

Northern Lake Huron Management Unit



FISHERIES DIVISION

MICHIGAN DEPARTMENT OF
NATURAL RESOURCES

ISSUE 6

JANUARY 2018

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What is the NLHMU?

The Northern Lake Huron Management Unit (NLHMU) encompasses all of the waters that make up the watersheds that drain into the northern portion of Lake Huron, from Sault Ste. Marie south to Oscoda. Our unit includes all or portions of the following counties: Chippewa, Mackinac, Cheboygan, Emmet, Presque Isle, Charlevoix, Cheboygan, Otsego, Montmorency, Alpena, Alcona, Oscoda, Crawford, Roscommon, Ogemaw, and Iosco counties. Fisheries staff working in this unit cover a diverse array of inland waters and Lake Huron ports. This diversity includes famous trout rivers, a large number of small inland lakes, some of Michigan's largest inland lakes, popular waters where lake sturgeon roam, and key Lake Huron fishing ports. All staff are housed at the Gaylord Customer Service Center except for fisheries assistants who are in charge of capturing angler catch statistics at various Lake Huron ports. This newsletter provides a snapshot of activities that our management unit conducted in 2017 and other useful information.

Personnel Spotlight-Ed Melling

Ed Melling is a fisheries technician in our management unit. He grew up in Fraser, Michigan and graduated from Fraser High School, then earned an Associates Degree from Macomb Community College and a Bachelor of Science in Fisheries and Wildlife Management from Michigan State University. He started working for Fisheries Division as a creel clerk on Lake Erie, became a fisheries technician in the Waterford Office in 1992, later spent 8 years in the Grayling Field Office then moved to the Northern Lake Huron Management Unit in 2010. With over 25 years of experience with Fisheries Division, Ed is an expert in all aspects of Fisheries work, has vast knowledge of equipment maintenance and repair, and is the Division go to guy on the art of net design and construction. Ed enjoys playing golf, spending time with his family and hiding from the cold in the winter.



Management Spotlight - Hubbard Lake

Did you know?

Rainbow smelt are present in some of our inland lakes. They are not native to the Great Lakes, and were likely stocked legally by DNR and illegally by the public during key days of smelt in Lake Huron. There is no doubt that smelt can be a valuable prey item for some predators such as walleye and northern pike. However, did you know that smelt populations can outcompete panfish populations in a lake due to their sheer numbers. Rarely will you find smelt in an inland lake with good perch and bluegill numbers and sizes. They consume some of the same prey items as juveniles, while adult smelt are highly piscivorous on juvenile panfish. They have teeth for a reason.



Jeff Gander

Walleye Population Estimate

At times, fisheries managers can find themselves conducting fish surveys or making decisions in a reactive manner. For example, angler calls about a “declining” fishery may urge us to learn more about that fishery prior to making a management decision (stocking, etc). Sometimes though, it is better to look ahead and gather fisheries data as a sort of baseline study. That is what we did on Hubbard Lake in Alcona County in the spring of 2017. This large lake has been a good wild walleye fishery for over two decades. We do not stock it. The lake is currently experiencing some of its own biological changes with the past invasion of zebra mussels and now round goby. We used trap nets and nighttime electrofishing after ice out in April to jaw tag and clip fins on over 3,400 walleye. Recapture sessions were conducted and the ratio of marked to unmarked walleye provided us with a basic estimate of over 3 adult walleye per acre in the lake. That is pretty healthy from a walleye perspective. The basic information on walleye density, growth, and age structure by gender gives us a baseline for future management decisions, especially if walleye or yellow perch populations change as a result of other biological or environmental factors.



Stocking and Management

Walleye Stocking 2017

From our **James Farm Pond** near Hillman we raised nearly 177,000 fingerling walleye and stocked the following lakes with 1.5" fish: Black Lake 123,930; Tea Lake 9,450; Long Lake (Montmorency Co) 16,450; Ess Lake 11,000; and Crooked Lake (Montmorency Co) 15,660.

