Michigan Waterfront Alliance Update for Monday, January 17, 2022

MICHIGAN WATERFRONT ALLIANCE

Michigan Waterfront Alliance (MWA) is a 501(c) 4 non-profit corporation formed over twenty years ago in order to effectively advocate for the creation or preservation of state laws, and/or policies designed to protect, preserve, and promote the sustainable and wise use of our state's immense treasure of high quality freshwater resources. Our primary mission will be accomplished by pro-active participation in Michigan's legislative process (lobbying), by participating in court cases whose outcomes may have significant statewide ramifications, and/or by direct involvement with natural resources management, or environment focused state agencies or departments.

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Study finds more than one million tons of salt is flowing into Lake Michigan each year

By Danielle Kaeding
Wisconsin Public Radio

Wednesday, December 22, 2021, 2:45 PM

More than one million metric tons of salt is flowing into Lake Michigan each year, according to a new study from the University of Wisconsin-Madison. The findings come as the state has been making significant strides to reduce salt use on roads to curb pollution.

Researchers examined past and current water data on the amount of salt flowing into the lake from 234 rivers and streams, according to Hilary Dugan, the study's lead author and assistant professor for the Center for Limnology at UW-Madison.

"There's a tremendous amount of salt going into the lake each year," said Dugan. "But because of the volume of Lake Michigan, that concentration is still pretty low."

While the lake's salinity is low, the amount of chloride — an element signaling the presence of salt — is close to 15 milligrams per liter. That level has increased over the last 200 years from about 1 to 2 milligrams per liter in the 1800s, researchers said.

Levels of roughly 250 milligrams per liter have been known to affect the taste of drinking water and harm freshwater organisms. Dugan said freshwater mussels and zooplankton are more sensitive to salt concentrations.

"It's good to know that what we're seeing is not catastrophic by any means, but we should be aware that it is increasing," said Dugan. "It could have some repercussions that we're not fully aware of yet."

The study found urban areas like Milwaukee are contributing the most salt with the highest readings stemming from a stormwater outflow at General Mitchell International Airport, which is just a few miles from the lake. Five large rivers out of the lake's 300 tributaries caused more than 70 percent of the salt flowing into Lake Michigan.

Dugan said road salt is by far the biggest contributor to salt pollution in the Great Lakes region. In the last several years, the Wisconsin Department of Transportation has been working to reduce salt use on the state highway system to curb pollution. Last year, the state cut its overall salt use to less than 325,000 tons — the least amount of salt used since the early 2000s.

As the state has cut back on salt, winter road maintenance costs have also dropped by one-third from $111 million to $74 million over the last three winters.

"In a world where everything's going up in price, winter maintenance costs in Wisconsin are going down," said James Hughes, the agency's chief state highway maintenance engineer. "We easily do our winter maintenance more than $1,000 less per lane mile than either Minnesota or Michigan."

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MICHIGAN
INLAND LAKES
CONVENTION:
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Virtual via Zoom
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Northern Pike: The "Wolf of the Weed Beds"

Article by Scott Brown, MWA
E-Newsletter Editor

Highly opportunistic feeders that prey upon on frogs, fish, crayfish, waterfowl, and small mammals such as voles, shrews, and even red squirrels, northern pike, scientific name *Esox Lucius,* are often appropriately referred to as the "wolf of the weed beds" due to the lightning fast manner in which the voracious carnivore "dispatches" its unwary prey. Capable of growing to lengths of up to 4.5 feet (1.37 meter) and of achieving weights of up to 62.5 pounds (28.4 kilogram), northern pike possess long hydrodynamic bodies that allow them to move quickly through the water, powerful duck bill-like jaws that nature has equipped with an impressive set of razor-blade sharp teeth, and large, light sensitive eyes that allow the notorious predator to effectively pursue its prey based solely upon visual stimuli.

