# THE GREAT LAKES

THE OFFICIAL PUBLICATION OF THE MICHIGAN STEELHEAD & SALMON FISHERMEN'S ASSOCIATION

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Anna Mooney, MDNR, Rep. Gary Howell, R-North Branch, Rep. Curt VanderWall, R-Ludington and Dan Eichinger, Chair of the MLSC Advisory Council look on as Dreamweaver Charters returns to port.

### **Lawmakers Learn More About the Fishery**

On a sunny and relatively calm Monday morning, July 10th, MSSFA organized a two day Michigan Legislative Sportsman Caucus (MLSC) fishing outing in Ludington, MI. The event was sponsored by the MLSC's Advisory Council whose vice chair is Dennis Eade, MSSFA's executive director. The charter fishing boats were arranged through Shane Ruboyianes, president of the Ludington Charter Boat Association. Eight boats left the harbor at 6:00 am with two legislators per boat, a MDNR fisheries biologist or manager, and a representative of the advisory council on board. The goal of the event was to get lawmakers on the water to experience firsthand the excitement of catching salmon and trout on the world's largest freshwater fishery the Great Lakes. Collaterally, it was a chance for biologists to share their knowledge of the effects of invasive species, like quagga mussels, gobies, etc. on the fishery and efforts to manage the ecosystem to maintain a healthy and diverse fishery. Finally it was a chance for advisory council members to share

> "Lawmakers" Continued on page 3

### **Army Corps Releases Report for Asian Carp**

By Marc Smith, Great Lakes Conservation Director for the National Wildlife Federation

On Monday, August 7, the U.S. Army Corps of Engineers (Corps) released a draft plan for how to protect the Great Lakes from the invasive Asian carp. It looks at options for bolstering defenses at a lock and dam structure near Joliet, Ill.—officially called the Brandon Road Lock and Dam-which is a choke point between the current location of Asian carp and the Great Lakes.

The draft study was

Trump Administration delayed its release for five months. The live capture of a silver carp on the Lake Michigan side of the electrical deterrents in June, combined with Bi-partisan Congressional pressure and public outcry forced the Trump Administration to release the study. (The draft plan can be found at: http://glmris.anl.gov/brandon-rd/)

The study offers promising solutions to keep the invasive Asian carp at bay. It relies on multiple technologies to reduce the

ready in February, but the chance Asian carp can enter the Great Lakes. The Corps essentially lays out a plan in which Asian carp have to run a gauntlet of defenses before the invasive fish could even get to the Brandon Road lock - reducing the chance that an Asian carp gets through at each stage. The Corps needs to finalize this plan as efficiently as possible and Congress needs to act with urgency to authorize and appropriate the necessary actions that will help

> "Brandon Road" Continued on page 7

### **Commercial Fish Farming: Economic Boom or Bust**

Proponents of the commercial fish farming industry, including some Michigan lawmakers, believe that allowing net-pen fish farming in the Great Lakes could supersize the state's \$5 million-a-year aquaculture industry into a billion-dollar enterprise within a decade, citing estimates from a 2014 Michigan Sea Grant strategic plan.

Michigan Sea Grant predicts up to 5,000 acres of the Great Lakes and Michigan landscape would be occupied by aquaculture infrastructure, and a Michigan DNR projection foresees 250 fish-farming facilities in the Great Lakes by 2025. The envisioned payoff could include supplying Detroit, Chicago, Toronto, and other areas with fresh fish, increasing jobs and revenue to Michigan communities, and providing the recreational fishing industry with baitfish.

Many Great Lakes advocates, however, say that vision would jeopardize multibillion-dollar Great Lakes restoration efforts, protected public uses, and the well documented benefits to the Pure Michigan economy already flowing from the Great Lakes—all for a small number of new

jobs. Great Lakes net-pen aquaculture, for example, could threaten sport fishing in Michigan and the nearly 38,000 jobs and \$4.4 billion a year in economic activity it provides, since farmed fish are known to escape their cages, spread disease, and outcompete wild fish.

A study by the MSU Center for Economic Analysis in October 2015 confirmed that the economic return would be modest, finding that the two active proposals to place commercial net-pen fish farms in the Great Lakes near Escanaba and Rogers City would provide no more than 44 Michigan jobs with a total annual income of about \$2.5 million.

In recommending against opening the Great Lakes to net-pen aquaculture, a March 2016 report by the MDNR, MDEQ, and

> "Commercial" Continued on page 3



Search groups for MSSFA

### **Study: Worsening Great Lakes Algae Blooms**

WASHINGTON (AP) Projected increases in rain from global warming could further choke U.S. waterways with fertilizer runoff that trigger dead zones and massive algae blooms, a new study said.

If greenhouse gas emissions keep rising, more and heavier rain will increase nitrogen flowing into lakes, rivers and bays by about 19 percent by the end of the century, according to a study in Thursday's journal Science.

While that may not sound like much, many coastal areas are already heavily loaded with nitrogen. Researchers calculated that an extra 860,000 tons of nitrogen yearly will wash into American waterways by century's end.

The nutrients create low-oxygen dead zones and harmful blooms of algae in the Gulf of Mexico, Great Lakes, Pacific Northwest and Atlantic coast.

"Many of these coastal areas are already suffer-

ing year-in, year-out from these dead zones and algal blooms," said one of the researchers, Anna Michalak, an ecologist at the Carnegie Institution for Science at Stanford University. "And climate change will make it all worse."

When waterways are overloaded with nutrients, algae growth can run amok, creating dead zones. Algae can also choke waterways

"Algae" Continued on page 19



An example of commercial net-pen fishing. Photo from http://wnmufm.org

### **IDEAS FOR CATCHNG MORE FISH** IN CLEAR WATER

#### by Bob Jensen

Autumn is quickly approaching, and in many areas, the water clears up in the fall. This is due to several things within the ecosystem, but the reality is, autumn waters can be clearer, and that will affect how we the fish react. And how the fish react should have an impact on how we react to our fishing presen-

I've got a trip planned to visit Sturgeon Bay of Door County in Wisconsin this fall. In planning for this trip, I refer back to a trip I made there in the fall a couple of years ago. Door County is a peninsula north of Green Bay in extreme eastern Wisconsin and is known for its ultra-clear water: When ice-fishing you can see bottom in almost fifty feet of water. That's clear stuff, and it requires special fishing considerations if you want to be successful.

On this particular trip we started out fishing for walleyes. Much of the time we think of walleyes to be bottom-hugging fish, and in many bodies of water they are. But walleyes are hungry in the summer and fall, so they'll be wherever the baitfish are. Around Door County, the baitfish suspend, and the walleyes do the same. At times they'll be just a few feet below the surface. On this day on the water, we employed a trolling presentation that's very refined and that enabled us to keep our spinner rigs where the walleyes were.

We used planer boards with Off Shore snapweights. We set out three lines on each side of the boat. The outside lines had the lightest weights, so those rigs were running closest to the surface. The lines closest to the boat had the heaviest weight. This meant that the lines closest to the boat were running the deepest. We were covering three different depths on each side of the boat. In this exceptionally clear water, most of the walleyes bit on the line farthest away from the boat. We were using Off Shore in-line planer boards with Tattle flags, so the boards were easy to read even when they were a good distance from the boat. By employing this technique, we caught good



Dean Arnoldussen is one of the best anglers anywhere at catching suspended walleyes. This one was suspended down seventeen feet over thirty feet of water.

numbers of walleyes, and feet of water. We saw sevsome big ones.

Later in the day we got after smallmouth bass. They were in four to six

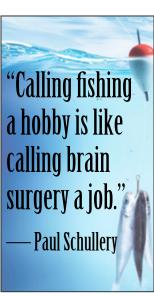
eral swimming near the boat, but they wouldn't eat our bait. We started making long casts and started

catching smallmouth, nice ones, very regularly. They wouldn't eat our baits when they were close to the boat, but if they saw it when it was a good distance away from the boat, they ate it willingly. Many of the biggest bass bit as soon as the bait hit the water at the end of a very long cast. This is when a no-stretch line like P-Line XTCB Braid can be a huge benefit. You get much better hooksets when the line doesn't stretch. Some anglers like to tie a fluorocarbon leader to the braid. They believe this makes the presentation more appealing to the fish, as the fluorocarbon attached to your lure is less visible than the braid. Tie a two foot leader of eight pound test Tactical Fluorocarbon to your braid and see if the strikes increase.

You can catch lots of fish, and big fish, in clear water if you employ techniques that minimize the effects of the clear water. Fish have to eat regardless of water color. Keep the above ideas in mind and vou'll catch more fish when the water is clear.

To watch all the new as well as older episodes of Fishing the Midwest television, see some short fishing tip videos, or to read fishing articles from the archives, visit fishingthemidwest.com





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#### "Commercial-" Continued from page 1

MDARD determined that Michigan lacks a funding stream for the \$3.3 million in startup costs to implement a commercial net-pen aquaculture program to protect the public's interest in the Great Lakes, and another \$2.3 million needed annually to monitor and maintain the program and to protect the state's resources.

#### **Ecological Threats**

The Great Lakes belong to the public, and these majestic waters define Michigan, power the Pure Michigan economy, and provide a distinct way of life. FLOW and other Great Lakes advocates oppose net-pen aquaculture as it would violate public trust and environmental laws by:

1. Dumping untreated fish waste directly into the Great Lakes that is laden with nitrogen and potentialphosphorous, ly triggering toxic algae "dead zones" like the one in 2014 that shut down Toledo's drinking water supply from Lake Erie. A typical 200,000-fish farm, for example, creates as much fecal matter as a city of 65,000 people—about the size of West Bloomfield's population—and threatens to make the Great Lakes "a toilet bowl," according to a state lawmaker.

2. Providing a breeding ground for parasites and diseases such as whirling disease, infectious salmon anemia, and viral hemorrhagic septicemia that can spread and mutate to wild populations, risking the

health of the Great Lakes fishery and ecosystem. Disease has devastated fish farms in the United States and across the world, including in Canada, Scotland, Norway, and Chile. Managing disease often involves applying antibiotics and other pharmaceuticals that could persist in the environment and impact other fish, wildlife, and potentially humans.

3. Leading to escapes from damaged cages or **net-pens** due to operator error, storms, ice damage, defects in the cages, and other causes. Escaped fish compete with wild fish for food and interfere with their reproduction and genetic diversity. For example, in October 2016, a cargo ship accidentally tore apart a fish-farm net off Denmark in the Baltic Sea, setting free the entire trout farm and its 80,000 rainbow trout. The Great Lakes host some of the world's best fishing for steelhead, a variety of rainbow trout. The net-pen proposals before the state call for raising rainbow trout, and the seemingly inevitable escapes would put the wild steelhead population in danger.

4. Introducing invasive species into the wild if non-native species are raised in the net-pens and some escape. Invasive species have significantly changed the Great Lakes by competing with native species for food and habitat. Invasives foul beaches, harm fisheries, clog water pipes, and lead to regional extinction of species.

2017 Tentative Print Schedule					
Issue	Deadline	Print Date			
1	12/30/2016	1/6/2017			
2	2/17/2017	2/24/2017			
3	4/21/2017	4/28/2017			
4	6/30/2017	7/07/2017			
5	8/25/2017	9/1/2017			
6	10/20/2017	10/27/2017			

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#### MICHIGAN STEELHEAD AND SALMON FISHERMEN'S ASSOCIATION

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Ken Merckel. President Eric Braden, Vice Presiden Dennis Eade. Executive Director Gerry Sickon, Secretary Nick Hamadanchi, Treasurer

The Michigan Steelhead and Salmon Fishermen's Association (MSSFA) is a multi-state, non-profit organization dedicated to educating the general public on improving, reserving and promoting sport fishing, the Great Lakes and their ributary streams and rivers. Commonly referred to as The Michigan Steelheaders or simply Steelheaders. MSSFA represents sport fishing families in the Great Lakes region. MSSFA encourages the strictest observances of sport fishing laws and ethical fishing practices.

#### "Lawmakers" **Continued from page 1**

their ideas for protecting, promoting and enhancing sport fishing in Michigan.

The event began with a reception on Sunday evening hosted by Representative Curt VanderWall (101st Dist.) and sponsored by Blue Cross Blue Shield of Michigan at the Timbers Restaurant. Seventeen lawmakers and staffers participated and enjoyed the camaraderie of this bi-partisan time together. Rep. VanderWall got to show off his shining city on the water and engendered some good natured competition by suggesting a little side wager to see who would catch the biggest fish and what team (boat) would bring in the most fish the following morning.

Boats left the harbor at 6:00 am on Monday and headed north off the point or south off little point closer to Pentwater. The fishing was good with boats catching lake trout, steelhead and salmon.

When the boats returned at noon, State Rep. Triston Cole, (R-Mancelona), his daughter Ruby, State Rep. Daniela Garcia, (R-Holland) and Bill Jackson of McAlvey Merchant & Associates won the team event catching sixteen fish on Captain George Freeman's boat Free Style. Cole also won the side wager for big fish. Rep. Daniela Garcia did experience some sea sickness but overcame the malady to haul in four nice fish. "Today was the first fishing trip of my lifetime and I got four!" said Garcia. "It was an absolute Pure Michigan day," state Rep. Triston Cole said of Monday's event. a beautiful place." He brought his daughter Ruby along for her first Lake Michigan fishing experience. "Michigan is blessed with an amazing coastline," said Cole, who said he is "lucky enough" to represent another beautiful area, Petoskey and Charlevoix.

After returning to port the lawmakers were treated to a "Catch & Cook" luncheon at James Street Brewing Company, sponsored by the Michigan Soft Drink Association (MSDA). The



Harbor View Marina Catch Board for team Pier Addiction; Rep. Brett Roberts, R-Charlotte, Sen. Peter MacGregor, R-Rockford, Capt. Dennis Eade, Mark Tenello, MDNR and Jamie Callahan, Legislative Director for Rep. Curt VanderWall.

fish were harvested the day before thanks to Ruboyianes on Dreamweaver and Eade on Pier Addiction who caugt twenty eight pounds of salmon and trout fillets. Bill Lobenherz, retired president of MSDA, coordinated with the restaurant's manager to deliver the bags of fish fillets which were prepared five different ways; lemon peppered, maple glazed, poached, deep fried and seasoned-blackened.

Rep. VanderWall introduced Ludington & Scottville Area Chamber of Commerce President and CEO Kathy Maclean who welcomed the lawmakers and guests to Ludington. VanderWall announced the winning team and big fish winner, Rep. Triston Cole, who eked out the honor over Rep. Scott VanSingel by a few kilograms.

As business mixed with pleasure during the luncheon, Dan Eichinger, MUCC's executive director and MLSC Advisory Council Chair, asked those in attendance to remember their time here and the value of natural resources to a community like Ludington.

"When you go back to Lansing, tell your colleagues about what you saw today and what you experienced today...how important our sport fishery is, our water quality is and our natural resources are. We are ambassadors," Eichinger

said. "Take this experience with you...that's all we've ever asked."



Senator Peter MacGregor fights a fish at the back of the boat as Mark Tenello, MDNR biologist looks on.



Jamie Callahan from Rep. Vander Wall's office fights a Chinook salmon on Pier Addiction as Rep. Brett Roberts, R-Charotte looks on.



Ludington & Scottville Area Chamber of Commerce President and CEO, Kathy Maclean addresses luncheon guests after being introduced by Rep. Curt VanderWall, R-Ludington.



### **MSSFA Fights to Restore GLRI Funding**

Lobbying for restoring funding for the Great Lakes Restoration Initiative (GLRI) during a D.C. Fly-In on July 18-19, had a positive impression on lawmakers. The National Wildlife Federation, National Parks Conservation Association and the Healing Our Waters - Great Lakes Coalition invited hunters and anglers to advocate for the GLRI personal visits with members of their state's congressional delegations and hosted a reception at the new offices of Ducks Unlimited to rally support from around the country to restore the cuts made by the Trump administration to the GLRI for 2018.

Murdoch Jemerson, waterfowl hunter and MDNR manager, Dennis Eade, fisherman and executive director of MSSFA, Dave Spangler, fisherman and VP of Lake Erie Charter Boat Association (LECBA), Taylor Ridderbush, TU, Gildo Tori DU, Celia Haven HOW, and Kyle Rorah DU all teamed to convince lawmakers that the return on investment and the restoration efforts that GLRI is having on the economies and environments of the states surrounding the Great Lakes makes it imperative we continue its funding.