From our **Reid-Berney Pond** near Alanson we raised 94,000 fingerling walleye and stocked 1.4" fish in these waters: Black Lake 50,270; Ocqueoc Lake 13,750; Kleber Pond 11,000; and Long Lake (Cheboygan Co) 19,910.

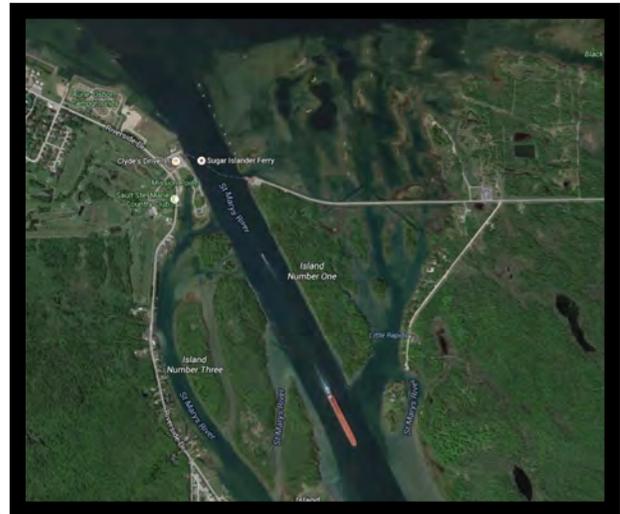


The St. Marys River system received 451,921 spring fingerling walleye spread throughout the river system as produced in the cooperative **eastern UP walleye ponds** with assistance from CORA, DNR, and the Drummond Island Sportsman's Club; while a U.P. tribal pond also stocked Black Lake with 101,035 2.2 inch fingerlings.

The following lakes were stocked with 1.4" fingerling walleye from the **Bay City rearing ponds**: Five Channels Pond 11,850; East Twin Lake 67,329; Vaughn Lake 12,690; Big Lake 20,790; Au Sable Lake 25,245; and Cooke Pond 87,181.

Habitat Spotlight - St. Marys River Little Rapids

As the only outlet to Lake Superior, the St. Marys River connects Lake Superior to Lake Huron and the lower Great Lakes. The river is approximately 70 miles long and is a truly unique system that provides world-class fishing opportunities year-round for a number of warm-, cool-, and cold-water fish species. Historically, the river had four main “rapids” areas – the Main Rapids, the Little Rapids, West and East Neebish Rapids. These relatively shallow, rocky areas with faster flowing water were very productive for a variety of different fish species. Over time, however, alterations to the river for navigation and other uses reduced or eliminated these rapids habitats, until only the Main Rapids remained, and that area now receives only about 10% of the river’s flow (the other 90% goes through hydroelectric power plants and the Locks). This loss of important fish habitat contributed to the St. Marys River being listed in 1987 as an Area of Concern in the Great Lakes Water Quality Agreement.



In 1996, DNR personnel suggested restoring flow to the Little Rapids area by putting culverts or bridges in the causeway. The idea was shared with officials from LSSU, Edison Electric, and the local sportsmans club. Edison funded a feasibility study for the Little Rapids Restoration Project in 1997.

Concerns were raised by the Great Lakes Carriers Association (Great Lakes Shipping) that allowing water to flow through the Little Rapids would drop water levels in the shipping channel. Sugar Island residents were also concerned about construction interfering with traffic on the causeway, which is the only way to get to the Sugar Island Ferry dock. A major concern of Island Residents was the potential impact on ice formation in the shipping channel, which could affect ferry service.



Habitat Spotlight - continued...

Over the decades this project remained a priority for DNR Fisheries Division, and several attempts were made to secure funding. Grant applications were submitted by Fisheries Division and other partners, including LSSU, the Eastern Upper Peninsula Planning and Development Corporation, the Chippewa County Road Commission, Chippewa-Ottawa Resource Authority, the St. Marys River Binational Public Advisory Council, Michigan Department of Environmental Quality, and the Great Lakes Commission. Finally, in 2011, a grant was obtained to do planning and engineering for the project, and river flows were modeled to ensure water levels in the shipping channel would not be impacted.