Capable of living as long as fifteen years, northern pike have an average life span of six to eight years. Due to their non-stop voracious feeding habits, northern pike obtain much of their length and weight in the first two to three years of life. The females of the once abundant predator become sexually mature at three or four

years, while the male of the species reaches sexual maturity in two to three years. Northern pike found in the Laurentian Great Lakes region spawn soon after "ice out" in late March, April and May.

Optimal northern pike habitat is found in Arctic and boreal regions of North America, Europe, Asia, and Siberia that continue to be defined by vast expanses of coniferous forests, wetlands, and thousands of relatively pristine lakes, rivers, and streams. Ideal northern pike habitat includes large, moderately productive, aquatic plant dominated inland lakes hosting natural shorelines, log jam created pools found in both large and small rivers, and the isolated, prey rich backwaters of creeks. While once thriving populations of northern pike continue to fade within the inland lakes of southern Michigan due primarily to the fact that once abundant populations of important northern pike prey fish such as yellow perch are now severely diminished, widespread loss of natural shorelines, and excess nutrient driven eutrophication, the prized target of many fly-in recreational fishing trips continue to thrive, for example, in the high quality inland lakes, rivers, and creeks found in unspoiled natural areas of the Canadian province of Ontario lying just north of Lake Superior.

January 4, 2022

Contact: Paige Filice (MSU Extension), 517-676-7291 or

Joe Nohner (DNR), 517-599-6825

Grow Your Appreciation for Michigan's Inland Lakes with Introduction to Lakes On-line Course

Registration is open now through Friday, January 21.

Lakes hold a special place in our hearts – no matter if you're a Michigander born and raised, or a visitor to the Great Lakes State – and can provide an escape from the hustle and bustle of everyday life. Visiting natural areas can improve moods, reduce stress and boost immune systems.

Whether you live on a lake, visit a secret fishing spot or escape the daily grind on a camping trip to a serene lake in the woods, lakes provide irreplaceable benefits to our mental and physical health and deserve our appreciation and attention.

This month, Michigan State University Extension offers an opportunity to develop a deeper understanding of inland lakes with enrollment in the Introduction to Lakes Online course, a nationally recognized, award-winning, six-week class in a convenient, self-paced online format. The course is designed for anyone who has a passion or curiosity for inland lakes, including lakefront property owners, local government officials, lake managers and educators. Course instructors include MSU Extension educators and state agency personnel.

Registration and course information

The 2022 course runs January 25 to March 16, and costs $115 per person.

Registration is open now through January 21.

Scholarships are available. Registration information is available on the Introduction to Lakes course webpage.

Since the course was first offered online in 2015, more than 1,000 people across the country have participated. Participants continuously praise the level of content and interaction they have with instructors and other students in the class. One student said, "Hearing from other students broadened my perspective and definition of riparian. I now realize that as each lake is unique, so too are its caregivers and their priorities and concerns."

Students have week-by-week, 24/7 access to six online units, complete with prerecorded video lectures, activities, resources and quizzes. Students communicate with each other and instructors through lively discussion forums and biweekly webinars. Ask-an-Expert webinars provide opportunities to learn from experts at the Michigan Department of Natural Resources, Michigan State University and the Michigan Department of Environment, Great Lakes, and Energy. Course topics include lake ecology, watersheds, shorelines, Michigan water law, aquatic plant management and community involvement. A certificate of completion is awarded to those who complete the course, and students receive a free, one-year membership to Michigan Lakes and Streams Association.

Students also can receive continuing education credits, including 16 Michigan Department of Agriculture and Rural Development Pesticide Applicator Re-Certification credits and credits in the MSU Extension Master Citizen Planner, Master Gardener, Master Naturalist and Conservation Stewards programs.

The Michigan Department of Natural Resources is committed to the conservation, protection, management, use, and enjoyment of the state's natural and cultural resources for current and future generation. For more information, go to Michigan.gov/DNR.