During the reception on Tuesday evening, Senator Debbie Stabenow, Co-Chair of the bipartisan Senate Great Lakes Task Force said, "One in five Michigan jobs are tied to water. It is more important than ever to continue investing in the health of our Great Lakes and waterways.

U.S. Rep. Bill Huizenga, R-Zeeland, House Great Lakes Task Force co-chair, called the GLRI a "critical program that works to preserve the Great Lakes for future generations," and said it "should continue to be a national priority.'

Michigan hunters and anglers advocating for the GLRI.

Unlimited

U.S. Rep. Jack Bergman, R-Watersmeet, said the GLRI is "extremely important" to the environmental and economic health of the country. In 2007, a Great Lakes protection program cost-benefit analysis authored by the Brookings Institution and the University of Michigan concluded that every dollar invested in restoration generated about \$2 in economic return. "It's tough to explain to people who have never been around the Great Lakes how important they are to the economic engine of the country," Bergman said. "It's an education process on all counts."

Gildo Tori, the public policy director for the Atlantic region of Ducks Unlimited, called the GLRI a "model federal program" that isn't regulatory in na-"We've heard this

"GLRI" Continued on page 18

### **MSSFA PRESIDENT** Dr. Ken Merckel

At the August 30th, 2017 Lake Huron Citizen Fishery Advisory Meeting, all sources of Saginaw Bay walleye mortality will be discussed including mortality in and outside of Saginaw Bay caused by recreational and commercial fishing. Natural mortality will also be discussed. The focus will be on the reliability of the data and if there are ways to reduce mortality. This is being undertaken as part of the adaptive management strategy for walleye in Saginaw Bay and all of MH4. This review is being done to insure the walleye fishery remains viable.

Another important topic is the lake trout fishery on Lake Huron. At the present time, lake trout recovery is

being led by self-sustaining strain of Seneca Lake trout. At this time, hatchery fish are not contributing a significant number of fish to the recovery effort. With that said, not all regions of Lake Huron are seeing the same recovery effort.

This leads to the question: Can a self sustaining Lake Trout population withstand the fishing pressure from Canadian commercial fishers, sport fishers and the expected increase in tribal fishing in the 1836 treaty waters? With the white fish population collapsing in northern Lake Huron and Lake Michigan, tribal fishermen will be keying in on lake trout.

For the past two years, I have been advocating a total allowable catch (TAC)

for lake trout in Lake Huron for all parties. So far, there has been no movement in that direction.

It is in my opinion that a self sustaining population of lake trout cannot support such a fishery. Therefore, before we stop planting lake trout in 2018, a serious discussion needs to take place among all stakeholders utilizing the fishery.

After the Lake Huron Citizen Advisory Committee meeting on August 30th, more information will be available for discussion and I will have an update for our October 7th board meeting in Clare, MI.





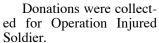


### **South Haven Steelheaders** Salute to Veterans



On Saturday, August 19, 2017, South Haven Steelheaders 6th Annual Salute to Veterans took place. It was a very well attended event on a beautiful summer day in Michigan!

At noon there was a boat parade and a special presentation for Jim McCloughan, Vietnam Combat Medic and 2017 Medal of Honor Recipient. This ceremony featured local, state and national dignitaries.



What a fantastic event and community support for America's disabled combat veterans. Thank you to all involved in planning and participation.











Unlimited Policy Director; and Kyle Rorah, Ducks Unlimited



**Dennis Eade, Executive Director** Michigan Steelhead & Salmon Fishermen's Association

MSSFA participated in a Washington, D.C. Fly-In to lobby for restoring funding for the Great Lakes Restoration Initiative (GLRI). We encouraged our Michigan delegation to restore the budget cuts and continue to protect and restore the Great Lakes. Ducks Unlimited hosted a reception on Tuesday evening July 18th and Congressmen Bill Huizenga (Dist. 2) spoke to the group about the importance the Great Lakes to the whole country and his commitment to seeing the cuts restored in the budget. Senator Debbie Stabenow and Congresswoman Debbie Dingell (Dist. 12) also spoke in support of the GLRI. I personally met with Congressman Jack Bergman (Dist. 1), John

Moolenaar (Dist. 4), Paul Mitchell, (Dist. 10), Dave Trott (Dist. 11) and Tim Walberg (Dist. 7) while in Washington. They all promised their support for restoring the funding in the budget.

The MDNR Fisheries Division has not yet introduce a new House Bill that would allow commercial fishermen to keep 100 lbs. of walleye and lake trout per day as bycatch in their nets. In my opinion, it probably will be introduced when the session resumes in September. The by-catch may be eliminated from the proposed statue but there are other areas in the proposal that need to be addressed and MSSFA has ioined with the other sport fishing organizations like

### **MSSFA** EXECUTIVE DIRECTOR Dennis Eade

TU, Hammond Bay Anglers, MUCC, MCBA, and the Saginaw Bay Walleye Club, to draft an acceptable alternative proposal that protects our \$7.1 billion sports fishing industry from this encroachment on the sport fishery. We object to the Bycatch allowance; want GPS gear location availability; want to be included in the advisory committee on regulations of commercial fishing and the authority to suspend the use of small-mesh gill nets in areas of the lakes where harm to other species would be detrimental.

Rep. Gary Howell has introduced HB 4884 which amends the Aquaculture Enabling Act to exclude the Great Lakes or the connecting waters of the Great Lakes. This is an important move to strengthen the Act to prevent commercial aquaculture operators from utilizing the public trust waters of the state. MSS-FA supports HB 4884 and encourages its members to communicate your support to your representatives in Lansing.

On the federal level,

MSSFA has received a grant to return to Washington, D.C. on September 26th and 27th to lobby and get co-sponsors for Congressman Dan Kildee's H.R.961 that will maintain our pristine coastal shorelines and protect our fish and wildlife, and our outdoor heritage from the threats of commercial fish farming in the Great Lakes. I was successful in getting the Tourism Industry Coalition of Michigan to provide a letter of support from its members for Kildee's bill and exert its influence on behalf of Michigan's \$38 billion tourism industry.

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MSSFA, through its membership on the Michi-



gan Legislative Sportsman Caucus Advisory Council, was able to organize a legislative fishing event in Ludington, MI on July 10th. Captain Shane Ruboyianes from Dreamweaver Lures lined up the charter boats, the Michigan Soft Drink Association provided the luncheon, and Jamie Callahan from Rep. Curt Vander Walls' office facilitated. We had seventeen members of the House and Senate, and staffers, joined by biologists from the MDNR Fisheries Division and MLSCAC members for a day of sport fishing. Representative Curt VanderWall (Dist. 101) was our legislative host for a reception the evening before and a Catch and Cook luncheon of fresh caught salmon afterwards at the James Street Brewing Company. I have received a number of notes of appreciation from legislators who not only had a great time fishing but learned a lot about the fragility of the ecosystem and the threats that invasive species have on sport fishing and to our

Great Lakes.



"It was great to speak with members of Ducks Unlimited, Healing Our Waters - Great Lakes Coalition, Trout Unlimited, and the National Wildlife Federation about the importance of protecting the Great Lakes, the hunting and recreation opportunities the Great Lakes provide, and the enormous amount of jobs and economic activity they create. Special thanks to Dennis from the Michigan Steelhead and Salmon Fisherman's Association for coming to the nation's capital to advocate for the Great Lakes."

- Congressmen Bill Huizenga, pictured here with MSSFA Executive Director Dennis Eade

### **Grand Haven Steelheaders Tournament** Reeled in Big Fish and Big Prizes

The 2017 Weeklong+ Contest was won by first time competitor, Capt. Jim Zelenka aboard the newly-named Breakin' Wind with the incredible total weight for three fish of 74 pounds, 5ounces. Captain Jim easily beat out the other competitors and established a new record for the Con-

test. The Breakin' Wind also caught the largest fish with a Chinook weighing an even 27 pounds. Capt. Jim received \$150 for 1st place and an additional \$50 for the largest fish. The travelling trophy will be presented at the annual Christmas Party. Coyote, captained by Rich Wilson

finished second for the second consecutive year with a total weight of 61 pounds, 13 ounces including a King weighing 21 pounds, 7 ounces. Block and Tackle captained by Paul Vander-Wall finished third with a weight of 54 pounds, 6 ounces.



### **Eclipse blamed** for Accidental Release of Thousands of **Atlantic Salmon into Puget Sound**

ANACORTES, Wash. (KOMO) -- The Washington State Department of Fish and Wildlife (WDFW) is calling all fishermen to help catch thousands of farmed Atlantic salmon that were accidentally released just off Cypress Island in the San Juan Islands.

On Saturday, Cooke Aquaculture had a net pen failure that caused the release of Atlantic salmon in Puget Sound.

The company says 305,000 fish were in the net pen but believes only up to 5,000 escaped.

The company released a statement to KOMO News that said in part, "Exceptionally high tides and currents coinciding with this week's solar eclipse caused damage to a salmon farm that has been in operation near Cypress Island for approximately 30 years."

Salmon managers with WDFW are encouraging anglers to catch and keep the fish.

"Our first concern, of course, is to protect native fish species," said Ron Warren, head of WDFW's Fish Program. "So we'd like to see as many of these escaped fish caught as possible."

When Tonja and Mike Oliver heard there were thousands of Atlantic salmon that escaped a salmon farm, they packed up their boat Tuesday morning in Lakewood and made their way to the San Juans.

We'll just troll around with the fish finder and see what we can find," said Tonja Oliver.

Meanwhile Tribal Fishers are concerned about the native population of salmon. The organization "Our Sound, Our Salmon" said fisherman from the Lummi Nation have already caught



some of the Atlantic salmon in their nets south of Bellingham.

The boat launch at Washington Park in Anacortes teemed with fisherman Tuesday, ready to help get the fish out of Puget

"That's the big concern, is doing damage to an already diminishing population of salmon in the Sound," said Oliver.

Warren said there is no evidence that these fish pose a threat to native fish populations, either through disease or crossbreeding with Pacific salmon.

To date, there is no record of Atlantic salmon successfully reproducing with Pacific salmon in Washington's waters, he said.

There is no size or catch limit on Atlantic salmon. However, anglers may fish only for Atlantic salmon in marine waters that are already open to fishing for Pacific salmon or freshwater areas open for trout fish-

To help anglers identify Atlantic salmon, WDFW has posted a salmon identification guide on its webpage.

### **Great Lakes Fish Farming** Legislation

Lawmakers in both political parties and chambers of the Michigan legislature have proposed bills to facilitate net-pen fish farming or ban it altogether:

**BILLS THAT BAN** 

FISH FARMING

SENATE BILL 526: Introduced in September 2015, the bill would ban aquaculture in the Great Lakes and flow-through operations in connected waters, including the Au Sable River.

HOUSE BILL 5255: Introduced in January 2016 to ban net pens in Michigan Great Lakes waters and connecting rivers up to the first dam.

**BILLS THAT PROMOTE** FISH FARMING

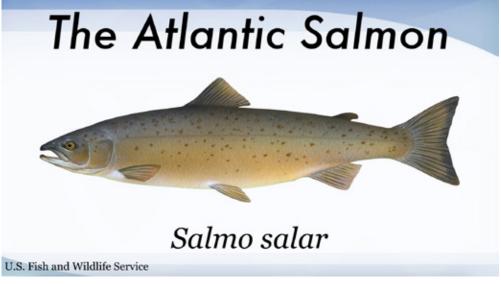
SENATE BILLS 681-683:

Introduced in December 2015 to reform the permitting and application processes and allow netpens in Michigan's Great Lakes waters, limited to 10 operations in the first five years.

**HOUSE BILLS** 5166-5167: Introduced in December 2015 to allow net-pens

in the Great Lakes and

consolidate permitting.





### **Closed-Loop Fish Farming** on Land Holds Promise

While several lawmakers, agencies, and organizations oppose opening the Great Lakes to commercial fish farming, many support closed-loop aquaculture systems on land that are completely separated from public-trust rivers, lakes, and streams.

Contained systems on land continually recirculate and filter water in the fish tanks and offer advan-

tages over, and address a number of key concerns regarding, open-water fish farming, including:

- No reliance on public waters
- Capture and treatment of waste, including excess feed and chemicals
- Disease prevention
- Little or no chance of fish escaping into the wild
- Tight control of the temperature, flow, and water quality to ensure optimum rearing conditions
- Less water use than other aquaculture systems.

Advocates contend that these closed-loop fish farm operations can be a sustainable source of nutritious local food and economic development. The trio of

Michigan resource agencies - MDEQ, MDNR, and MDARD— overseeing aquaculture have expressed support for assisting the industry in the development of closed-loop, recirculating aquaculture facilities.

According to Michigan Sea Grant, the disadvantages of closed-loop systems are high complexity, start-up costs, energy use,

and failure rates. Taking up the challenge, the Michigan Office of the Great Lakes, in its 2016 statewide water strategy, expressed support only for closed-loop or recirculating aquaculture systems and called for the state and industry to collaborate to establish operational best practices and grow the industry.



Structural controls

Structural controls re-

### **Structural Control Measures**



#### "Brandon Road" Continued from page 1

protect our Great Lakes, fish and wildlife, and econ-

### Why is this important?

- Asian carp pose a serious threat to the Great Lakes. They are an invasive species which has devastated parts of the Mississippi River and Illinois River where it has out-competed native fish for food and habitat. We simply do not want it in the Great Lakes.
- Current defenses are inadequate. A series of electric deterrents to repel the fish is not 100% effective and cannot be relied on as our sole means to protect the Great Lakes.
- Bolstering defenses at Brandon Road Lock and Dam is the next step in our battle to protect the Great Lakes from Asian carp. The Corps has tentatively selected a plan that combines a series of structural and non-structural controls at the Brandon Road Lock and Dam aimed at reducing the risk of Asian carp from swimming closer to the Great Lakes. Now, once this plan is finalized, we need Congress to act with urgency to get this done.
- The Trump Administration's decision to withhold the plan only increases would cost more than \$275 the urgency. The five-month delay did not help. In fact, in June, an Asian carp was found 9 miles from Lake Michigan, emphasizing the urgency of the situation. Asian carp would wreak havoc on the economy and environment of the Great Lakes. Now that the plan is out, it's time to get to work.

More about Asian carp—why should we be worried?

The non-native and invasive Asian carp pose a huge threat to the Great Lakes, people, businesses and wildlife.

• Asian carp can grow up to 100 pounds. The invasive fish breed like mosquitoes and eat like hogs consuming up to 40 percent of their body weight daily in plankton in algae that other fish species need to

- Silver carp leap out of the water when disturbed by passing boats. The fish have injured boaters in several states; the U.S. Fish and Wildlife Service have said the fish pose a potentially deadly threat to boat-
- If Asian carp invade the Great Lakes, the fish will pose a major threat to the lakes' \$7 billion fishery and \$16 billion recreational boating economy in the Great Lakes states.
- Allowing Asian carp to enter the Great Lakes would also undermine the nation's investment over the last eight years to restore and protect the Great

### What's in the plan?

The U.S. Army Corps of Engineers looked at 6 (six) options—from taking no action (which we obviously do NOT support) to putting in place a host of technologies and structures to repel the fish. The Corp's tentative recommendation calls for building a new lock in combination with other technologies such as water iets, complex underwater sound, and electric fences to defend the Great Lakes from Asian carp.

### How much does it cost?

Building the barriers million. This is a bargain compared to the risk posed to the \$7 billion Great Lakes fishery.

#### When would it be completed?

Based on the current Corps timeline estimated construction could be done by 2025.

#### What happens in the meantime?

The Corps and other federal agencies such as the Fish and Wildlife Service, along with state agencies in Illinois, are working to beat back the advance of the Asian carp. While these efforts to date are helpful and need to continue, we simply cannot rely upon the status quo from protecting the Great Lakes. We need the Corp and Congress to act with urgency.