Starting in 2013, the Great Lakes Commission has received Great Lakes Restoration Initiative (GLRI) funding from the National Oceanic and Atmospheric Administration (NOAA) to complete this project with the Chippewa County Road Commission and other partners. The project included construction of a 5 span, 625-foot bridge, as well as physical and biological monitoring of the Little Rapids area. NOAA-GLRI funding for the project was \$9.4 million. Two-way traffic was maintained throughout construction by building a temporary roadway along the causeway. Bridge construction, which includes parking and a fishing area separate from traffic, was completed in fall 2016, and the entire project was completed in 2017.

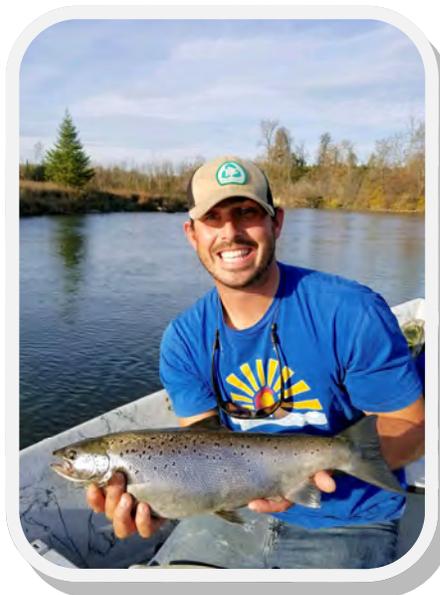


A little more than a year after the bridge was installed, we are starting to see benefits. There was an immediate improvement in flows, with the gravel and cobble substrates exposed very soon thereafter. LSSU monitoring is showing an increase in the use of the area by lotic species, or those that prefer flowing water, and a shift to species that prefer rocky substrates. Anglers are also enjoying the new bridge, with reports of Atlantic salmon, steelhead, pink salmon, and Chinook salmon being caught in the area.

Persistence paid off to accomplish this habitat improvement project that was proposed decades ago! The work of many different partners over two decades helped this project get done. Although it's a relatively small project on a geographic scale, it has the potential to have far-reaching impacts. The resource (and anglers) should benefit from this for generations to come.

Species Spotlight - Atlantic Salmon

A few newsletters back, we reported that the Lake Huron Basin of DNR was experimenting with stocking of Atlantic salmon at four sites, including Lexington, Oscoda, Alpena, and Sault Ste. Marie. Since then we have made many adjustments both at the hatchery and management unit level. Platte River Hatchery has had better success raising fish both from a size and health perspective. This species is a challenge to rear for a full year since they are vulnerable from a health perspective in captivity. At the management unit level we have stocked all sites in the spring when hatchery temperatures are near the temperatures of the receiving waters. In addition, we have held yearling fish in the St. Marys River in large holding pens for a slightly longer duration. In addition, we continue to get the word out to anglers that reporting of caught Atlantics is critical to helping us understand the future management direction. After all, what good is the program if anglers are not taking advantage of



it? Once stocked (regardless of location), this species utilizes the entire Lake Huron waters, with some individuals even venturing into the St. Clair River and Lake Erie corridor. However, their tendency to return to the stocked ports is strong. Return of stocked fish at age-2 and age-3 is always good in the St. Marys River. The returns in the fall to the Au Sable and Thunder Bay rivers have also been good, (as well as Lexington farther south) and anglers are now targeting them. We will continue to learn more about this species in the future.