An Important Note to Our E-Newsletter Readers Regarding MSU Extension Intro to Lakes

---Wednesday, March 16th Panel Discussion---

The readers of this e-newsletter may be interested in knowing that Michigan Waterfront Alliance Board of Directors members, and corporate legal counsel, Attorneys-at-Law William and Dane Carey will contribute their legal expertise to a question and answer based panel discussion focused on various aspects of inland lake management and conservation on Wednesday, March 16, 2022 from Noon to 1:00 PM. Only those registered and participating in the 2022 Michigan State University Introduction to Lakes program will be allowed to participate in the panel discussion. The leadership of Michigan Waterfront Alliance encourages you to register today for this year's Introduction to Lakes program by clicking here...

MIDWEST GLACIAL LAKES Partnership

The Midwest Glacial Lakes Partnership (MGLP) brings together resource agencies, non-profit organizations, and other stakeholders to protect, rehabilitate, and enhance sustainable fish habitats in naturally formed lakes of the Midwest. We foster collaborations on fish habitat science, education and outreach, and conservation.

Request for proposals: 2023 Lake Conservation Grant

We request project proposals for funding from the Midwest Glacial Lakes Partnership (MGLP) 2023 Lake Conservation Grant. The MGLP is one of twenty partnerships that span the nation under the umbrella of the National Fish Habitat Partnership (NFHP). The MGLP area of focus is glacial lakes and their watersheds as depicted by the recently updated service area in the second article below. Nine Midwestern states, federal agencies including the U.S. Fish and Wildlife Service (USFWS), U.S. Geological Survey, and the U.S. Forest Service, tribal partners, and private natural resource entities including The Nature Conservancy, have been integral partners in the development and operation of the MGLP.

Examples of past MGLP projects that have restored natural shorelines (left; photo by Mark Keiser), removed fish passage barriers (center; Joe Nohner), and assessed nutrient loading in the watershed (right; Jerry Sweeten).

We support conservation projects that work toward meeting the goals and objectives set forth in the MGLP Strategic Plan to benefit glacial lake fish habitats, which include addressing the chemical, physical, and biological components of the habitats

that fishes found in glacial lakes use throughout their lives. We have directed funding toward a wide range of aquatic conservation projects that benefit imperiled, endangered, and recreational fish species and their habitats. We typically fund 3-5 projects annually between $30,000 and $100,000, but larger projects will be considered for funding up to a maximum of the approximately $360,000 expected for distribution. Projects have been successfully implemented because contributions and capabilities of many partners have been combined to accomplish project goals that none of the partnering entities could accomplish on their own.

Projects considered for funding must align with the goals and objectives of the MGLP and can range in scale from projects that affect one or more sites, lakes, or watersheds. Projects should address the processes that cause fish habitat impairments as opposed to managing or treating the symptoms of those causes. Examples include, but are not limited to:

- **projects that implement or demonstrate new approaches**
- **watershed-level nutrient control projects;**
- **water quality and erosion control measures;**
- **native vegetation or wetland rehabilitation;**
- **natural riparian or in-lake habitat restoration and protection;**
- **barrier removal for improved native fish passage;**
- **fish population or watershed assessments needed for project evaluation;**
- **habitat assessment, prioritization and planning for future habitat projects;**
- **evaluating current and future habitat conditions;**
- **projects addressing climate change adaptation or mitigation through fish habitat;**
- **projects training biologists and managers on inland lake fish habitat management tools and approaches; and**
- **community outreach and education on the importance of and how to better conserve glacial lake fish habitat.**

In addition to conducting independent outreach and/or education, successful applicants will be expected to work with the MGLP to coordinate media and public outreach to raise the profile of MGLP-funded projects.

If you have a lake conservation project aligned with the goals and objectives of the MGLP and need financial assistance, we encourage you to submit a proposal for project funding. If you have any questions, please contact Joe Nohner at nohnerj@michigan.gov or 517-284-6236 or Gary Whelan, MGLP Steering Chair, at whelang@michigan.gov. Applications for funding are available at the Lake Conservation Grant website. Applications are due on February 18, 2022, and you can submit your application by emailing it to MGLP Coordinator Joe Nohner at nohnerj@michigan.gov.