#### What comes next?

The plan goes out for public comment. The Corps will listen to public comment to incorporate into a final plan, which will then need to be approved and funded by the U.S. Congress. The 45-day comment period ends October 2. The Corps will also hold three public meetings: September 11 in Chicago, IL; September 14 in Muskegon, MI; and September 18 in Joliet, IL. Conservation and environmental groups are asking for a 90-day public comment period to allow for a detailed analysis of the 488-page report.

#### So this will solve the problem once and for all?

- The solutions proposed to bolster defenses at Brandon Road Lock and Dam are a very good upgrade over our current inadequate system. This will be a big step in our effort to protect the Great Lakes from Asian carp. But these defenses are geared toward reduce the risk of invasive species moving upstream from the Mississippi River Basin. Congress originally authorized the Corps to find a two-way solution to stop the transfer of invasive species between the Great Lakes and the Mississippi
- Eventually, we need to put in place a system that blocks any and all invasive species from spreading from the Great Lakes to the Mississippi River—and vice versa. The Great Lakes have used the Chicago Area Waterways System as a superhighway for spreading invasive species to other parts of the country-including zebra and quagga mussels and the round goby fish to name a few.

#### Why did Trump **Administration hold it?**

There's no justifiable reason to delay action in the effort to protect the Great Lakes from Asian carp. The important issue now is that we have the study. The public outcry and Congressional support from Republicans and Democrats in the region were essential to get the report released. Now,

we have solid options to pursue. It's time to act.

### **Brandon Road?**

The Brandon Road Lock and Dam is a choke point. Asian carp have to swim through it before getting to the Chicago Area Waterway System and then the Great Lakes. It's the most logical place to try to repel Asian carp swimming up from the Mississippi and Illinois rivers. Brandon Road Lock and Dam provides the best opportunity to stop Asian carp before they get into the Great Lakes.

The current set of electric deterrents are not foolproof. Barges can pull fish through the deterrent and young fish and eggs can move through the deterrent. Additional protections are needed at Brandon Road to prevent Asian carp from swimming closer and establishing a breeding population near the electric deterrent.

The combination of technologies suggested in

#### Why all the attention at **Complex Noise**

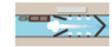
Complex noise is underwater sound generated to deter ANS fish species from entering the Brandon Road Lock approach channel. However, this measure would not control the passage of floating ANS or ANS that are known to be hitchhikers.

> **Electric Dispersal Barrier** An electric dispersal barrier creates an electric field that repels and stuns fish and would be placed at the downstream extent of the engineered channel.

### **Engineered Channel**

An engineered channel is a concrete structure installed within the downstream approach channel to

Brandon Road Lock. The engineered channel serves to increase the effectiveness of some ANS controls, reduce control impacts and serves as a platform to add new technologies in the future, if deemed appropriate.



#### Flushing Lock

The flushing lock would be designed to exchange water from the upper pool prior to a lockage; thereby removing floating Mississippi River Basin ANS from the lock. The flushing lock would not control the passage of swimming or hitchhiking species.



#### Water Jets

Water jets, installed along the bottom of the engineered channel, are designed to remove small and stunned fish that may become entrained in recesses of barges.

#### **Supporting Measures**

These measures do not control ANS movement but support other measures in the tentatively selected plan.

#### **Boat Launches**

Boat launches would be sited upstream and downstream of Brandon Road Lock and Dam to address limited boat access for safety and ANS-related activities.

### **Mooring Area**

This supporting measure is included in alternatives with an electric dispersal barrier in case vessels need to reconfigure prior to locking through Brandon Road Lock.



### Warm Water --- Go Deep

#### By Denny Bobeldyk

Contributor

Recently a change in the water column temperature sparked a radical change in our fishing tactics. For most of the summer the salmon, lake trout, and steelhead had been caught in relatively shallow or medium depths of water. Beginning in April we had caught coho in deep water, 200 ft plus, but running our baits up high the surface down to 30 ft. We used smaller spoons, body baits, and flashers w/ peanut flies. The coho were easy to catch and also going at a fast trolling speed of 2.5 and above to 3.0 at the ball.

As the waters of Lake Michigan began to warm up the fish gradually retreated to new depths mainly between 40 ft to 100 ft down in various depths of water. The spoon bite took over with standard size spoons being the best. Dreamweavers and Stingers worked well but trolling speeds were slower with 2.3 at the ball working best. More kings started to show up. There was also the lake trout bite on the bottom between depths of 80 and 120 ft of water. The best bait was different colors of spin-n-glos behind a flasher. Also smaller dodgers w/ flies were productive. The speed at the ball dropped to 1.5 to 2.0. The lake trout really liked this slower presentation. This bite happened mostly in June and July with June being a slow month compared to the other months. In June mostly lake trout were taken with an occasional salmon

mixed in. In July the king salmon bite picked up with 2 and 3 year olds being taken. Recently in August the water has really warmed up with temperatures around 70 degrees mostly from top to bottom. The question is how do we as amateur fishermen adjust to this radical change?

We knew that we must get our baits down deep to where the cooler water existed. The temperature probe on our Depth Raider was a key component in finding the cooler water where salmon lurked. By dropping it down to maximum depths we were able to find colder water but not a lot of it. The salmon seemed to be in small schools and scattered throughout the bottom reaches of the lake. Also

It was imperative that we get these baits down there where the salmon could hit them. Most anglers we talked to were having problems getting down to these fish. The copper and lead lines that were deadly in the two previous months failed to reach these fish. The lead lines of 7 color lead to 10 color lead failed to be deep enough to reach these fish. Also 250 and 300 copper lines did not work. The fish were too deep for these proven fish catchers in shallower settings. What we did was to run our downriggers very deep in waters between 150 ft and 200 ft of water. Most of the time we were running them between 100 and 150 ft down. Heavier cannonballs were key as to prevent blowback on our downrigger cables. One other solution was to run a fixed slider or stacker on our downrigger poles. We caught a lot of fish on these stackers getting an extra lure down deep. We ran the stacker baits around 8 ft above the main line. Standard spoons and super slims on the stackers worked great. This was a dynamite presentation which once resulted in 2 fish being taken at the same time. Talk about a Chinese

We also ran dipsey divers down to where the fish were marked usually in the lower quarter of the water column. Spin doctors and flies of different colors worked well in this situation. Wire divers and braid

Fire Drill!

divers both were deadly. Maximum leads up to 300 ft back on the divers were key. The depth chart given with the divers provided quick response to marked fish on the graph. It was a waste of time to run anything higher in the column. Even our planer boards were useless in this situation. Downriggers and Divers were key in catching these fish and we ended up w/respectable creel numbers. As amateur fishermen we are constantly striving to find new ways to catch salmon. Don't waste your time fishing the shallower depths with warm water. Be prepared to drop everything in your arsenal deep to find these fish. Your creel numbers will go up and you will not waste time

in the warmer water. Usually the first hour in the morning there were fish higher in the column feeding but after sunup these fish would scatter and go deep. Many times I have gone back to the launch and talked to other fishermen. Consensus was that most of them could not find these fish and their creels consisted of very few fish. Hopefully more beginning anglers will learn from their mistakes and go deep for warm water August salmon.

Oh by the way I am a 38 yr veteran of fishing Lake Michigan out of Holland, Michigan. Still learning and trying new tactics to catch fish. Still time to go out and slam some big ones. Good luck and good fishing!



### New Canadian Law for U.S. Boaters/ **Anglers Crossing Canada Border**

A new Canadian law has been put in place to ensure that Canada treats U.S. boaters the same way America treats Canadian boaters. The new law states that American boaters who don't anchor their boat or step foot on Canadian

soil don't have to report to Canadian Customs, New York Upstate reports.

This legislation stems from an incident back in 2011 when Roy Andersen, then 22 years old, was fishing in the Gananoque Narrows on the Canadian side



of the St. Lawrence River when Canada Border Service agents suddenly surrounded Andersen's boat and seized it.

Apparently, Andersen and his friend didn't report to a Canada port of entry upon entering Canadian

waters, and it almost cost them big time.

Canadian officials reportedly told the boater he'd have to immediately pay a \$1,000 fine or he'd be arrested and his boat would be towed to Canada, where

he'd have to pay \$25,000 in additional fines. Luckily for Andersen, once lawmakers got involved, his penalties were reduced to just \$1. To review the reporting requirements for boats in the U.S. and Canada, refer to The Great Lakes Cruising Club.

### PANFISH IN THE FALL

water, can be very easy to

catch in the fall. Howev-

trolling for fish that are not

by Bob Jensen

Most anglers are pretty open-minded when it comes to fishing. Some have their favorite species of fish and they concentrate on that specie.

Other anglers, in fact most anglers, just want to have something pulling back on the end of their line. They would rather catch a bunch of bass than not catch any walleyes. The autumn months are a great time to take advantage of several species of fish that are willing autumn biters. Panfish, in many bodies of

er, to really get in on the panfish action, you'll need to alter your presentation a little bit. Here are some of those alterations. Much of the time we think of bluegills and crappies as being a fish you would chase in shallow

water. While that is true in the spring, in the fall you can do very well in deeper water, say fifteen to twenty five feet depending on the

To find these deepwater panfish, some sonar work is necessary. At times they will be holding near a weedline or some form of structure, other times they will be near baitfish away from any structure. Turn the sensitivity up on the sonar and cruise around areas that you suspect could hold fish. Raymarine sonar units have a color display that does an outstanding job of showing the fish. Set the unit so the bottom of the lake is close to the bottom of the screen. That will provide the best picture of what's below the boat.

Once a school of fish is found, you'll want to stay right on top of it. If there's some wind, move a little upwind, drop an anchor, and drift back right over the fish. Now you can drop your bait right down

to them. If bluegills or yellow perch are the primary quarry, go with a one/thirty-second ounce jig, or maybe even a 1/64th if they are reluctant to bite. Usually the larger jig will work fine. Crimp a splitshot onto the line a foot or so above the jig so it gets into the fishzone faster.

If crappies are what you want to catch, go with a sixteenth ounce jig. For either crappies or bluegills, Gypsi Jigs are a great choice.

These jigs need to be tipped. You can use live minnows or pieces of a crawler, but Impulse Mini Smelt work just as well, and you'll catch more fish per bait. Instead of re-baiting after every fish, you can catch several fish per bait with the Impulse.

These small jigs will perform best on four pound test P-Line CX Premium line. Team this with a light action rod and you've got

"Panfish" Continued on page 18



### Hook, Line and Sinker Learn to fish with the DNR

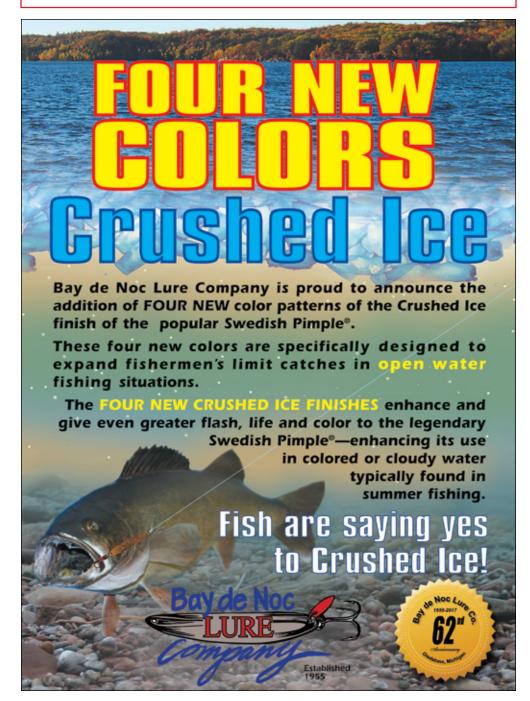
Have you ever wanted to learn how to fish? Here's your chance. Hook, Line and Sinker is a weekly fishing program available at over 30 state parks and fish hatcheries. We'll teach you casting and fishing basics, and can provide you with a rod and reel to use if you don't have your own. With step-by-step direction, you'll learn fishing basics like knot-tying, setting up your pole, casting, selecting and using bait, and removing fish from the hook.

The classes are offered free of charge, and participants under 17 do not need a fishing license.

Below are locations that may offer *Hook*, *Line and Sinker* classes. Please note, the links below are for each location's weekly program schedule. Hook, Line and Sinker may not be offered at every location each week. To find upcoming dates and times, please call the location your are interested in. You can look up each of these parks on our Recreation Search website.

Bay City Recreation Area, Bay City, 989-667-0717 Brighton Recreation Area, Brighton, 810-229-6566 Cedar River State Harbor, Cedar River, 906-864-1040 Hartwick Pines State Park, Grayling, 989-348-2537 Hayes State Park, Onsted, 517-467-7401 Holland State Park, Holland, 616--399-9390 Holly Recreation Area, Holly, 248-634-8811 Ionia Recreation Area, Ionia, 616-527-3750 Island Lake Recreation Area, Brighton, 810-229-7067 Ludington State Park, Ludington, 231-843-9261 Mears State Park, Pentwater, 231-869-2051 Metamora-Hadley Recreation Area, Metamora, 810-797-4439 Milliken State Park, Detroit, 313-396-0217 Mitchell State Park, Cadillac, 231-775-7911 Muskegon State Park, Muskegon, 231-744-3480 Pinckney Recreation Area, Pinckney, 734-426-4913 Pontiac Lake Recreation Area, Waterford, 248-666-1020 Port Crescent State Park, Port Austin, 989-738-8663 Proud Lake Recreation Area, Commerce Twp., 248-685-2433 Rifle River Recreation Area, Lupton, 989-473-2258 Sleeper State Park, Caseville, 989-856-4411 Sleepy Hollow State Park, Laingsburg, 517-651-6217 South Higgins State Park, Roscommon, 989-821-6374 Sterling State Park, Monroe, 734-289-2715 Tawas Point State Park, East Tawas, 989-362-5041 Waterloo Recreation Area, Chelsea, 734-475-3170 Wells State Park, Cedar River, 906-863-9747 Wolf Lake Hatchery Visitor Center, Mattawan, 269-668-2876 Yankee Springs Recreation Area, Middleville, 269-795-9081 Young State Park, Boyne City, 231-582-7523

Hands-on lessons on recreational activities like fishing, archery, kayaking and more are also available through the DNR's Recreation 101 program. Visit www.michigan.gov/rec101 to learn more.





Chinook salmon from the 2014 year-class are now Age 3 and they seem to be providing very good fishing in Lake Michigan. File photo: Michigan Sea Grant

### Lake Michigan Kings Are Back — But Why?

After the gloom-and-doom of 2016, anglers are gearing up for a much better run of salmon in 2017. Recent trends in the fishery suggest that ups and downs may be the new norm if prey populations do not stabilize.

#### By Dan O'Keefe

MSU Extension Educator

Spread the word! Lake Michigan kings are back —

After a couple of disappointing years of fishing for Chinook salmon along the Michigan shoreline of Lake Michigan, anglers are once again excited about the late-summer bonanza that these "king" salmon provide. While the final estimates of angler harvest and catch rates will not be available from Michigan DNR and other agencies until spring, the long lines of heavy coolers at fish cleaning stations and full boards of fish are a very good sign.

The size of fish is even more impressive. Ever since bacterial kidney disease (BKD) ran through the Chinook salmon population in the late 1980s, king salmon over 30 pounds have been rare to nonexistent in most years. This year has already produced numerous 30 pounders and even one giant that tipped the scales at 41.48 pounds (see details).

### Why the rebound?

While fisheries scientists do not have a definitive answer to this question, there are several factors at work. Many relate to the poor year-class of Chinook salmon in 2013. Many anglers will remember the public process that led up to the 46 percent reduction in Chinook salmon stocking for 2013. On top of this stocking cut, natural reproduction fell by an estimated 84 percent in 2013. All told, the number of Chinook salmon entering Lake Michigan dropped from 10.68 million in 2012 to 3.5 million in 2013.

This weak 2013 yearclass was a big factor in the poor fishing experienced last year because Age 3 fish from the 2013 year-class were returning to spawn in 2016. The good news is that wild reproduction increased slightly in 2014 and the total number of Chinook salmon increased to 6.47 million (stocking remained steady from 2013 to 2014).

Chinook salmon from the 2014 year-class are now Age 3 and they seem to be providing very good fishing. Fisheries managers have been trying to balance the number of predators and available prey for decades, and judging by early reports it seems that the current balance is providing a nice mix of good catch rates and large, healthy salmon. However, this does not mean that the future of the Lake Michigan fishery is secure.