Gear Spotlight

~ Trap Net ~

Large mesh trap nets are a fish catching gear type that is unique to Michigan and often used as a supplemental gear on lake surveys. A DNR Fisheries Division net builder designed them in the 1960s based on older pound nets which were used in the Great Lakes for commercial fishing in the early 1900s. Today's trap nets used on surveys consist of a 2 inch mesh lead that extends 150 feet to shore, heart wings that direct the fish into a funnel, and a 1.5 inch mesh pot that is three dimensional and holds the fish under water till survey teams can check and process the sample. More recent improvements to the nets have focused on making the nets lighter and easier to use. Today's nets are made of nylon twine and polypropylene line, are UV resistant and durable. With proper care a trap net can last many years. An individual net can take weeks to construct, as it requires over 4,000 hand sewn knots. These nets are built in-house, and specifically in the Northern Lake Huron Management Unit, by one individual who is trained in such activity. This saves the DNR a great amount of money as they would be costly to purchase. Larger versions of trap nets are used by DNR research section in the Great Lakes. Trap nets are a passive gear. This means, we place them in strategic shoreline locations of a lake, and let the net work on its own to catch fish. This typically happens in the evening, nighttime, and morning hours when fish are cruising the shoreline and are directed into the net pot from the lead which extends to shoreline. These nets are extremely useful in capturing certain types of fish and are often used by NLHMU when conducting adult walleye population estimates on certain lakes during the spawning period. We often use trap nets in the northern lakes of Michigan to supplement the catch from fyke nets and provide us a better, well rounded picture of the fish community. What are the enemies of a trap net and those who tend them? The answers are: shifting ice, muskrats, cranky snapping turtles, boat motors, and angler lures.



Trout and Beaver

Oil and water, that is how beaver and trout mix. Some may believe this, while the science would say that beaver and trout have been on the landscape well before we were here as humans. Beaver do provide many benefits to the landscape from groundwater storage, to wetland creation. As fisheries managers, we tend to have an up and down relationship with the animal. Some beaver dams can prevent fish passage and act as warm water retention ponds. It is certainly true that the trapping industry today is not what it was when pelt prices were high, and gas prices were low decades ago. The price today of a good beaver pelt may only be ten dollars or so, and of course will fluctuate over time. These fluctuations are most influenced by the need for fur in Asia, particularly Russia and China. As of this newsletter edition, beaver appear to be higher in numbers in northern Michigan. Because of this, we tend to receive more calls from the public regarding beaver damage, whether to a waterbody or adjacent landowner property. As an animal, beaver are managed through regulations by DNR Wildlife Division. There are certain waterbodies or watersheds where beaver may be problematic, and others where a species such as trout are not the key resource. We do our best to facilitate discussions between trappers and landowners who are having problems with beaver. It is best that landowners along waterbodies take a proactive approach to beaver



management, instead of a reactive approach. Shop around for a well respected trapper and provide them winter and spring access to your property so they can actively manage the species through harvest. Let wildlife management, through harvest, serve its purpose.

Angler Photo Center

Fish and kids go together



Wonder what the taxidermy cost would be for this one? Au Sable River



Sturgeon River brown trout



Angler and a Montmorency County brown trout



Perfect. A teenager, worms, and a small brook trout creek.

Dam Renovation - Big Creek Impoundment

The NLHMU is responsible for managing several dams that undergo periodic inspections by the Department of Environmental Quality's Dam Safety Program. In the fall of 2013 we were notified that the Big Creek Dam had failed its inspection due to significant leakage, and we were required to draw down the impoundment and begin planning for "the repair, replacement, or removal of the outlet pipe system."



First, we needed to decide if we should repair or remove the dam. We looked at current use, asked members of Forest Resources Division, talked to those who used the impoundment (they came out of the woodwork when we drew the impoundment down), and decided it would be worthwhile to repair the dam. That is easier said than done! However, thanks to a couple grants from the Dam Management Grant program, donations from concerned groups and individuals, Fisheries Division's

major maintenance budget, and our NLHMU budget, we gathered over \$200,000 to get the dam repaired in 2016.