MICHIGAN DEPARTMENT OF
NATURAL RESOURCES
CARING FOR MICHIGAN'S OUTDOOR PLACES AND STORIES SINCE 1921

January 14, 2022

Michigan DNR has successful Great Lakes fisheries survey year

The Michigan Department of Natural Resources has completed its annual Great Lakes survey season, conducted on all of our Great Lakes waters from April to

November 2021. The data from these surveys directly informs fisheries management decisions and future actions on Great Lakes waters.

Survey highlights from the DNR's four Great Lakes fisheries research stations, as arranged from north to south, include:

Lake Superior and Northern Lake Michigan – Marquette Fisheries Research Station

The research vessel Lake Char, which surveys Lake Superior and focuses on lake trout, began work as soon as the ice was gone. The R/V Lake Char had a full season that included a trip to Isle Royale in June to document lake trout spawning in deep water and outside the expected fall spawning period, and the crew used a deep-water remotely operated vehicle that deployed video recording and a vacuum sampler. The sampling confirmed lake trout spawning in June and the deepest ever documented lake trout spawning in water over 300 feet deep. These surprising observations will be used with other survey data to further improve lake trout management in Lake Superior.

Lake Michigan – Charlevoix Fisheries Research Station

Two surveys accounted for the majority of the Great Lakes survey work for the Charlevoix Fisheries Research Station staff and the survey vessel Steelhead in 2021.

Spring gill net survey

The spring gill net survey was conducted at seven ports this year: St. Joseph, South Haven, Saugatuck, Grand Haven, Arcadia, Leland and Charlevoix. Across all ports, more than 100,000 feet of experimental, bottom gill net were deployed with catches of more than 5,000 fish.

The objective of this survey is to assess recreationally, commercially and ecologically important fish populations with a focus on lake trout, burbot, lake whitefish and yellow perch in Michigan waters, and to use the information collected to inform ongoing research and management efforts for multiple Lake Michigan species. This is a collaborative assessment with other Lake Michigan agencies that has been conducted since 1997; due to the broad spatial coverage and multispecies focus, this survey provides us with our most comprehensive picture of the status of adult Lake Michigan fish populations.

Lakewide acoustic (forage fish) survey

For most of the month of August, the S/V Steelhead and crew were conducting the forage fish survey, a multiagency effort measuring the abundance of alewife, rainbow smelt, bloater chub and other prey fish throughout Lake Michigan, using hydroacoustic (high-tech, recordable fish finder) gear. This year's prey fish assessment included an added element: a calibration study that used two U.S. Geological Survey "saildrones" that measured prey fish acoustically, but without vessel motor interference. Results from this survey continue to inform research and interjurisdiction trout and salmon management concerning predator/prey balance and lower food web changes in Lake Michigan including the lakewide "predator-prey ratio" analysis.

Bottom trawl survey

In addition to these two major surveys, the S/V Steelhead and crew completed the annual bottom trawl survey in September at four of the ports sampled during the spring gill net survey. This lakewide survey provides information on the overall status of the nearshore fish community, including the presence, range expansion and effects of exotic species and the status of yellow perch recruitment.

Other assessments

Small survey vessels were used by Charlevoix Fisheries Research Station staff for targeted surveys during fall 2021, with assessments of northern Lake Michigan reef fish populations being completed from August through November. Assessments included deployment and collection of egg-sampling gear, along with numerous acoustic telemetry projects examining lake trout, lake whitefish and cisco movements and spawning site use. Staff, who are members of the DNR Fisheries Division dive team, also assisted with mussel surveys in the Detroit River, as well as reef monitoring work in Saginaw Bay.