#### Ups and downs may be the new norm

Growth of salmon has been bouncing up and down like a ping pong ball over the past decade. The growth rate of fish is a good indicator of their overall well-being and ability to find enough food, so this means that conditions are changing a lot from one year to the next.

Fisheries managers look at the weight of mature Age 3 female Chinook salmon returning to weirs and harbors as a standardized measure of salmon growth in Lake Michigan. In 2015, the average weight of an Age 3 female was 13.1 pounds. This increased to 19.0 pounds in 2016. That is a huge difference!

Such radical and rapid shifts in growth rate indicate instability in the ecosystem. In other words, food availability is changing a lot from one year to the next. Some of this is related to changes in the number of predators (especially the big fluctuations in wild Chinook salmon production) but fluctuations in the availability of alewife (the salmon's food source) are a bigger problem.

In short, small alewife

are relatively abundant in some years and provide a lot of food for salmon. In other years, alewife do not produce as many young and salmon have trouble finding food. A big problem in recent years is that alewife do not often survive to spawn several times. Instead, nearly all alewife are eaten before they reach age

Not coincidentally, the last really good alewife year class we had was in 2012. The alewife from that 2012 year-class are now Age 5. If some of them are able to avoid all of the hungry mouths out in the big lake until next year then we may finally have some Age 6 alewife in Lake Michigan once again.

This would be a good sign for overall stability of predator-prey balance in the lake, but it is by no means guaranteed. Prior to 2000, alewife of Age 6, 7, and 8 were fairly common and in some years Age 9 alewife were also found. We are still a long way from that level of stability in older alewife.

Judging by recent history, the boom times will not last long. Get out there and enjoy it while it lasts, and remember the good times next time we have a tough season.

Michigan Sea Grant helps to foster economic growth and protect Michigan's coastal, Great Lakes resources through education, research and outreach. A collaborative effort of the University of Michigan and Michigan State University and its MSU Extension, Michigan Sea Grant is part of the NOAA-National Sea Grant network of 33 university-based programs.

This article was published by Michigan State University Extension. For more information, visit http://www.msue.msu.edu.



## THE MICHIGAN STEELHEAD & SALMON FISHERMEN'S ASSOCIATION

### THE QUALITY OF FISHING REFLECTS THE QUALITY OF LIVING!



MSSFA was organized in 1971 by a handful of individuals who knew that Michigan's newly formed trout and salmon fishery was something worth working to protect. They were a small group who wanted to not only protect their fishery, but learn how to catch their elusive prey and tell fishing stories.

MSSFA chapters have membership meetings with guest speakers to learn about all the aspects of sport fishing. MSSFA chapters also sponsor fishing clinics, seminars, sport-fishing shows, derbies and tournaments. And are active sponsors for fishing outings for kids, seniors, veterans and our handicapped.

For those who love to fish but have no means, MSSFA chapters sponsor a "Crews" program that allows a sign up as a crewmember for a day of fishing.

With a common goal, and a close working partner with the Michigan Department of Natural Resources, MSSFA helps to enhance the resource and sport fishing in our rivers, streams, inland lakes, and of course the mighty Great Lakes. MSSFA is a front-runner at all levels of the legislature and in courtrooms and has spent countless hours working behind the scenes and attending hearings.

So why join the Steelheaders.....Got kids, love fishing. JOIN NOW! And become a member of the largest organized group of fishermen in the Midwest. There are chapters throughout the entire state. You too can help protect and preserve this world-class sport fishery for you, your children, and generations to come.

### THE GREAT LAKES SPORT FISHING NEWS (GLSFN)

The Great Lakes Sport Fishing News is owned and operated by The Michigan Steelhead and Salmon Fishermen's Association.

Better than forty years ago, The Michigan Steelhead and Salmon Fishermen's Association began to publish a magazine called the "Guide to Great Lakes Sport Fishing." Five years later the magazine became a monthly format called "The Great Lakes Steelheader." Today the newspaper is called "The Great Lakes Sport Fishing News."

This paper has no paid writers and has a grass roots style. Its writers are the every day fishermen who share their techniques and fishing adventures. And has become well renown for it's January Special Edition or "Show Edition" that is seen at all the spring expos and sport, boat and fishing shows throughout the Great Lakes.

Information in the paper covers the entire Great Lakes Basin region from Minnesota to New York including all five of the Great Lakes and their tributary streams.

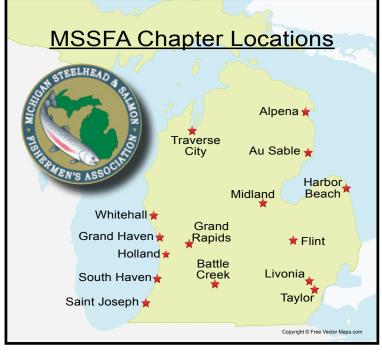
Chapter members receive the paper as part of their membership. And because of the diversity of fishing in the Great Lakes, the information covers everything from river fishing, big lake fishing to inland lake fishing. The paper also offers a direct route to all the new products and techniques on the market through our advertisers.

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☐ Great Lakes Bay Region \$40.00	☐ Thumb \$40.00 (Harbor Beach)	Mail to: MSSFA	HAMEN'S ASSOCIA

Ada, MI 49301

#### MSSFA State Board of Directors, Officers and Committee Chairs Dr. Ken Merckel kenmerckel@yahoo.com Lake Huron Citizens Advisory Fishery Committee Legislative Committee Dennis Eade **Executive Director** deneade@charter.net Lake Michigan Citizens Advisory Fishery Committee Legislative Committee Vice President Eric Braden esbraden630@gmail.com Gerry Sickon gsickon@ford.com Secretary Lake Erie Citizens Advisory Fishery Committee Nick Hamadanchi nick.hamadanchi@gmail.com Treasurer jvmaas@charter.net Jim Vander Maas **Tribal Negotiations Committee Co-Chair** Brian Eade **Tribal Negotiations Committee Co-Chair** brian.eade@live.com Roger Hinchcliff RHinchcliff@mortgageone.biz Streams Committee Renee Davis Pays to Belong Coordinator mssfapaays@gmail.com Membership Director mssfamembership@gmail.com











### 2017 BOARD OF DIRECTORS MEETINGS

MUCC Headquarters 7:00 pm to 9:00 pm 2101 Wood Street, Lansing, MI

October 7 10:00 AM Jay's Sporting Goods 2017 Saturday in Clare Michigan

**TBD** December 2017

### PAY\$\$\$ TO BELONG

A list of participating retailers is below. The most current information can be found on the MSSFA website: Mssfa.org

MSSFA MSSFa.org Pays to Belong						
Name	Address	City	State	Zip	Discount Type	
AJ's Automotive	13711 Ironwood NW	Walker	MI	49544	Member Rates	
Al & Bob's Sports	3100 S. Davison	Wyoming	MI	49548	10% Discount with AI & Bob's Card	
All Auto Care	1234 Ball Ave. NE	Grand Rapids	MI	49505	Member Rates	
Alpine Rent-All & Sales	1452 Alpine Ave NW	Grand Rapids	MI	49504	10% on Stihl & Toro Parts. Www.alpinerent-all.com info@alpinerent-all.com	
Ann's Custom Canvas	4414 Remembrance Rd	Walker	MI	49544	10% Discount, not valid on specials. Mention steelheaders before ordering	
Art Van Furniture	Statewide				Friends and Family Sales only (need special coupon)	
Auto Owners Insurance	303 E. Monroe	Durand	MI	48429	Rowe Agent Group #486	
Batteries Plus	2061 N-139 Suite B	Benton Harbor	MI	49022	10% & Member Discount 269-925-7374 www.batteriesplus.com	
Batteries Plus	386 Bay Park Dr, Suite B	Holland	MI	49424	10% & Member Discount 616-396-9914 www.batteriesplus.com	
Batteries Plus	5228 S. Westnedge Ave	Kalamazoo	MI	49002	10% & Member Discount 269-553-2355 www.batteriesplus.com	
Batteries Plus	3031 28th Street SE	Kentwood	MI	49512	10% & Member Discount 616-575-0500 www.batteriesplus.com	
Batteries Plus	5839 Hrvey Street, Suite 6	Norton Shores	MI	49444	10% & Member Discount 231-747-9168 www.batteriesplus.com	
Berkfield & Co LTD	2625 Pontiac Lake Road	Waterford	MI	48328	5% Great Lake Sportsmens Program on personal Insurance, on home/auto.	
Big Lake Outfitters of Saugatuck	640 Water St	Saugatuck	MI	49453	10% on fishing tackle (retail store) with membership card 269-857-4762	
Big Papa Sportfishing	50642 Oregon Ave.	Novi	MI	48374	10% on lishing tackle (retail store) with membership card 269-657-4762	
Sig Papa Sportfishing	4444 14 Mile Rd		MI			
Bladk Dog Outfitters	4444 14 Mile Ka	Rockford	MI	49341	10% Discount on fly tying materials, hooks & lines. www.blackdog-outfitters.com	
BoatU.S.					\$15 Annual Membership Dues - Use Membership # GA83723B	
Bob's Outdoors	Statewide	www.bobsoutdoors.com			10% Discount (www.bobsoutdoors.com)	
Dayton, Rick R, DDS	169 Louis Campau Promenade Ste 2A	Grand Rapids	MI	49503	20% off all services (616)458-2545	
Cascade Capital Funding	4251 Cascade Rd. SE	Grand Rapids	MI	49546	Free appraisal up to \$300.00	
Dockside Marine, Inc	4320 State Rd	Glennie	MI	48737	15% Off Parts & Accessories (Excludes Electronics)	
Dunham's Sports	Statewide				10% Discount # 50050/3	
Firestone - Metro 25	19268 Middlebelt	Livonia	MI	48152	\$20 off on \$200 or more on service www.metro25firestone.com	
Fish with Jim Outfitters	http://www.fishwithjimoutfitters.com/	248-252-1277			Discount \$50.00 off the total trip price.	
Glacier Corporation	1021 Fuller St.	Santa Ana	CA	92701	Aguarium Chillers for "salmon in classroom) \$625 + 60 (s&h) = \$685	
Gold Coast Outfitters LLC	6755 Butternut Dr	Port Sheldon	MI	49460	10% Discount www.goldcoastoutfitters.com	
Great Lakes Angler Magazine		www.glangler.com			Use promo code MCLUB10 1yr/\$13, 2yr/\$25, 3yr/\$36	
Health First Chiropractic Clinic	2526 Woodmeadow Dr SE	Grand Rapids	MI	49546	First Visit Free	
Homestead Resort on Betsie River	2399 Dam Rd	Benzonia	MI	49616	10% In Season, 25% Off Season (homestead@crystal-rentals.com)	
Insta-Launch Campground	20 Park Ave	Manistee	MI	49660	Member Discount	
Insurance Shop/Fremont Ins.	824 Water St.	East Jordan	MI	49727	10% Discount off insurance for MSSFA Group Members	
Jim Waldron Pontaic, Buick, GMC	1146 S. State Rd	Davison	MI	48423	Contact Nick Russlol for Sales, 10% off all parts not to exceed \$100.00	
J Smith Custom Tackle	1136 E Hughes Lake Road	Rose City	MI	48654	15% - 20% off depending on rod. Customrodsbyjsmith.com 989-685-2819	
K & M Marine	14990 Telegraph Rd	Redford	MI	48239	10% off merchandise except sale items (www.kandmmarine.com)	
Kamp Oil Inc	6467 Manistee St	Fredric	MI	49733	Citgo Sea & Snow 4-1 gal case 13.50/gal = 54/case, other disc avail.	
Kamp Oil Inc	3650 Eastern Ave SE	Grand Rapids	MI	49508	Citgo Sea & Snow 4-1 gal case 13.50/gal = 54/case, other disc avail.	
Beebe Oil Co (aka Kamp Oil)	4999 22 Mile Rd	Utica	MI	48317	Citgo Sea & Snow 4-1 gal case 13.50/gal = 54/case, other disc avail.	
Lapeer Boat Service	3556 Fort Knox Dr	Lapeer	MI	48446	10% off parts and labor (810-245-6038)	
Liberty Tax Service	544 E. 8th St.	Holland	MI	49423	\$20.00 Discount on tax service	
Life Family Chiropractic Centres	5795 Balsam Dr	Hudsonville	MI	49426	Complimentary 1st visit (excludes medicare) 50% off 1st massage	
Linwood Beach Marina & Campground	135 S. Linwood Beach	Linwood	MI	48634	10% off service work	
Logan's Run Muskegon River Cottage Rental	1648 Gardner St.	Newaygo	MI	49337	10% Discount www.logansrun.us 616-485-4501	
Mark's Sport Shop	11530 Mason Dr	Grant	MI	49327	Member Discount	
MC Sports	Major Locations				Member Rates with MC Sports Card	
MUCC	2101 Wood Street	Lansing	MI	48912	\$18.00 Membership Dues	
Racks Taxidermy	13662 Cleveland	Nunica	MI	49448	10% Discount 616-844-4495	
Ramada Lighthouse Inn	1555 Phoenix Rd.	South Haven	MI	49090	20% Discount 269-639-9900	
Red Sky Outfitters	5234 Plainfield Ave NE	Grand Rapids	MI	49525	10% www.redskyoutfitters.com 616-719-3074	
Red Sky Outlitters Richfield RV	Statewide	Grand Rapids	ivii	49020	10% www.redskyoutritters.com 616-719-3074	
				40404		
River Raisin Marina & Campground	2502 E. Elm Avenue	Monroe	Mi	48161	Buy 1 get 1 free - call 313-575-4367 (www.riverraisinmarina.com)	
RX Optical	Statewide				Plan 308	
Slamco	Internet Sales	www.slammertipup.com			10% Discount	
Sonus	3535 Parks St, Suite 108	Muskegon Heights	MI	49444	10% Discount. 231-737-4570 laura.szot@americanhearingsonus.com	
Sun Coast Marine	1172 68th Street	South Haven	MI		Member discount	
The Angling Outpost	2480 Duck Lane Rd	Whitehall	MI	49461	www.anglingoutpost.com 5% use coupon "steelheader" for online purchases	
Tuffy Muffler	435 N. Beacon	Grand Rapids	MI	49417	10% off parts and labor	
Tuffy Muffler	4384 Kalamazoo SE	Grand Rapids	MI	48512	10% off parts and labor	
Tuffy Muffler	610 28th St SE	Grand Rapids	MI	49507	10% off parts and labor	
Tuffy Muffler	4315 Clyde Park SW	Wyoming	MI	49509	10% off parts and labor	
Van's Sport Center	1855 Alpine Ave.	Walker	MI	49544	10% Discount	
Warrior Lures	5915 Lillian La	Traverse City	MI	49684	10% Discount on all product ordered (www.warriorlures.com)	
	847 Ionia Ave. NW	Grand Rapids	MI	49503	10% Discount	
West Michigan Propeller						

### Lake Trout survival release study in **Lakes Superior and Huron**

A critical component of fisheries management is understanding what happens to fish when they are caught and released. Most recently the Michigan DNR has been looking specifically at what happens to lake trout after they are caught through a mortality assessment survey.

To ensure accurate data is being collected on fish being lost from angling, mortality estimates must include both fish harvested and fish that are released and then die as a result of fishing. The DNR's Fisheries Division gathers this data through its creel clerk program. Creel clerks, stationed at Great Lakes ports throughout Michigan, measure lake trout that have been caught and released. The data are used in fish population models used to estimate harvest quotas for recreational and commercial fisheries.

'Underestimating mortality of angler-released fish will result in unreliable harvest quotas that are not protective of this important sport species," said DNR fisheries research biologist Shawn Sitar. "Therefore, reliable estimates of the mortality of released fish are critical to the DNR's management of lake trout."

Unfortunately, there was little known about the mortality of angler released Great Lakes lake trout. A few studies have been done for inland lake trout populations but only one study had been done on the mortality of angler-released Great Lakes lake trout.

"That study, done by Andrew Loftus in 1988, indicated hooking mortality averaged 14.9% with a statistical range from 7.4-25.7%," explained Sitar. "But the study had some serious limitations including: 1) low sample sizes of only 67 fish over a twoyear period; 2) no lake trout were captured from waters greater than 150 feet and only eight fish were caught and released from about 145 feet; and 3) little information on factors affecting hooking mortality for released fish."