The reservoir was refilled by the spring of 2017. We also stocked walleye fry in the spring of 2017. We electroshocked Big Creek Impoundment in 2017 and found bluegill, walleye, northern pike, and yellow perch. The presence of all these species helped guide our decision not to stock anything else at this time. We will continue to monitor the fish populations in the coming years to see if any additional management actions are needed.



DNR stocks 48,000 brown trout and 24,000 rainbow trout yearlings annually into the Au Sable River between Mio Dam and Alcona Pond. This is a popular trout fishing destination for many Michigan anglers, and is a world renowned fishery. In recent years, we worked with local anglers to better understand and



manage the fishery through regulations and tactical stocking. Stocking sites were increased from 4 to 8 sites in this reach of river as a tool to spread out fish and reduce competition around stocking sites. Past managers believed that natural reproduction of trout in this reach was absent or insignificant due to the warmer waters flowing out of Mio Pond and hindering juvenile fish survival. Results from past electrofishing surveys (2010-2013) indicated that stocked brown trout supplemented a wild population of trout in

this reach of river, and that wild trout numbers were significant. As a result we are currently in year one of a two year study to determine the proportion of stocked to wild brown trout, particularly at younger ages. In order to do this, Anglers of the Au Sable stepped up and helped clip the adipose fin of each hatchery stocked brown trout (48,000!) in 2017, and will continue this activity in 2018. Preliminary results from three electrofishing sessions this past fall indicated that stocked (clipped) age-I brown trout were found in acceptable numbers and about as equal to the number of wild age-I brown trout. Thus, we are getting the best of both worlds. Many large brown trout thought to be of hatchery origin were also observed based on possessing compressed dorsal fins. At the same time, many wild (no fin erosion) large brown trout were also captured. The electrofishing sessions also provided additional information on rainbow trout numbers, walleye, and even menominee. Overall, the river looks pretty good below Mio, and there are plenty of big brown trout to be caught! We will examine this reach of river again next fall, and make management tweaks if necessary.



NLHMU Creel Personnel....

Each year from April through October, at various Great Lakes ports, anglers may be greeted by a DNR Statewide Angler Survey Program (creel) clerk looking to gather valuable information about your angling activities. Please take a moment to get to know a little more about these friendly folks that would love to hear about your most recent fishing trips!

Julie Shafto was born in Kalamazoo, Michigan and currently resides near the crystal clear waters of Lake Huron in Rogers City. She attended Lake Superior State University. Prior to working with the creel program Julie worked at Wolf Lake State Fish Hatchery as an interpreter and volunteer. She also spent numerous summers working in the Wolf Lake Fish Health Lab. In 1999 Julie joined the creel program and has since worked at various northern Lake Huron ports including Rogers City, Presque Isle, Rockport, Alpena, and the Ocqueoc River. In her free time Julie enjoys joining the ranks of the anglers fishing out of Rogers City and gardening when the weather doesn't allow her to fish. For the 2018 season you may expect to encounter Julie working the ports of Rogers City and Alpena.



Mike Ferguson was born in Flat Rock, Michigan and currently resides in the tranquil port town of Detour Village. He attended Eastern Michigan University. Prior to joining the DNR Mike proudly served his country for 20 years as a member of the U.S. Air Force. In the year 2000 Mike began with the creel program and has since served in various positions on Lake Erie, the Detroit River, the St. Mary's River (from Sault Ste. Marie to Drummond Island), St. Ignace, the Les Cheneaux Islands and Detour Village. In his spare time Mike enjoys fishing and rabbit hunting with his beagles. For the 2018 season Mike is once again scheduled to work in Detour and the Les Cheneaux Islands area.

Creel Personnel continued....

Kynzie House was born and raised near the Alpine Village of Gaylord, Michigan where she also currently resides. She attended Central Michigan University. Kynzie began work with the DNR in 2014 as a short-term worker for Fisheries Division. In 2015 she joined the ranks of the creel program, performing inland surveys on East and West Twin Lakes in Montmorency County. That same year Kynzie accepted a transfer to work in Marquette. During her time in the U.P. She worked on both Lake Superior and the inland waters of Au Train and Deer Lakes. In 2017 she accepted a transfer to the NLH unit to perform creel at St. Ignace (including the Carp and Pine Rivers) and Cheboygan. In her free time Kynzie enjoys fishing, hunting, and playing rugby. In 2018 Kynzie is scheduled to work the ports of Cheboygan and Hammond Bay.