Lake Huron – Alpena Fisheries Research Station

The R/V Tanner and its crew from the Alpena Fisheries Research Station completed a full suite of fisheries assessments across Lake Huron during 2021, traveling from the Les Cheneaux Islands in the north to the Thumb Coast in the south, with many stops in between. Fieldwork began in April, with an annual lake trout survey that samples more than a dozen stations across the main basin through the month of May. The findings from the spring gill net survey continue to show strong natural reproduction of lake trout in the northern part of the lake, but declining recruitment of stocked lake trout in the south.

In early and mid-summer, the R/V Tanner and its crew conducted exploratory sampling and provided assistance to science partners including: remotely operated vehicle and water chemistry work at the Middle Island sinkhole, deploying of dissolved oxygen loggers in Saginaw Bay, and completing the second Outer Saginaw Bay hydroacoustics and midwater trawling survey in support of a multiagency evaluation to determine the success of recent cisco rehabilitation efforts.

By late August, the R/V Tanner again was deployed to Saginaw Bay for the annual September fish community survey. While data for the gill net portion of this survey are still being examined, preliminary results indicate the highest gill net catch rate for walleye since 1994, with yellow perch catch rates being similar to recent years. Of special note, two juvenile lake sturgeon stocked as part of recent restoration efforts in the Saginaw River watershed were captured and released.

Immediately after the conclusion of the Saginaw Bay survey, the R/V Tanner traveled north to the Les Cheneaux Islands, where an early October fish community survey revealed an increase in yellow perch gill net catch rates and a record smallmouth bass catch rate, which topped all previous data collected since 1969. The data collected throughout the entire 2021 survey season are being examined, shared with partners, and used to update models and decision tools that help inform fisheries managers on the status of lake trout, walleye, yellow perch and other important species across Lake Huron.

St. Clair River – Lake Erie Corridor – Lake St. Clair Fisheries Research Station

The 2021 field season for the R/V Channel Cat and crew began in April 2021 with a spring trap net survey in Anchor Bay of Lake St. Clair. New for this year's survey was the surgical insertion of acoustic telemetry tags in smallmouth bass, which will allow biologists to track their movements and habitat use throughout the St. Clair-Detroit River System and beyond. After removing the trap nets in May, survey effort moved to the North Channel of the St. Clair River with the annual June setline survey for lake sturgeon. A total of 112 lake sturgeon were caught and tagged, including 37 fish that were captured in previous survey efforts.

In July, the first-ever binational Lake St. Clair-wide small fish survey was conducted in cooperation with the Ontario Ministry of Northern Development, Mines, Natural Resources, and Forestry and the U.S. Fish and Wildlife Service. Catch rates of forage fish and juvenile sport fish in the nearshore waters of the lake were sampled with similar survey gear to ensure results from U.S. and Canadian waters were comparable. Interestingly, catch rates were 10 times higher in Canadian waters where

natural, undisturbed shorelines are much more common than in U.S. waters where hardened seawalls prevail.

In August, assessment efforts shifted to trawling with the eighth annual Lake Erie trawl survey and the annual Lake St. Clair lake sturgeon trawl survey. The Lake Erie survey, which is used to assess the abundance of forage fish and young-of-year walleye and yellow perch in Michigan waters of the west basin, continued to document strong reproduction for both species, including a record-high catch rate of juvenile yellow perch.

The Lake St. Clair survey resulted in the captured of 35 lake sturgeon (33 first-time captures and two fish that were captured in previous surveys) that were tagged and released. The largest lake sturgeon was a 73-inch fish that tipped the scales at 104 pounds. Trawling work continued into September, when the R/V Channel Cat joined the R/V Tanner for the annual Saginaw Bay fish community survey. The catch rates of young-of-year walleye and yellow perch in the Saginaw Bay trawls were high, and forage abundance was the second-highest measured in the past 10 years.

The survey season for the R/V Channel Cat concluded the first week of October with the Lake Erie walleye index survey, which measures the abundance of yearling and older walleyes. Walleye catch rates were up from 2020, with a substantial proportion of the fish likely representing the strong 2019 year class.