A large amount of Great Lakes lake trout are caught at depths greater than 150 feet, particularly in Lake Superior, yet this 1988 study didn't necessarily factor in what barotrauma does to those fish. Barotrauma refers to injuries caused by an increase in water pressure like being moved through a wa-

ter column quickly while being reeled on a in hook.

Given the importance of high quality estimates of the mortality of angler-released lake trout from the Great Lakes and the lack of study data on barotrauma, a recent DNR study was conducted to estimate the mortality rate of angler-released lake trout in Michigan waters of lakes Superior and Huron. The study also examined the key environmental and fishing factors that influence survival of angler-released fish.

"In this study, Fisheries Division staff estimated the mortality of angler-released lake trout using tagged fish in lakes Superior and Huron then comparing the differences in tag return rates between large trap net-caught (control group) and angler- caught and released lake trout (treatment group)," Sitar said.

To determine what other factors could influence angler-released lake trout mortality; barotrauma, surface water temperature the fish is released in, capture depth, hook location, play time, handling time, and fishing method were all measured.

From 2010 to 2013 the following numbers of fish were tagged and released in southern Lake Superior: 2,300 trap net-caught lake trout and 1,800 angler-caught lake trout. In west-central Lake Huron, 1,670 trap net-caught and 930 angler-caught lake trout were tagged and released. Tag recapture data were then tallied between 2010 and 2016. Tag return rates were much lower

In Lake Huron, mortality of angler-released though these estimates

> when considering whether to release lake trout. To read the full lake trout mortality study, it is available online.

lake trout was 53% for surface temperature below 50 Fahrenheit and averaged 61% above 50 Fahrenheit, have higher uncertainty because of lower numbers of angler-caught fish tagged and returned in Lake Hu-

Based on these findings, the DNR will look at alternative fisheries management regulations that limit the mortality from the angler-release of Great Lakes lake trout. Additionally, communications are being shared with anglers to ask them to consider the surface water temperatures

the Modern Fish Act by Senators Roger Wicker (R-Miss.), Bill Nelson (D-Fla.), Roy Blunt (R-Mo.), Brian Schatz (D-Hawaii), John Kennedy (R- La.) and Joe Manchin (D-W.Va.). The "Modernizing Recreational Fisheries Management Act of 2017" (Modern Fish Act) would improve public access to America's federal waters, promote conservation of our natural marine resources and spur economic growth. A companion bill, H.R. 2023, was introduced in the U.S. House of Representatives on April 6, by Congress-

On July 10, 2017 the

recreational fishing and

boating community praised

the Senate introduction of

For years, the recreational fishing community has been hindered by antiquated policies that restrict access to public waters, hurt the U.S. economy and detract from conservation goals. The Modern Fish Act addresses many of the challenges faced by recreational anglers, including

men Garret Graves (R-La.),

Gene Green (D-Texas),

Daniel Webster (R-Fla.)

and Rob Wittman (R-Va.).

allowing alternative management tools for recreational fishing, reexamining fisheries allocations, smartly rebuilding fish stocks and improving recreational data collection. The bill aims to benefit fishing access and conservation by incorporating modern management approaches, science and technology to guide decision-making.

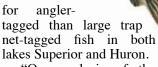
Bipartisan group of

senators introduce

the Modern Fish Act

"The Modern Fish Act will achieve many goals, the most important of which is getting more Americans outdoors and enjoying our wonderful natural treasures," said Mike Nussman, president of the American Sportfishing Association. This bipartisan legislation includes key provisions that will adapt federal management to manage recreational fishing in a way that better achieves conservation and public access goals. Recreational fishing provides many economic, social and conservation benefits to the





"Our analysis of the collected tag information indicated surface water temperature at time of release was the major factor affecting tag return rates of treatment fish," Sitar shared. "Generally, it was found that angler tag returns declined with increasing surface water temperature at the time of release."

In Lake Superior results from tag-return data analysis indicated mortality of angler-released fish averaged 43% when the surface water temperature at release exceeded about 50 degrees Fahrenheit and was 15% when surface water temperatures were below 50 degrees Fahrenheit.



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### Roadmap to Fishing Lake Michigan: Meet your Match!

Want to fish Lake Michigan, but aren't sure when or where to go? This roadmap is a starting point to providing information on many fishing sites and times of the year when great opportunities exist. Please note this is not an exhaustive list.

Port	Jan Mar.	April - May	June - Aug.	Sept Oct.		
Arcadia / Onekama	lake trout, brown trout	lake trout, brown trout	Chinook, lake trout	Chinook	Bays de Noc Manistique	
Bays de Noc (Little & Big)	yellow perch, walleye, lake whitefish	yellow perch, sm bass, walleye	walleye, sm bass, carp	sm bass, walleye, yellow perch	Beaver Island	,
Beaver Island			sm bass (June: catch-and- release), carp		Fairport	ac
Charlevoix		walleye, lake trout, cisco, suckers, carp	cisco, sm bass, steelhead, Chinook, coho	sm bass, lake trout, Chinook, coho, yellow perch	Menominee Harbor Sprin Petoskey Charlevoix	_
Fairport			Chinook, coho			
Frankfort	lake trout, brown trout	brown trout, lake trout	lake trout, Chinook	Chinook, steelhead	Manitou Island	
Grand Traverse Bay	cisco, lake trout, brown trout	steelhead, cisco, lake trout, brown trout, sm bass	sm bass, lake trout, cisco, Chinook, coho, carp, steelhead	Chinook, coho, cisco, steelhead, lake trout, yellow perch	Manitou Island Leland Glen Arbor Platte Bay Grand Traverse Bay	
Harbor Springs / Petoskey		steelhead, brown trout, coho, suckers, lake trout, rock bass, bullhead, freshwater drum, sm bass, carp	northern pike, catfish, sm bass, Skamania, Chinook, coho, lake trout	lake trout, Chinook, coho, brown trout, steelhead	Frankfort	
Holland / Port Sheldon	brown trout, coho, steelhead (March)	brown trout, coho, steelhead (April)	lake trout, Chinook, coho, steelhead, brown trout	Chinook, coho, steelhead	Arcadia Onekama	
Leland / Glen Arbor	lake trout, brown trout		salmon, lake trout, steelhead, brown trout	salmon, lake trout, steelhead, brown trout	Manistee	
Ludington	burbot, brown trout, lake trout	lake trout, brown trout, steelhead, yellow perch, Chinook, coho	lake trout, Chinook, coho, steelhead, brown trout	Chinook, coho, steelhead	Ludington	
Manistee	burbot (Feb. - March), brown trout, lake trout	lake trout, brown trout, steelhead, yellow perch, Chinook, coho	lake trout, Chinook, coho, steelhead, brown trout	Chinook, coho, steelhead Menominee (Nov.)	Pentwater	
Manistique		walleye	steelhead, Chinook, walleye, lake trout	Chinook		
Manitou Island			Chinook, lake trout (Aug.)		Whitehall	
Menominee		brown trout, walleye	walleye, sm bass	walleye, sm bass	Muskegon	
Muskegon / Grand Haven	brown trout, coho, lake trout, steelhead	brown trout, steelhead, Chinook, coho, yellow perch	steelhead, Chinook, coho, lake trout	Chinook, coho, steelhead, lake trout	Grand Haven	
New Buffalo	brown trout, coho, lake trout, steelhead	Chinook, coho, brown trout, lake trout, steelhead			Grand Naven	
Pentwater	brown trout, lake trout	steelhead, Chinook, coho, brown trout, lake trout, walleye	Chinook, coho, lake trout, steelhead, white perch, freshwater drum, walleye, sm bass	Chinook, coho, steelhead, lake trout, brown trout	Holland / Port Sheldon Saugatuck	
Platte Bay		steelhead, brown trout, lake trout	sm bass, lake trout	coho		
Saugatuck / South Haven	brown trout, coho, lake trout, steelhead	coho, brown trout, lake trout	yellow perch, lake trout	yellow perch	South Haven	
St. Joseph	brown trout, coho, lake trout, steelhead	coho, brown trout, lake trout	yellow perch	yellow perch, Chinook, coho	St. Joseph	
Whitehall	brown trout, lake trout	steelhead, Chinook, coho, brown trout, lake trout, walleye	Chinook, coho, lake trout, steelhead, white perch, freshwater drum, walleye, sm bass	Chinook, coho, steelhead, lake trout, brown trout	New Buffalo	





### Michigan Department of Natural Resources

### Gov. Rick Snyder Announces **Invasive Carp Challenge**

Calls for innovative solutions to prevent invasive carp from entering the Great Lakes

The following news release was issued earlier by the Office of Gov. Rick Snyder: Aug.1, 2017

#### LANSING, Mich.

Today Gov. Rick Snyder announced that the Invasive Carp Challenge is now accepting proposals for innovative methods to prevent invasive (or Asian) carp from entering the Great Lakes.

Invasive carp pose a serious and growing threat to the economy and ecology of our Great Lakes, Snyder said. The Invasive Carp Challenge will tap into the creativity and expertise of the entrepreneurial community to find the best ways to protect Michigans most prized natural resource.

On June 22, an eightpound silver carp was cap-

**GREAT LAKES** 

tured beyond the electric barrier, just nine miles from Lake Michigan. Michigan continues to seek to work cooperatively with other states and Canadian provinces to keep silver and bighead carp two species of invasive carp from entering the Great Lakes.

The Invasive Carp Challenge is designed to tap into the creative minds of people around the world to join the government and research community in enhancing existing research and tools while developing new, innovative solutions. The challenge will accept solutions in any phase of development, from concept to design to field-tested models, specifically aimed at preventing invasive carp movement into the Great Lakes.

**GREAT LAKES INVASIVE CARP CHALLENGE** 

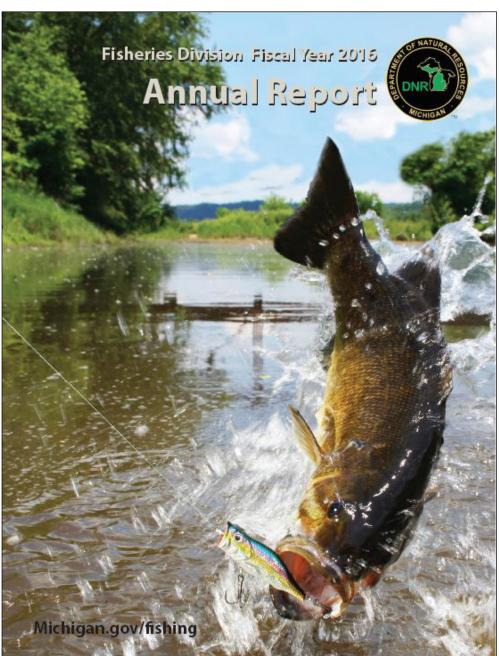
Written proposals will be accepted online through InnoCentives Challenge Center through Oct. 31, 2017. One or more solutions will share up to \$700,000 in cash awards provided by the State of Michigan. Once registered, solvers can see a detailed description of the challenge, review existing deterrent technologies for invasive carp and submit their proposed solutions.

Learn more about the Invasive Carp Challenge by www.michigan. gov/carpchallenge.

**CONTACTS:** Governor's Office Anna Heaton or Tanya Baker

517-335-6397 Department of Natural Resources

Tammy Newcomb 517-284-5832



### **DNR Fisheries Division's 2016** accomplishments and activities

The Michigan Department of Natural Resources today announced that the DNR Fisheries Division's report highlighting various management efforts accomplished during Fiscal Year 2016 is available online at michigan.gov/fishing.

Again this year there are two components to the report: a 13-page document with full details of DNR fisheries management work completed in the past year and a 9-inch-by-12-inch printed trifold brochure (available as a PDF) that visually summarizes the

vision Annual Report focuses on the programs and work completed in the past fiscal year (Oct. 1, 2015, through Sept. 30, 2016) by

five-year strategic plan, published in March 2013. The 2016 Fisheries Di-Highlights of the report include dam removal efforts, habitat restoration work, prevention of aquatic invasive species, state-record fish, fisheries population changes education and FIRST CLASS CHARTERS
CAPTAIN STEVE HAMILTON outreach efforts, partner-

> We're always pleased to present our annual report to provide a regular snapshot of the critical work Fisheries Division is doing to manage Michigan's worldclass aquatic resources, said Fisheries Division Chief Jim Dexter. These reports help us track our progress as we work toward completing our strategic plan and we are proud to share them with the public.

ships, research, fish stock-

ing, energy efficiencies and

much more.

Fisheries Division welcomes input from readers of the 2016 annual report. Comments may be shared via email to DNR-Fish-Accomplishments@michigan.

division staff in an effort The Threat to maintain and improve Silver carp and bighead Michigan's fisheries. The carp are within 10 miles of report categorizes work the three electric barriers within the goals developed built to prevent invasive as part of the division's carp from entering Lake Michigan through the Chicago Area Waterways Sys-

> These fish can grow to over 100 pounds. They jump out of the water to threaten boaters, out-compete native species for food, and can take over an entire river system.

> If that happens in Michigan, it will affect the core of who we are as Michiganders and what we love about our great state.

### What is at Stake

- A \$7 billion fishing industry in the Great Lakes
- Water recreation a major attraction in Michigan's tourism economy, generating \$38 billion in economic activity
- The health of the largest freshwater ecosystem in the world

### **Invasive Species**

• There are several species of carp that are considered invasive because they are capable of causing harm to

the economy, environment or human health. These carp are native to Asia and have been introduced into the United States. Invasive carp include the following

www.mi.gov/carpchallenge



### **Bighead Carp:**

- · Up to 5 feet long and weighing up to 90 lbs
- Large head with a toothless, downturned mouth
- · Eyes sit below the mouth Adults are dark gray with dark blotches
- · Keel between anal and pelvic



### Silverhead Carp:

- May exceed 3 feet in length,
- can weigh up to 60 lbs · Light silver body with a
- white belly • Eyes sit below the toothless
- mouth
- Keel extends from the anal fin anteriorly (forward) past the pelvic fin base



### Black Carp:

INVASIVE CAR

- Large bodied, can reach 6 feet in length and 150 pounds
- · Elongated, laterally compressed body
- Blackish brown scales grading to bluish gray to almost white belly
- · Pointed head with a flattened anterior (front) portion • Young individuals look very
- similar to grass carp (another invasive species) but have pharyngeal teeth



#### **Grass Carp:** • Can reach lengths of more

- than 5 feet, weight can reach more than 80 lbs.
- Eyes sit even with the mouth
- · Large scales that appear crosshatched
- · Shorter dorsal fin than goldfish or common carp

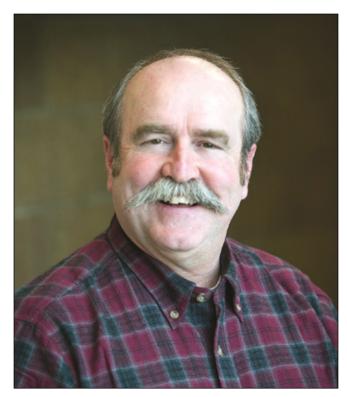
"Carp Challenge" Continued on page 15



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### **Department of Natural Resources names Bill** O'Neill deputy director

of Natural Resources Director Keith Creagh today announced that Bill O'Neill has been named natural resources deputy for the agency, effective Sunday, Aug. 13. Current natural resources deputy, Bill Moritz, is leaving his position with the DNR to work for the Wildlife Management Institute.

New Michigan DNR natural resources deputy O'Neill has more than 31 years of experience with the DNR. Since January 2012, he has served as chief of the DNR's Forest Resources Division, except for a brief stint in early 2016 when – on an interim basis – he took on the role of resources deputy while Moritz filled in as DNR director during Creagh's assignment at the Michigan Department of Environmental Quality.

While with the DNR, O'Neill has taken on many roles, including Michigan Civilian Conservation Corps camp director, land manager for several forest management units, district manager for the Eastern Lower Peninsula District and FRD field coordinator, administering the largest state forest system in the continental United States. Each position offered opportunities to collaborate across department divisions, as well as the chance to build relationships with external partners and organizations.

As DNR natural resources deputy, O'Neill will administer the divisions that oversee Michigan's wildlife and fisheries, state forests and state parks, minerals and law enforcement.