Lee Martin was born in Clarkston, Michigan and currently resides in the rustic abode of Glennie. He attended Grand Valley State University. Prior to joining Fisheries Division Lee worked for the DNR as a short-term worker with Parks and Recreation Division at the Holly Recreational Area and for Wildlife Division at a deer check station in Grass Lake. In 2016 Lee joined the creel program working on Lake Erie. In 2017 Lee took the opportunity to transfer up north and performed creel at the ports in Alpena and Oscoda. In Lee's spare time you may very well encounter him wetting a line somewhere upstream on the Au Sable River. In 2018 Lee is scheduled to work the ports of Harrisville and Oscoda.

This coming angling season please take an opportunity to stop by and say 'hi' to one of our Northern Lake Huron clerks, even if you haven't been out fishing – they should have some good fishing tales to share with you. We'll hope to see you back at the dock!



Field Photos

Cold evening helping out on Lake Gogebic



Wakely Lake pike



Hubbard Lake walleye with new jewelry



Electrofishing the Au Sable River



Mullett Lake smallmouth bass



Netful of walleye in Alcona County



2017 Lake & Stream Surveys, field work

During the spring and early summer our unit conducts fish community surveys on lakes when temperatures reach 55-75 degrees Fahrenheit. Our stream fish surveys are mostly done from July through early September. A variety of gear types are used on lakes while direct current electrofishing is primarily used on rivers and smaller creeks. Some surveys are general examinations of the fish community, while others are directed towards a specific species. Here is where we focused our entire efforts in 2017.

- Black Lake sturgeon fishing season
- Hubbard Lake walleye population estimate at ice-out
- Inland Waterway spring muskellunge tagging efforts
- Fish community surveys on Mullett Lake, Wakely Lake, Frenchman Lake, Loon Lake (PI Co)
- Black River, Pigeon River, Pine River water temperature monitoring
- Walleye pond culture
- Angler pressure survey on Tomahawk Creek Flooding
- Trout population estimates at the North Branch Au Sable (3 sites), Au Sable River (Mio), Black River, West Branch Sturgeon River, and West Branch Maple River
- Stream fish community assessments at Coppler Ck, Duval Ck, East Branch Pine River, Hannah Ck, McGinn Ck, Pickerel Ck, Perry Ck
- Swan River salmon weir operation
- St. Marys River fish community assessment
- Fall juvenile walleye assessments at Long Lake (Montmorency Co.), Ess Lake, Black Lake, Big Creek Impoundment, Big Lake, East Twin Lake
- Trout stocking evaluations Au Sable River at Mio, Mckinley, 4001



Looking Ahead

Scheduled Surveys

2018

Spring Fish Community Surveys:

- Shupac Lake (Crawford Co.);Twin Tomahawk Lakes (Presque Isle Co.)
- Chain and Jose Lake (Iosco Co.); Foch Lake (Montmorency Co)

Springs Muskellunge Tagging:

Inland Waterway and connecting waters

Stream Fish Community Survey: South Creek, others to be determined

Trout Population Estimate: North Branch Au Sable Rv (3 sites), West Branch Maple River, West Branch Sturgeon River, Gilchrist Creek, West Branch Big Creek

Water Temperature Monitoring: Pine Rv, Pigeon Rv, Black Rv watersheds

Fall Juvenile Walleye Index: Black Lake, St. Marys Rv, many sites to be determined

