winter after stocking.

An analysis of the fish harvested showed that the 2-year-old brown trout averaged 16.9 inches in length and weighed 2.5 pounds which was much smaller than 2-year-old fish stocked during 2002 to 2005. The 2-year-old brown trout from the earlier plant averaged 22.9 inches in length and weighed 6.7 pounds. The lack of alewives probably contributed to the decline in size.

Creel studies at Lexington and Port Sanilac suggest that the brown trout harvest is about 20% higher if surveys are conducted through the months of November to March. Adjustments were made to the harvest data to reflect this factor at the other ports yet the information through 2011 still showed that the return to the angler's harvest is only about 0.68% of the number stocked which is far short of the goal of 5%. The creel data for 2012 will be evaluated at the end of the season and if the current trend continues the stocking of brown trout in Lake Huron will not be resumed.

Grant obtained for a new nearshore fishery survey in Lake Huron – Jim Johnson, MDNR:

The food web changes have shifted more of the offshore open water fish production to the bottom of the shallow water areas. The near shore zones contain vast amounts of rocky habitat in Lake Huron which has prevented extensive survey work of not only of the fish but bottom organisms because most standard sampling equipment was not designed for use over hard bottoms. This grant will allow the use of modified sampling equipment to assess the fish community from shore to a depth of 100 feet. Species that could be benefiting from the food web changes and will be represented in the survey include musky, smallmouth bass,

walleye, lake sturgeon, freshwater drum, gizzard shad, yellow perch and round gobies. Funding is provided through the EPA Cooperative Science and Monitoring Initiative for Lake Huron. This year, 2012 will be a period of intensive sampling and research in Lake Huron by multiple agencies.

The study will focus on Thunder Bay and Southern Lake Huron and sampling techniques will include beach seining, bottom trawling, large and small mesh gill netting, trap netting and electrofishing. Five vessels will assist with the survey and a masters student will complete a thesis by participating in the study.

The goals of the study include: 1) use beach seining to describe nearshore fish communities, 2) study the populations of smallmouth bass, walleye and yellow perch, 3) study the food items consumed by the shallow water dwelling fish, 4) determine the type of habitat that each species prefers and 5) determine sampling errors caused when the survey gear interacts with rocky and snag filled bottom habitat. In addition, the Thunder Bay River will be studied to determine if nutrients are drifting into Thunder Bay from the River or if the exotic mussels are utilizing the nutrients before they arrive in the Bay. In addition, if the nutrients make it to the Bay, efforts will be made to determine if any of the nutrients drift beyond the shallow water to support the offshore communities.

Discussion of the focus and format for the 2012 Spring Sea Grant Workshops – Brandon Schroeder:

We are still in the initial planning process and are soliciting recommendations, opinions and feedback. The workshops had a lot more participation with the 3 hour evening format that was used during 2011. Last year the meetings started at 6 p.m. and concluded at 9 p.m. The hosts and speakers were great and the feedback was from the participants was good.

For 2012, there are no big-ticket items like Chinook salmon stocking reductions, so suggestions on topics and locations were discussed. It was suggested that a theme approach be used that would focus on the “The Positives of Lake Huron”. Some agenda suggestions included, excellent walleye and improving yellow perch fisheries, forage update with a discussion of the surging comeback of smelt, Atlantic salmon hatchery updates, steelhead study with emphasis on anglers returning tagged fish heads, success with cormorant treatments, cisco hatchery production update, increasing wild lake trout reproduction, the diet study and the excellent diverse fishery that has developed throughout the Lake.

The committee continued to discuss potential topics and locations, with three locations being established including Ubly, Alpena and Cedarville. The plan is to rotate each year between Ubly and Harbor Beach and between Alpena and Oscoda. Frank and Brandon will work on establishing agendas and obtaining the speakers.

Fisheries Management and Law Enforcement updates:

Jim Dexter, Acting Fisheries Chief – Lake Michigan is in the same place that Lake Huron was last year evaluating the stocking levels of Chinook salmon. They are using a new decision analysis model, working with constituents on management strategies, and hosting public meetings.

The Department’s budget is not good because of declining revenue. Both hunting and fishing license fees were down for 2012 and the trend has been downward for several years. Also, since matching federal dollars depend on the number of licenses sold that source of income has decreased by 6% from 2011. There is no choice but to implement significant reductions for 2012.

Craig Milkowski, Law Enforcement – The Coast Guard asked for a group patrol in November. Larry Desloover is out with the Coast Guard now pulling Canadian gill nets in US waters. During this time of the year, there are often reports of mystery boats on the water that must be investigated.

Jim Baker, Southern Lake Huron Unit Supervisor – Typical winter work is occurring including aging scales and spines; mending nets; trailer repair and writing up survey summaries.

Dave Borgeson, Northern Lake Huron Unit Supervisor – We are working on fall walleye assessments from inland lakes and the large Inland Waterway Study. The crew is also working on the Wild Rose and Sturgeon River brown trout strains. Additional winter activity includes habitat work and report writing.

Gary Whalen, Hatchery, Tribal Coordination Unit and Habitat Supervisor – Gary reported on a conference he attended that had a presentation by Mark Duda from Responsive Management Research Firm, <http://www.responsivemanagement.com/>. The business conducts surveys throughout the country to determine attitudes of people toward the natural resources and outdoor activities including hunting and fishing. A highlight was that there is very good support over the country for hunting and fishing opportunities but participation is decreasing because individuals have less time available and some are losing interest. Family and work responsibilities are increasing which leaves less time for outdoor activities such as hunting and fishing. The presentation Gary mentioned from the conference presented by Responsive Management is attached.

The meeting dates for the remaining 2012 Lake Huron Citizens Fishery Advisory Committee Meetings are:

April 11, 2012,

June 19, 2012

October 16, 2012.

The meeting adjourn at 3:00 p.m.