"Bill Moritz has been a thoughtful and tireless advocate for Michigan's natural resources and the people who enjoy and appreciate them," said Creagh. "I have full confidence in Bill

Michigan Department O'Neill's ability to step in as the department's natural resources deputy. Bill has decades of valuable experience to draw upon, and I know he will provide the right leadership to advance the management of Michigan's world-class natural and cultural resources."

> O'Neill currently serves as president of the Northeast Area Association of State Foresters, is on the National Association of State Foresters executive board, and is a Department of Forestry board member at both Michigan Technological University and Michigan State University. His past affiliations include the Wildlife Society (member), the Montmorency Soil and Water Conservation District (board of directors) and the Huron Shores Writing Institute (board of directors).

> "Our state is home to some of the most magnificent woods, water and wildlife found anywhere in the world, and I am honored to take on this role for the Department of Natural Resources and for the people of Michigan," O'Neill said. "As state forester and chief of the DNR Forest Resources Division, I was committed to collaboration and doing what's best for the sustainable management of our natural resources. I look forward to working with our resource divisions and partners in continuing that commitment."

> O'Neill earned a bachelor's degree in forestry and a master's degree in forestry with an emphasis on business management from Michigan State University.

Until a permanent replacement is named as chief of the Forest Resources Division, DNR Regional Initiatives Deputy Marc Miller will serve as the division's interim chief, in addition to his other duties.

#### "Carp Challenge" Continued from page 14

What kind of harm can invasive carp cause?

Bighead, silver, black and grass carp each pose different threats to the Great Lakes and Michigan's waters and can cause significant harm to lake and river ecosystems, sport and commercial fishing, boating and water recreation, and may even cause harm to humans.

Bighead carp feed on plankton, a primary food for many native fish including walleye, yellow perch and lake whitefish. They are voracious eaters, consuming up to 40% of their weight per day.

These fast-growing fish can reach up to 90 pounds, and each female can produce up to one million eggs.

If they make it to the Great Lakes, bighead carp will populate nearshore areas and large rivers, which could reduce sport and commercial fishing opportunities, threatening the \$7 billion fishing industry in the Great Lakes.

Silver carp also feed on plankton. They are voracious eaters, consuming up to 40% of their weight per

These fast-growing fish can reach up to 60 pounds, and each female can produce up to one million eggs.

Silver carp leap high out of the water when disturbed by boat motors. Boaters can be and have been injured by these leaping fish. Fear of injury could keep people away from recreational boating activities, which would have a negative impact on the \$38 billion tourism economy in the state. See a video of silver carp jumping out of the water.

In the Great Lakes, silver carp would be likely to populate nearshore areas and large rivers.

Black carp feed on mollusks and snails, consuming up to 20% of their body weight per day.

If they become established in the Great Lakes, black carp could pose a major threat to Michigan's native mussel populations, many of which are endangered, threatened, of special concern, or in need of conservation.

Black carp would compete with mollusk-eating native fish, including freshwater drum, redhorse species and the state threatened lake sturgeon, for limited food resources.

Grass carp feed on plants, consuming up to 90 pounds of food a day. The fish can only digest half of the food and expel the rest, contributing to algal blooms.

Grass carp can destroy weed beds used by native fish for spawning and nursery areas and damage wetland ecosystems and waterfowl habitat.

### How did invasive carp get to the U.S.?

Bighead and silver carp were imported into the southeastern U.S. in the 1970s to remove algae and suspended matter out of catfish farm ponds and wastewater treatment ponds. Similarly, grass carp were imported to manage weeds in farm ponds. Black carp were likely imported with shipments of bighead, silver or grass carp. While the exact manner of release into the wild is still debated, it is widely believed during large flood events in the mid-1990s, some of the farm ponds overflowed their banks and invasive carp were released into local waterways in the Mississippi River Basin.

In the mid-1980s, a grass carp sterilization program was put in place to reduce the risk of introduced fish reproducing and reaching nuisance levels that would result in detrimental impacts. The sterilization program has worked to some extent, but fertile fish are still being captured in locations where only sterile fish introduction is authorized.

### Can I legally catch invasive carp in Michigan?

Bighead, silver and black carp are not known to be in the Great Lakes or Michigan waters. Grass carp have been found in low numbers in all the Great Lakes, except Lake Superior, since the early 1980s (they are most often found in Lake Erie).

Bighead, silver, grass and black carp are all prohibited species in Michigan. This means that it is unlawful to possess, introduce, import, sell or offer these species for sale as live organisms, except under



certain circumstances.

However, if you happen to catch a fish you believe to be an invasive carp, do not release it. Report it as soon as possible by contacting Seth Herbst, DNR Fisheries Division, herbsts1@mich-517-284-5841. igan.gov Invasive carp can also be reported using the Invasive Carp reporting form.



Silver carp jumping in the Fox River in Illinois. - Photo credit: RYAN HAGERTY/U.S. FISH



### **Did You Know?**

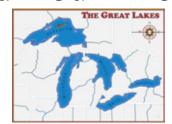
### About the Great Lakes

If you seek a pleasant peninsula, look about you. The Michigan state motto is a great reminder of two things Michiganders hold dear: the Great Lakes that literally shape our state and the beauty found within those peninsulas. The Great Lakes — Huron, Ontario, Michigan, Erie and Superior — make up the largest freshwater system on the planet.

The Lakes are connected through a system of canals and connecting waterways, such as the Detroit River and Lake St. Clair. Learn more about the flow of water, from Lake Superior to the St. Lawrence Seaway and the Atlantic Ocean.

#### Size, Length and Volume:

- Total length of Great Lakes shoreline, including islands: 11,000 miles.
- World's supply of surface freshwater in the Great Lakes: 20 percent.
- Combined surface area of all the Great Lakes: 94,000 square miles (244,000 square kilometers)
- The surface area of



the Lakes is larger than: Connecticut, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont combined.

• Gallons of fresh water: 6 quadrillion (22.7 quadrillion liters). Enough to submerge the entire continental United States in nearly 10 feet of water.

#### **Key Facts:**

- Approximately 34 million people in the United States and Canada live in the Great Lakes basin 8 percent of the U.S. population and about 32 percent of Canada's population.
- More than 3,500 species of plants and animals live in the Great Lakes basin including 170-plus species of fish.
- The Great Lakes are among the world's 15 largest lakes.
- A geologically young system compared to the world's oceans, the Great Lakes began to take their present shape about 10,000 years ago.

### About Michigan's Watersheds

Watersheds are often referred to as drainage or catchment basins and are defined as the land area that drains – or sheds – water to a particular river, stream or body of water. Watershed boundaries are determined by high points in the land-scape.

In Michigan, virtually all watersheds eventually drain into one of the Great Lakes. What we do on the land can have a profound effect on our water systems.

Learn more about watersheds, figure out which watershed you live in and gain an understanding of how water flows and drains throughout the state.

Information source: http://www.miseagrant.umich.edu



Graphic courtesy of www.watershed.org



### Great Lakes Basin: Inland Aquatic Ecosystems Integrated Assessment

Inland aquatic ecosystems are the lifeblood of the Great Lakes basin.

Ranging from swamps to coastal fens, from slow moving rivers to coldwater streams, from small ponds to the magnificent Finger Lakes, these aquatic ecosystems supply fish and wildlife with diverse habitats and people with livelihoods and well-being.

However, changes to the Great Lakes inland aquatic ecosystems from various pressures: land conversion, water and biological resource use, pollution and non-native species invasions, have fundamentally altered the form and function of inland waters.

#### What are the Great Lakes Inland Aquatic Ecosystems?

The Great Lakes inland aquatic ecosystems include thousands of small inland lakes, ponds, streams, wetlands and groundwater flows, all of which are hydrologically connected to the Great Lakes. This is an enormous and complex system of aquatic habitat covering over 200,000 square miles of watershed area.

In fact, the Great Lakes basin has the greatest concentration of small water bodies in the world for the area of its size.

The product of massive glacial events that carved out the Great Lakes over 10,000 years ago, these ecosystems include some truly unique habitats. The Finger Lakes stretching east of Lake Ontario in New York, for example, are a result of dammed glacial till that captured huge blocks of ice after the last glaciers receded and carved out deep fissures in the land. These narrow lakes range in size and depth, with the deepest lake reaching 618 feet.

This vast array of aquatic ecosystems supports an even greater diversity of biota, from carnivorous bog plants, like the purple pitcher plant (Sarracenia purpurea), to migrating

lake sturgeon (Acipenser fulvescens) and a host of other regionally and globally rare plants, invertebrates, reptiles, amphibians, birds and mammals.

The inland aquatic ecosystems also drain watersheds throughout the basin, maintaining the natural water cycle and refreshing the invaluable supply of drinking-water in the Great Lakes.

Comprising such a broad range of ecosystem types, inland aquatic habitats provide many ecosystem services—all the tangible and intangible benefits of streams, lakes, wetlands, and groundwater aquifers.

Aside from keeping lake levels replenished and sustaining drinking water for 35 million people, streams, rivers and wetlands provide Great Lakes communities with fish to eat and flowing water to enjoy through recreation, including boating, angling, and wildlife watching.

Streams and tributaries to the Great Lakes are particularly important economically, generating an estimated \$7 billion annually. Though often overlooked in terms of their full economic value, coastal and inland wetlands not only provide critical stopover habitat for waterfowl, shorebirds and spawning fish like the yellow perch (Perca flavescens), they also help purify water supplies and alleviate flood damage during high flows. Wetlands and lakes also store large amounts of carbon from the atmosphere.

Yet, many values derived from Great Lakes inland aquatic ecosystems, and in some cases values that disregard ecological integrity, have also led to substantial habitat degradation. Water diversions, dams, dikes, and agricultural tiling, though beneficial to society, have altered the natural movement of water throughout the landscape and have created barriers to the exchange of materials and organisms.

In the course of improving the landscape for economic and community growth, we have lost large areas of aquatic habitat, especially coastal and inland wetlands. Invasive plants and animals continue to degrade the quality of rivers, lakes and wetlands, and biological harvesting, especially in the fishing industry, has extirpated some native species, including the lake trout (Salvenius namaycush), Atlantic salmon (Salmo salar) and several species of ciscoes from some or all of the Great

When ecosystems are altered beyond a natural range of conditions, ecosystem services are lost, and being connected by the downward flow of water, alterations in one ecosystem may impact the habitat of another. Therefore, the success of ongoing and planned conservation work is essential to sustaining the Great Lakes inland aquatic ecosystems for our and future generations.





### FIND THE FOOD, FIND THE FISH

#### by Bob Jensen

From now until the water gets hard again, if you want to be more successful in your fishing, there is one very basic thing to keep in mind: You've got to be fishing where your quarries' food is. Actually, as soon as the spawn was over finding what the fish wanted to eat was a very important consideration. As the summer progresses and we get into the fall months, staying near what the fish want to eat is very important. Following are some examples and how you can capitalize when you encounter some of these situations.

Let's say you're on a body of water that has lots of white bass. White bass are fun to catch: They're great fighters and when they're on the bite, they'll eat almost anything you throw to them. Let's say you're trolling with crankbaits for white bass. Crankbaits in the smaller sizes are often very good for whites. Suddenly you notice lots of gulls diving in a certain area just a couple of hundred yards away. If you want to catch fish, you should get over to that area quickly but quietly. What's happening is a school of white bass has trapped a school of baitfish, probably shad, near the surface of the water. The white bass are eating the shad from below, the gulls are eating the shad from above. Get within casting range and throw a bait that appeals to a white bass and you're going to get bit. However, we're not going to use that crankbait that we were trolling with. It will probably run under the bass. We want to choose a bait that can be fished on the surface or very close to the surface, something like a topwater bait or a Thumper Jig tipped with an Impulse Swim'N Grub in the two or three inch size. My first choice would be the Thumper/Impulse combo. A topwater would work, but they have treble hooks so it takes longer to unhook the fish. Also, white bass like to flop, and a flopping fish and treble hooks can be hard on fingers and hands.

A few years ago I was fishing with Travis Peterson. Travis is an expert angler for any fish that swims near his home in Bemidji, Minnesota. On this day we were fishing bass in shallow vegetation. Fishing was pretty good. Travis then noticed that a dragonfly hatch was going on in a field of lily-pads nearby. We got over there quickly, but again, quietly. Every now and then we would see a bass slurp a dragonfly off the surface. We tied on Jaw-Breaker weedless spoons and started throwing them around. What had been good fishing changed to great fishing. The presence of the dragonflies got the bass into a feeding fren-

zy and we took advantage ing onto a point or shallow of it. If Travis hadn't noticed the dragonfly activity however, we could have missed out on the action.

If walleyes are your goal, pay close attention to your sonar for the presence of baitfish. You usually won't see the surface activity with walleyes that you might with bass, but locating the walleye's food is just as important to catching them as it is to white bass or largemouth bass. Something like the Raymarine Dragonfly 7 provides a very detailed picture of the bottom and reveals if baitfish are present or not. The Dragonfly 7 is a lot of sonar for not too much money. This time of year, if I don't see baitfish when I'm fishing for walleyes, I usually don't fish the spot. How-

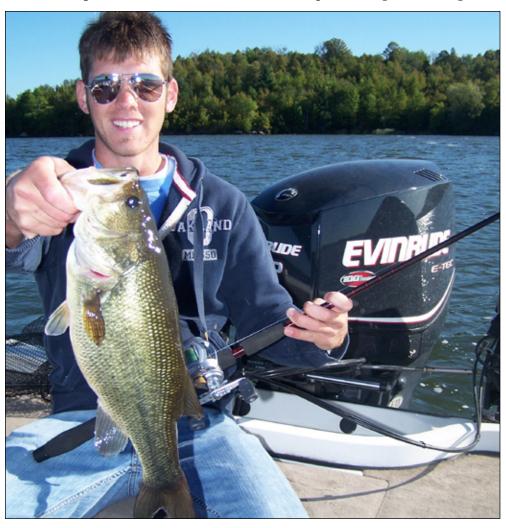
ever, if the wind is blow-

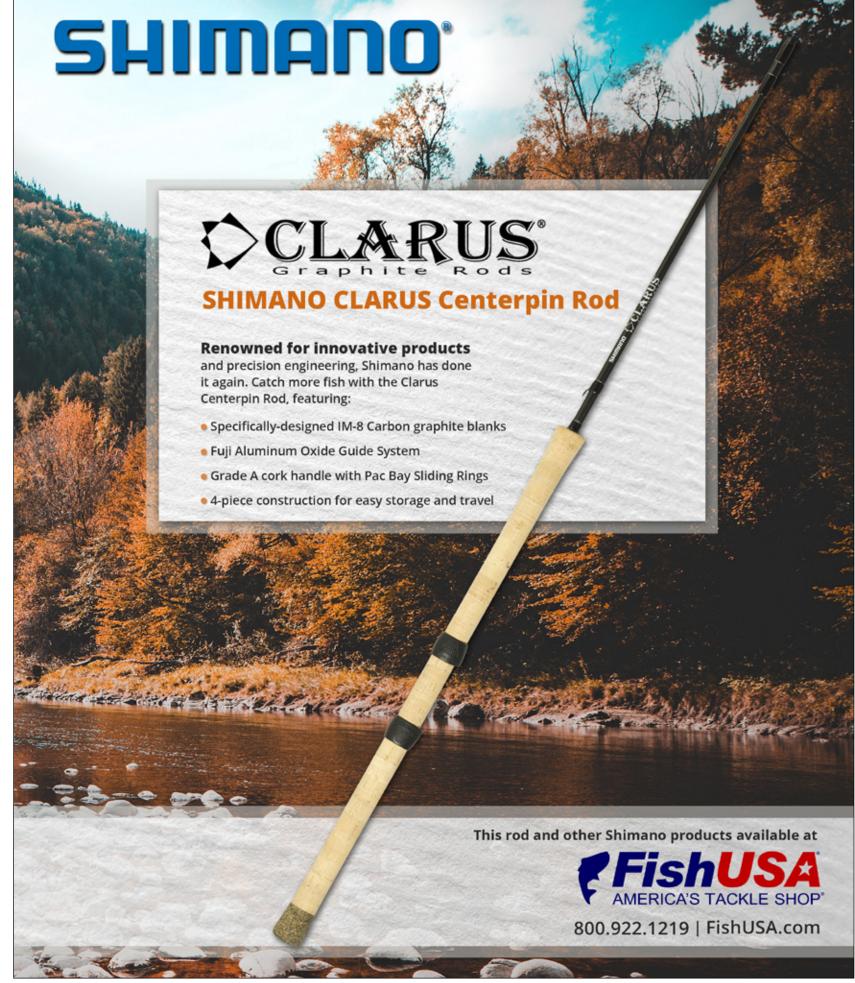
water structure, you might want to make a few casts to see if the fish are feeding shallow.