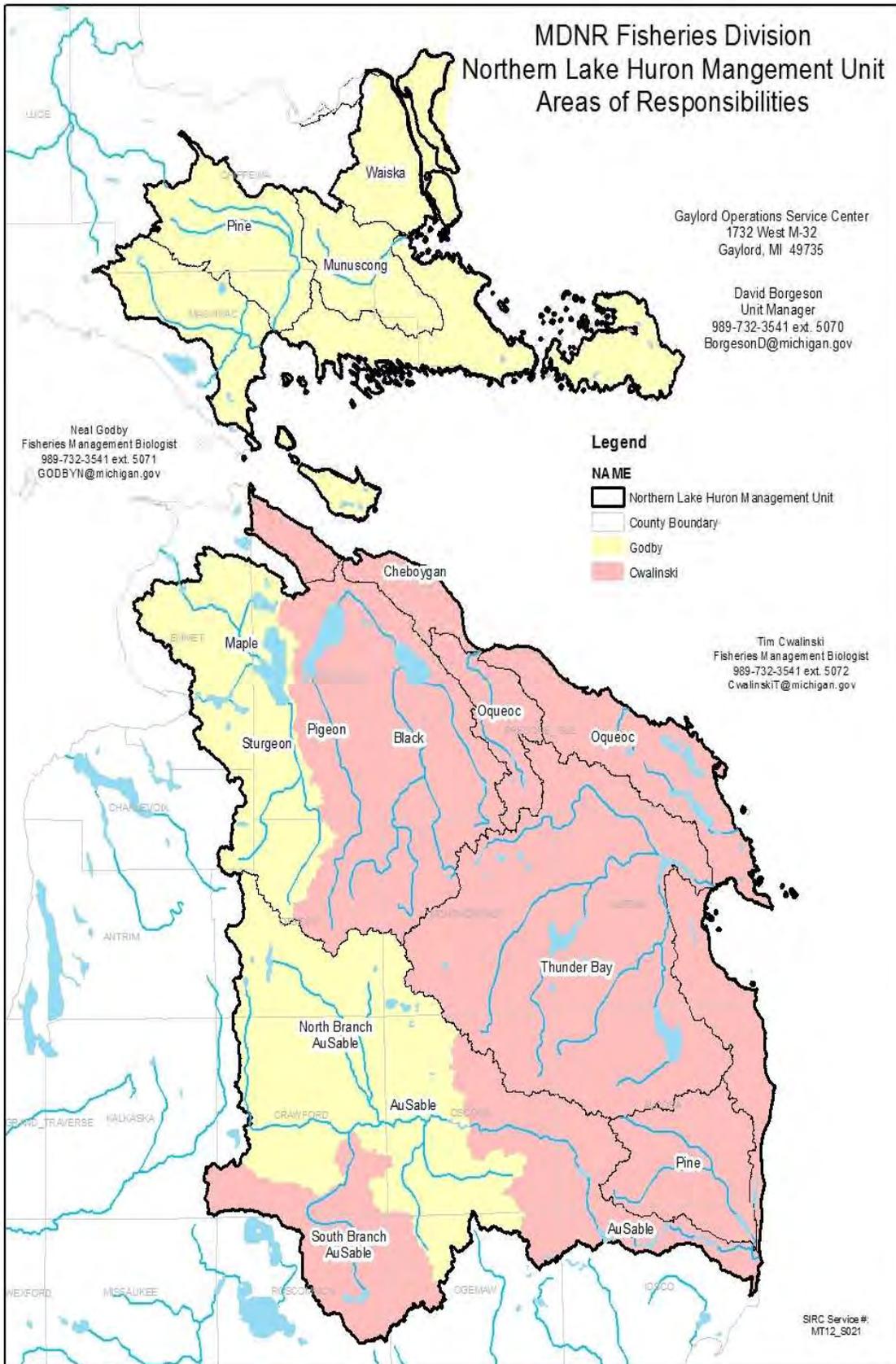
Fall Trout Stocking Evaluations: Au Sable River below Mio, others to be determined

Angler Census: Black Lake (winter)

Angler Pressure Estimates with Trail Cameras :
To be determined



Contact us at any time



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