Remember that during the summer and fall months if you want to catch fish, you've got to be fishing where their food is. If you remember that, your chances for success will go way

To see the new and old episodes of Fishing the Midwest Television, fishing tip videos, current articles and those from the archives, go to fishingthemidwest.com

This big bass was near a school of bluegills and couldn't resist a spinnerbait fished slowly through the bluegills.







### It's Time to Stop Zebra Mussels

You may have been hearing a lot about Aquatic Invasive Species and the devastation they cause to our lakes through infestation of Eurasian Watermilfoil, Spiny Waterflea, Starry Stonewort and Zebra Mussels, just to name a few. It is important to understand that any action suggested by governmental agencies to contain and stop the transmission from infested lakes to clean lakes has been less than effective. Infectious diseases may be quarantined in people, but there is nothing to stop the spread of disease (aquatic invasive species) in our beloved lakes.

Early detection of zebra mussels is imperative for treating any infected area of water. Private property owners with or without boat launching capabilities are encouraged to install a simple device called Zebra Mussel Early Warning System or ZMEWS for short. It hangs from a dock with a chain or rope. Veligers (baby zebra mussels) attach themselves to a simple PVC pipe and periodic checks can reveal early infections so treatment can be started. While you can't see veligers, once they attach to a ZMEWS the surface of the pipe will feel rough, like fine sand paper. Zebra mussels prefer the inside of the pipe. Contacting the DNR to determine a course of action is the next step in identifying if the roughness is caused by zebra mussels.

The ZMEWS is simply a 4 inch or larger high pressure PVC pipe strung with a rope or chain that hangs from a dock. The pipe should be placed about one foot from the bottom of the lake and be checked monthly. Build one and hang from your dock. It's simple to do and can be an effective tool for early detection. You can also contact your lake association for more information on installing one on your dock.

Baby zebra mussels are called veligers. They are only 100 micrometers long (0.1mm) in diameter with a tiny shell and a curved sheet of skin covered with tiny hairs that beat in the water helping them swim and draw algae in for them to eat. Veliger larvae can be transported in the "residual water" remaining inside boat compartments when trailered boats are moved between waterways or even in stowing bait. Zebra mussels will attach to any hard service including vegetation and surfaces on recreational boats, trailers, docks and lifts eventually encrusting boat motors and hulls. Zebra mussels greatly reduce lakefront property values, and their sharp shells cut swimmer's feet.

Infested lakes will eventually become so short of zooplankton that fish will die off. Weeds will grow faster due to deeper-penetrating sunshine. Since zebra mussels only eat the good algae dangerous algae blooms will become a risk.

Take a stand. It is time to stop the spread of all aquatic invasive species. We deserve the pristine lakes we have come to enjoy and love. So do our future generations.

#### "GLRI" Continued from page 4

administration really rail against over-regulation," he said. "Well, the GLRI is an incentive-based program. It drives people to work in partnerships.

Visits to the "Hill" on both Tuesday and Wednesday garnered more support for GLRI funding from Michigan congressmen and provided an opportunity to speak about the dangers of commercial open water fish farming in the Great Lakes region. John Boothroyd, legislative assistant to Congressman John Moolenaar, R-Midland was especially interested in our input regarding commercial aquaculture and Bridget Sobek Dobuan, legislative director for Congressman Dave Trott was interested on our take regarding Congressman Dan Kildee's House Bill 961 which would ban commercial net-pen aquaculture in the Great Lakes and national scenic rivers. Engaging our representatives is the best way to overcome the obstacles to preserving our hunting and fishing heritage.



Fishing in the Midwest: Jumbo bluegills like this one will be ready to bite in the upcoming weeks.

### "Panfish" Continued from page 8

an outfit that will put lots of panfish in the boat.

Panfish are great in a frying pan: Keep a few for supper and let the rest go. That way they'll be there when you return, and return is something you'll want to do after experiencing the fun fishing that panfish can provide in the coming weeks.

To see the newest episodes of Fishing the Midwest and some from the past, short video tips, and recent and archived fishing articles, go to fishingthemidwest.com.



### 2017 State of the Bay Conference

Saginaw Bay will be the topic of conversation at the 2017 State of the Bay Conference. Held on September 27, 2017, in Bay City, the one-day conference will feature activities related to the restoration, conservation, and protection of Saginaw Bay. Michigan Sea Grant Extension Educator Kip Cronk will moderate one of the sessions. Learn what the communities around the Bay and throughout the 22-county watershed are doing to encourage public access, economic development, environmental education, and watershed management.





Are you looking for a great place to go fishing that is easy to access, has a high likelihood of catching fish, has various amenities. and is all around family-friendly? Then the Family Friendly Fishing Waters project can help!

Do you have a location you'd like to see listed? The DNR will continue to collect Family Friendly Fishing Waters location submissions. Just visit our online form and fill in the necessary details.

Our established format asks applicants to share digital photos of any suggested Family Friendly Fishing Waters location. To do so, an email can be sent to

### Family Friendly **Fishing Waters**

DNR-FamilyFriendlyFish- mitted as possible. with the photos included as JPEG attachments. The email subject line should reference the suggested location. Photos should be relevant to the suggested location and highlight the fishing area(s), the parking area and/or the water body itself. Be sure to take several photos from various angles and we will select the best ones to use.

Please note, all Family Friendly Fishing Waters submissions and locations are vetted by DNR staff to ensure they fit the necessary requirements. Submission of a water body does not guarantee it will be included on the Family Friendly Fishing Waters website. The DNR will make every effort to include as many water bodies that are sub-

michigan.gov You do not need a fishing license to help somone under the age of 17 fish. Those under 17 have the same fishing privileges and must comply to the same fishing regulations as those with valid fishing licenses do. People without a license can: help land fish with net or their hands, help unhook the fish, set up the fishing rod with the appropriate gear, bait the hook, fix tangles or snags, cast the line for the young angler (however, it should be stressed that the young angler must be an active participant while the person assisting is only assisting).

> Visit www.michigan. gov and search for Family Friendly Fishing Waters for an interactive county map.



**Fall For Salmon This Season** 

**Pecan Crusted Salmon Recipe** 



### Fishing Participation up 1.5 Million **According to 2017 Special Report on Fishing**

the Foundation works with

partners to mobilize a major

cultural shift that leads all

Americans to the great out-

doors. In 2010, the Foun-

dation launched Outdoor

Nation, a pioneering initia-

tive that aims to empower

young leaders to champion

the outdoors on campuses

and in communities across

the United States. For more

information visit: Outdoor-

Foundation.org and Out-

doorNation.org.

ALEXANDRIA, (July 27, 2017) - The Recreational Boating & Fishing Foundation (RBFF) today announced the release of its 2017 Special Report on Fishing. Most significantly, the report shows fishing participation has increased by 1.5 million over the previous year. Additionally, several exciting trends and participation increases among key segments are highlighted in the report.

#### **KEY FINDINGS:**

- Fishing is still the number two adult outdoor activity. but it's gaining ground on jogging
- 2.5 million participants tried fishing for the very first time
- New participants accounted for 5.3% of the total participant base and tended to be young and female
- 3.8 million Hispanics participated in fishing (an 11% increase) Hispanic anglers go on 6 more outings per year than their general market peers
- Youth participation increased 3% to 11 million total participants
- Americans took 855 billion total fishing trips, equating to 18.8 trips per participant

"These findings energize us and provide some validation for the work we are doing on a daily basis," said RBFF President and CEO Frank Peterson. "Our efforts to recruit new audiences and bring families to the water are certainly paying off. 60 in 60 is off to a great start, and effective R3 (recruitment, retention and reactivation) programs will only grow the participant base and secure funding for conservation programs for years to come.'

The Special Report on Fishing is the product of a partnership between RBFF and the Outdoor Foundation and looks into participation trends, barriers to entry, motivating factors and preferences of key groups of anglers.

"Research shows that fishing is an essential piece of America's outdoor tradition, and it often leads children to pursue outdoor activities and healthy living into adulthood," said Ivan Levin, deputy director of the Outdoor Foundation. "This report aims to help the fishing industry, and the entire outdoor industry, understand fishing participation in order to engage even more people in recreational fishing and create the next generation of lifelong anglers and outdoor enthusi-

The full report and an accompanying infographic is available in the RBFF Resource Center.

About the Recreational Boating & Fishing Foundation (RBFF):

RBFF is a nonprofit organization whose mission is to increase participation in recreational angling and boating, thereby protecting and restoring the nation's aquatic resources. RBFF's recently announced 60-in-60 effort strives to attract 60 million anglers to the sport by the end of 2021. To help recruit, retain and reactivate participants, RBFF developed the award-winning Take Me Fishing<sup>™</sup> and Vamos A Pescar<sup>™</sup> campaigns creating awareness about boating, fishing and conservation, and educating people about the benefits of participation. These campaigns help boaters and anglers of all ages and experience levels learn, plan and equip for a day on the water. The campaign websites, TakeMeFishing.org, VamosAPescar.org, feature how-to videos, information on how to get a fishing license and boat registration, and an interactive state-by-state map that allows visitors to find local boating and fishing spots.

About The Outdoor **Foundation** 

The Outdoor Foundation is a not-for-profit organization dedicated to inspiring and growing future generations of outdoor enthusiasts. Through groundbreaking research, action-oriented outreach and education programs, 1 cup finely chopped pecans

1 medium salmon fillet

serving size pieces

about 2-3 lbs, cut into

1 cup coarse bread crumbs

#### "Algae" Continued from page 1

with "green mats of goop on top of the water" that are giant floating blooms, Michalak said.

The blooms often have toxins that can pollute drinking water. In 2014, a bloom on Lake Erie fouled tap water for half a million people in Toledo, Ohio, for more than two days.

The study, which is based on computer simulations, found the Northeast and Midwest will be hit hardest by the increase in nitrogen runoff. Most of the excess nitrogen from fertilizer use and the burning of coal, oil and gas would flow into the Mississippi River system and into the Gulf of Mexico, one of the largest dead zones on Earth, researchers said.

"The results are incredibly interesting and compelling," said Samantha Joye, a University of Georgia

1 tablespoon seasoned salt 1/4 teaspoon black pepper 2 egg whites (separated from yokes)

2 teaspoons cornstarch 1/2 juice of one lemon

1 zest of one lemon, finely grated

4 tablespoons of olive oil

Blend the egg whites, lemon juice and cornstarch together in a shallow bowl, set aside for dipping the salmon pieces.

Combine the bread crumbs, seasoned salt, pepper and lemon zest in another shallow bowl.

Dip both sides of the salmon in the liquid. Then transfer the salmon to the bowl containing the crumb

mixture, pat the crumb mixture onto the small salmon pieces. Air dry the crusted salmon for 10 - 15 minutes on a wire rack. This will help firm the coating prior to cooking.

Heat the oil in an large skillet (that can be placed in the oven). Saute the salmon pieces until golden brown, about 2-3 minutes per side. Turn only once carefully. Transfer the skillet to a preheated oven at 450 degrees for 8-10 minutes or until the salmon flakes easily.

Serves four. Bon appétit!

Recipe from www.LakeMichiganAngler.com





### Lake Michigan's Charter Fishing Industry Is ... **Remarkably Stable**

#### By Dan O'Keefe

MSU Extension Educator

For the past 10 years as a Sea Grant Extension Educator I've worked to understand the economic impact of Michigan's charter boat industry. This has big implications for coastal tourism. In 2016, charter fishing generated \$23 million in Michigan's coastal communities, resulting in 476,361 employment hours. Lake Michigan's charter fishery is the largest, accounting for around 70 percent of the state's charter fishing effort according to Michigan DNR. Charter captains in Michigan report their catch and effort to DNR, and Michigan Sea Grant uses this information to calculate economic impacts and investigate trends.

#### Big salmon are a big draw

Last year was a tough one for fishing. The Chinook salmon is a prized species on Lake Michigan, and charter harvest rate of Chinook salmon fell to the lowest it has been since 1995, when bacterial kidney disease (BKD) wiped out many of the lake's salmon. According

to Michigan DNR, charter harvest in Michigan waters of Lake Michigan ranged from 1.09 to 1.94 Chinook salmon per trip in the early 1990s, ranged from 2.24 to 7.40/trip 1996-2014, and fell from 2.27/trip in 2015 to 1.94/trip in 2016.

This understandably caused a lot of concern among charter captains last year. Angst was compounded by plans to reduce stocking, although the goal of the stocking cut was to prevent a complete crash in the fishery. Some of the debate centered on which species to cut: lake trout or Chinook salmon.

A recent study funded by Wisconsin Sea Grant found that Wisconsin anglers on Lake Michigan are willing to pay more to target Chinook salmon (\$140/trip) vs. lake trout (\$90/trip). An earlier study on the Lake Huron charter fishery found that the decline of Chinook salmon catch rates was linked to a 51 percent drop in charter fishing effort and resulting economic impacts, although increasing gas prices in the late 2000s were also a factor. During the Lake Huron charter fishing

crash of the mid-2000s lake trout catch rates remained high. But what does this all mean for Michigan waters of Lake Michigan?

#### **Consistent economic** impacts are the rule

Despite low Chinook salmon catch rates in 2015 and 2016, charter trips and resulting economic impacts did not exhibit the same kind of crash that occurred in Lake Huron around 2004. In fact, Lake Michigan charter trips remained above the post-BKD average of 11,577 trips/year in 2015 and 2016 according to Michigan DNR.

A 2009 charter economic study found that the economic impact of charter fishing around Lake Michigan averaged \$14 million; due to economic factors (e.g., rising gas prices, recession) this fell to \$11.6 million in 2009. After adjusting for inflation, this means that Lake Michigan charter fishing generated an average of \$15.7 million in Michigan and bottomed out at \$12.6 million in 2009. In 2016, Michigan Sea Grant found that Lake Michigan charter fishing generated \$15.7 million in economic impacts for Michigan



Unhooking a Chinook salmon on the deck of a Lake Michigan charter boat. Lake Michigan charter trips and salmon remain a big draw and consistent part of coastal tourism. Photo: Michigan Sea Grant

coastal communities. Dead on average, despite the low Chinook salmon harvest

#### **Few fluctuations relative** to Huron

The fact of the matter is that Lake Michigan's charter fishery has been much less volatile than Lake Huron's, both in terms of harvest rates and economic impacts. While Lake Michigan harvest rate dropped to just under two Chinook salmon per trip in 2016, Lake Huron crashed to fewer than one Chinook salmon every two trips (Michigan DNR data) and

economic impacts of char-50 percent.

In other words, anglers could still expect a good chance that their boat would harvest a Chinook on Lake Michigan last year while this was not the case after the decline of salmon on Lake Huron. Other species (including lake trout, coho salmon, and steelhead) play an important role in the charter fishery, too. Many anglers are thrilled to catch any of our Great Lakes trout and salmon, all of which make good eating and top out at an impressive size.

Given the recent trouter fishing fell by more than bles with predator-prey balance in Lake Michigan and the high prey consumption of Chinook salmon, we can expect a more diverse mix of predators in the future along with modest Chinook catch rates. The good news is that the economic impacts of Lake Michigan's charter fishery appear to be quite stable so long as anglers can still expect a reasonable chance at boating a 'king.

Michigan Sea Grant

"Charters" Continued on page 23



Your banana is not the Plague in a Peel. Or Poseidon's Yellow Middle Finger of Doom.

It's a fruit.

From the tropics.

Beloved by babies, monkeys,

and baby monkeys.

Despite popular myths,

bananas possess no fish-frightening powers.

Just vitamins. And potassium.

So go ahead.

Bring your snack aboard.

Forget superstition. You have science.

You have the clarity of 580 technology.



### 2017 is the Year of the Big Fish on Lake Michigan

According to several angler and DNR creel clerk reports this is the year of big fish on Lake Michigan! Although the numbers of Chinook salmon are down compared to five years ago, their size is definitely up indicating a better balance in the predator to prey ratio.

'I have seen a good number of fish in the 20-pound range even as early as

gust 2 and then a 37-pound boat on the very next day! Chinook on August 8.

Meanwhile, Joe Maka - a DNR creel clerk out of Muskegon - has been reporting a mixed bag of Chinook and coho salmon, steelhead and lake trout for most of the season.

"May was awesome with many anglers coming in with 15-20 fish, June was tough fishing and then



**Captain Brandyn Thorsen holds fish** for his client Cameron.



The Chinook weighed 41 lbs. and was caught North of Muskegon.

May," said MacKenzie Bennett, the DNR's creel clerk out of Ludington. "And it is not just Chinook salmon that are bigger - the coho salmon and steelhead sizes are up too!"

of Ludington caught a 20-pound steelhead on Au-

July was a lot better," Maka said. "We are seeing not as many Chinook salmon but they are of quality size."

Charter boat captains can agree with a report of a 33-pound Chinook caught One charter boat out on August 7 by one boat, followed by a 41-pound fish caught by the same

The last Chinook salmon from Lake Michigan to push the 40-pound range was a 44-pound salmon caught in the Betsie River in 2001. The state record 46-pound Chinook salmon was caught in 1978 in the Grand River. Both these river fish were caught in the fall, so a 41-pound fish out of Muskegon in August is very unusual.

'This is a pleasant surprise to see the fish sizes that we are this year," said the DNR's Lake Michigan Basin Coordinator Jay Wesley. "We have been aggressively trying to reach a balance between Chinook salmon numbers and alewife in Lake Michigan through stocking reductions. The last five years showed an unbalance with too many Chinook and not enough alewife. Ideally we would like to see 20 pounds of alewife to one pound of Chinook. In 2015, computer models showed we were down to 10 pounds of alewife per pound of Chinook. Back in 1978 and 2001 when we last saw 40-pound Chinooks, we had about 30 pounds of alewife per pound of Chinook."

The DNR recognizes that the numbers of Chinook are down compared to what anglers experienced in the last 10 years, and it is encouraging to see tackle-busting fish now indicating a healthy fishery. This type of activity has created a much needed positive buzz for Lake Michigan.

To learn more about where and when to catch fish on Lake Michigan, check out the Road Map to Fishing Lake Michigan,



### **FALL FISHING IDEAS**

by Bob Jensen

The weather in my part of the world has been cool the past few days. Some people are predicting an early autumn. I'm not hoping for summer to depart soon, but we take what they send when it comes to weather. If you like to fish, the fall months can provide some outstanding fishing opportunities. Just in case fall does come early this year, following are some things you can do to take advantage of the fishing action.

The fall season provides perhaps the best opportunity for catching numbers of big fish. Sure you can catch a big one before it spawns in the spring, but fall fish are preparing for winter by bulking up, so they're hungry. They're thinking about eating, not about spawning. makes them more susceptible to an angler's presen-

As with any fishing, the key thing is to fish where the fish are. I've caught walleyes in the fall in two foot of water on windblown shorelines, and in thirty feet of water on deep humps. Same thing's true with largemouth bass, smallmouth bass, northern pike, muskies, and crappies. Keep moving until you find them.

Remember that in the fall, big baits catch big fish. It's more efficient for a gamefish to eat one big meal instead of several smaller ones. Therefore, big baits are the way to go. If you're after largemouth, try a Reed-Runner spinnerbait with a big blade and tip it with a big trailer, something like the largest Impulse Paddle Shad. If a slower presentation is desired, go with a rubber legged Jungle Jig with, again, a bulky plastic. This set-up is effective where you would fish the spinnerbait or along a deep weedline. Make sure the jig color contrasts with the trailer color.

If walleyes are the quarry, try a Fire-Ball jig tipped with a redtail chub, one in the five inch range, maybe even a little bigger. When it comes to fall walleyes, a redtail is hard to beat. Don't crowd them in the minnow bucket, and keep them aerated. We always take at least three or four dozen redtails on the water

with us in the fall. Make sure you're using fresh, strong line in the fall. Too many anglers use the same line they've used all spring and summer, and things usually work out o.k. But

odds for hooking a truly big fish are better in the fall should be incentive enough to spool some new line on just in case the line you're using has a nick. Your line is the only thing keeping you stuck to the fish: Use good stuff. Eight pound test P-Line CX Premium has become a favorite of mine for this style of fishing: It's strong, but thin in diameter.

There are lots of reasons to go fishing in the fall. The colors can be spectacular, the crowds are gone, and the big fish are eating. If you keep the above ideas in mind, you'll be on your way to taking advantage of these fall fishing opportu-

Watch the newest and some of the older episodes of Fishing the Midwest television, video fishing tips, and read fishing articles from the past and present at fishingthemidwest.



Tim Snyder caught this big smallmouth on Kabetogama Lake last fall. It was one of many truly big smallmouths taken on jigs tipped with plastic or large minnows.

### **Battle Creek Steelheaders Summer Tournament Winner**



Justin Kling displays his winning catch

Saturday July 15, 2017 saw the Battle Creek Steelheaders meet at Portage Lake in St. Joseph County for their annual summer inland lake tournament and family picnic at Klines

Fishing was slow for the eighteen fisherman. Panfish were not co-operative only five Bluegills and five Crappies were brought to the scales.

Justin Kling blew away the predator division with his boating of a thirty-nine inch, twelve pound fourteen ounce Northen Pike. Justin is always competitive in club Steelhead tournaments but this win will be a terrific memory!



2017 E	<b>Battle</b>	Creek Steelheader's Ca	lendar of Event	S
Month	Date	Event	Information	Contact Info
October	7	Kalamazoo River Salmon	Allegan Dam	Todd Sidnam 269-317-0324
October	21	Kalamazoo River Memorial	Allegan Dam	Todd Sidnam 269-317-0324
October	28	Kalamazoo River Trout Quest	Allegan Dam	Todd Sidnam 269-317-0324
November	25	St. Joe River Fall Steelhead	I-94 Boat Ramp	Todd Sidnam 269-317-0324
December	2	St. Joe River Chapter Challenge	Southwest Chapter	Ryan McCartney 574-274-6382
December	9	Christmas Party		Kalamazoo Eagles

2017 Flint River Steelheader's Calendar of Events					
Month	Date	Event	Information	Contact Info	
September	20	Membership Meeting	7:00 pm at Walli's	Burton, MI	
October	18	Membership Meeting	7:00 pm at Walli's	Burton, MI	
November	8	Membership Meeting	7:00 pm at Walli's	Burton, MI	
December	13	Membership Meeting	7:00 pm at Walli's	Burton, MI	

Month	Date	Event	Information	Contact Info
September	9	Sportsmen for Youth Day	Muskegon Cty Fairgrounds	https://sportsmenforyouth.com
September	16	Grand Haveen Salmon Festival	GH Waterfront/City Marina	www.ghsalmonfest.com
September	16	GH Steelheaders - Salmon Festival Big Fish Contest	GH Waterfront Stadium	www.ghsalmonfest.com
September	16	Salmon Fest Kid Zone Activity Area	GH Waterfront/City Marina	
December	TBD	Christmas dinner/annual meeting		
		For more information on Grand Roger Belter - 61608420	I Haven Steelheaders activities 00877 or rogerbelter@gmail.co	

2017 (	2017 Grand Rapids Steelheader's Calendar of Events					
Month	Date	Event	Information			
September	11	Board of Directors Meeting	7 PM			
September	25	Membership Meeting	7:30 PM / Social Hour 6:30 pm			
October	1	Chapter Buck Contest Starts				
October	2	Board of Directors Meeting	7 PM			
October	30	Membership Meeting	7:30 PM / Social Hour 6:30 pm			
November	4	Fall River Contest Grand & Muskegon Riv	ers and their Tributaries STC			
November	6	Board of Directors Meeting	7 PM			
November	11	Fishing Partners Manistee Contest STC				
November	27	Membership Meeting	7:30 PM / Social Hour 6:30 pm			
December	4	Bard of Directors Meeting	7 PM			
December	11	Chapter Family Christmas Party	6 PM Diamond Hall			

2017	reat	Lakes Bay Region	Steelheader's Calendar	or Events
Month	Date	Event	Comments	Contact Info
September	9	Frankfort	Salmon outing 6 am - 1 pm	
December	9	Christmas/Awards Banquet Bring family and friends!		

Board meetings: 6:00 pm / Membership meetings: 7:00 pm All Board/Membership meetings are held first Tuesday of each month with the exception of May, Jue, July and August. A raffle is held following all membership meetings. BRING A FRIEND! All membership meetings are open to the public. Register via Marine Radio channel 72 at beginning of all events. Weigh in's and picnics follow at 2:00 pm.

989-496-3410

For more information, email: kathy@steel-headers.com or check web page www.steel-headers.com



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2017 H	2017 Holland Steelheader's Calendar of Events				
Month	Date	Event			
September	5	Tuesday Fish League Final Night	Membership meetings held at:		
September	11	Board Meeting	Yacht Basin Yacht Club		
October	2	Board Meeting	1862 Ottawa Beach Road, Holland MI 49424 Social hour at 6 pm, Dinner at 7 pm		
November	6	Board Meeting	Call board members to find out location of		
December	2	River Tournament	board meetings.		
December	4	Board Meeting	For event information, so to bellendetechand		
December	7	General Membership Meeting	For event information, go to hollandsteelhead- ers.org, or call Jeremy Erdman 616-510-9405		

2017	2017 Huron Valley Steelheader's Calendar of Events			
Month	Date	Event	Information	Membership Meetings Held at:
October October	19 28	Membership Meeting Huron Walleye Tournament w/ MWS	7:30 pm	American Legion Post #200 11800 Michaels St. Taylor, MI 48180
				John Popp tzjohn@comcast.net

Month	Date	Event	Chair
September	5	General Membership Meeting	
September	9	Salmon Tournamet - Frankfort w/ TCAS	Mike (MWS) & Dick (TCAS) Hartrick
September	23	Manistee River Tournament w/TCAS	Adam Trenz
October	3	General Membership Meeting	
October	7	Ohio Steelhead Alley (include Elk Creek P.A.)	Phil Bustos
October	14	Manistee River Tournament	Fabian Sepulveda
October	24	Captain/Crew/River Angler 2018 Calendar Meeting	Kelley/P. Bustos/Nabors
October	28	Huron Walleye Tournament w HVS	Jim Robertson
November	4	River Tournament Manistee w Det. S	TBD
November	7	General Membership Meeting	
November	18	Pere Marquette River (Flies Only Section) w TCAS	Phil Bustos
December	5	CHRISTMAS PARTY - HAPPY HOLIDAYS	
December	9	Huron River Tournament	Hinchcliff/Davis
7:00 PM a	t The N	***ALL MEMBERSHIP MEETINGS ARE OPEN TO TO ew Livonia Seniors Center at the Southeast Corner of Far:	

Month	Date	Event
September	21	Membership Meeting
September	21	Board Meeting
October	19	Membership Meeting
October	19	Board Meeting
November	1	Pro Am Committee 2018 Kick-off #1
November	16	Membership Meeting
November	16	Board Meeting
November	25	River Tournament
December	6	Pro Am Committee 2018 #2
December	7	Local Tournament Committee Annual
December	9	Holiday Party
		Membership Meetings Held at: South Haven Moose Lodge, 1025 East Wells Street, South Haven, MI 49040 Contact: SHS President

2017 Southwest MI Steelheader's Calendar of Events				
Month	Date	Event	Location / Contact Info	
September	14	Membership Meeting	Board Meetings: 5:30-6:30 PM	
October	12	Membership Meeting	One in L. Harris, Cr. O. 7:00	
November	8	Membership Meeting	Social Hour: 6:00-7:00	
December	2	Writer Challenge Tournament	Meeting: 7:00-8:30 PM	
December	8	Christmas Party		
		Membershi	p Meetings Held at:	
	St. Joseph-Benton Harbor Elks 541, 601 Riverview Drive, Benton Harbor MI 49022			

Contact: Jim Marohn 269-208-2784

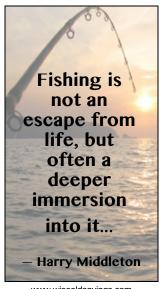
Month	Date	Event	Location / Contact Info	Time
September	6	Membership Meeting		6:30 pm
September	9	MWS Salmon Tournament	Frankfort	
September	16	Crystal Lake Tournament	Warner Smith	
September	23	Senior Center Fish Fry		
September	23	MWS Manistee River Tournament		
September	30	Grand Traverse Bay Tournament	Elk Rapids, Joe Cruzen	
October	4	Membership Meeting		6:30 pm
October	21	Port Captain's Meeting		
November	1	Membership Meeting		6:30 pm
December	8	Christmas Party		

2017 Thumb Chapter Steelheader's Calendar of Events				
Month	Date	Event	Information	Location
September	21	Regular meeting with tackle swap	7:30 PM	Ubly Foxhunters
October	19	Regular meeting - Election of Board/Officers	7:30 PM	Ubly Foxhunters

#### "Charters" **Continued fom page 20**

helps to foster economic growth and protect Michigan's coastal, Great Lakes resources through education, research and outreach. A collaborative effort of the University of Michigan and Michigan State University and its MSU Extension, Michigan Sea Grant is part of the NOAA-National Sea Grant network of 33 university-based programs.

This article was published by Michigan State University Extension. For more information, visit http://www.msue.msu.edu.



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### Michigan Releases Draft Plan to Improve Lake Erie **Water Quality**

LANSING – State leaders, on June 13, shared Michigan's draft Action Plan for Lake Erie—an approach for improving water quality and helping to prevent algal blooms, making it safer for people and aquatic life.

The plan aims to reduce the amount of phosphorus entering Lake Erie to help prevent persistent, intense algal blooms in the western part of Lake Erie, including those that are unsafe for people, and address low dissolved oxygen in the central basin.

Michigan's plan sets the roadmap for how the state will do its part to reduce the amount of phosphorus entering Lake Erie by 40% by 2025. According to Michigan Dept. of Ag. Director Jamie Clover Adams, Michigan's plan outlines current efforts and articulates actions the state will take to improve Lake Erie.

"Although state agencies and other stakeholders are conducting more and better research on the Western Lake Erie Basin and improving best practices for agriculture and wastewater treatment, our Domestic Action Plan lays out additional key strategies for wetland restoration. invasive species research, tightened permit requirements for sewage treatment facilities, and customized farm operations," said Clover Adams.

Algae are natural components of marine and freshwater systems, and not all algae are harmful, but too much algae, like in Lake Erie's western basin. is an indication of an imbalance in the ecosystem. There are many reasons why the Western Basin is susceptible to algal blooms.

"From invasive species to rainfall run-off to increasing temperatures, there are many challenges we are working to understand," said C. Heidi Grether, director of the Michigan Department of Environmental Quality. "Fortunately, with strong support from Gov. Snyder and actions such as declaring Lake Erie an impaired water, Michigan is poised to find solutions." Recently, Michigan joined Ohio and Ontario in the signing of the Western Lake Erie Basin Collaborative Agreement and the Lake Erie Basin was included as a priority action area in Michigan's Water Strategy. Keith Creagh, Michigan DNR director, encouraged cooperative action across local, state and national governments to benefit Lake Erie. "Lake Erie is one of Michigan's defining natural resources," Creagh said. "If we want to ensure the lake continues to be a source of drinking water and a great place for recreation for the region and the state, it is imperative that we work together to provide solutions."

Michigan's Domestic Action Plan is one of several from surrounding states, Ontario, and both federal governments. The final version, along with plans from other Lake Erie Basin states, will be integrated into the U.S. EPA's comprehensive plan, scheduled for release in 2018.



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### Thursday, September 21

We will begin gathering with light refreshments at 11:30am, the program will begin promptly at 12:00pm and will last until approximately 1:00pm. Come enjoy this celebratory gathering complete with speakers, media & more!

> RSVP by September 14 to: info@huronpines.org (989) 448-2293 Directions will be provided upon RSVP



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