The year's field work concluded with a Lake St. Clair nearshore assessment from the R/V Mooneye, the station's electrofishing boat. Preliminary results indicate a diverse fish community comprised of both sport and nongame fish. Final data analysis from all 2021 surveys is ongoing, and results will be shared with partners to promote sound, scientific fisheries management in the international waters of the region.

To learn more about how the DNR manages Michigan's fisheries for current and future generations, visit Michigan.gov/Fishing.

ATTENTION READERS!!!

In order to add your friends, neighbors, and/or fellow lake or watershed conservation focused association member e-mails to our growing list of water resource conservation minded people who would like to receive

this Michigan freshwater resources focused twice monthly newsletter, contact Editor Scott Brown at scottb1952@gmail.com

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MICHIGAN WATERFRONT ALLIANCE

>> We Need Your Help!!! <<

Why You Should Join Michigan Waterfront Alliance?

Do you care for your lake, river, or stream? Do you care enough to contact your state senator or representative about issues that affect your waterbody? Do you keep track of the bills that are important to your lake, river, or stream? The good news is that Michigan Waterfront Alliance (MWA) is doing this for you. MWA hires a lobbying firm to keep track of issues and bills which may affect Michigan's waterfronts, and remain in constant contact with senators and representatives. These lobbyists have relationships with those serving in our state legislature, willing to present bills that MWA would support to help protect Michigan's inland waterways, and help to defeat bills that may be detrimental to our waterways. There is an old saying that "you can't fight city hall." This may be true if you do not know how, but with the help of MWA's attorneys, MWA has the experts that know how to deal with legal issues. There have been laws interpreted incorrectly when it comes to our lakes, rivers, and streams.

MWA, with its attorneys, has argued these cases when we believe the law has been misinterpreted.

While the MWA Board of Directors is made up of volunteers, it is expensive to hire lobbyists and attorneys. The Michigan Waterfront Alliance membership is made up of individuals, lake associations, and corporations who care about Michigan's lakes, rivers, and streams. Would you like to be more involved? You can by becoming a member of Michigan Waterfront Alliance and by becoming an active partner in MWA. Membership in MWA is inexpensive:

We rely entirely on membership dues to fund the operating costs of our organization...

TO BECOME A MEMBER OF

MICHIGAN WATERFRONT ALLIANCE VISIT OUR

>>>>>> MEMBERSHIP PAGE <<<<<<

Annual Dues are:

$50 for an individual;

$100 for a lake association; and

$200 for a corporation

With support from individuals like you, lake associations, and corporations, we can continue to work together as a unified voice choosing to protect Michigan's water resources for future generations. Thank you for your consideration!!!

Michigan Inland Lakes Partnership

Michigan Waterfront Alliance is a proud member of the Michigan Inland Lakes Partnership

A Collaborative Partnership Dedicated to Protecting Michigan's Vast Heritage of High Quality Inland Lakes

The Michigan Inland Lakes Partnership (MILP) is made up of a broad range of organizations and agencies that have a common interest - protecting inland lakes. Explore this site to learn more about Michigan's lakes, the organizations involved with the Partnership, and how you can be a part of the effort. You can also follow us on Facebook and Twitter!

Michigan has more than 11,000 inland lakes. Most are high quality resources highly valued by society for recreation and as places to live. These cultural demands place significant stresses upon these ecosystems, often resulting in undesirable changes. How can these lakes be strategically managed to minimize undesirable changes and protect them for this and future generations?

The purpose of the Michigan Inland Lakes Partnership (Partnership) is to engage state and local agencies, Native American Nations, outreach institutions (universities and other educational institutions), non-governmental organizations (NGOs), businesses, industries and citizens in a collaborative effort to ensure the quality, sustainability and ecological diversity of lakes, while considering society's needs. The Partnership will promote communication and cooperation between partners, communities and citizens interested in the management of Michigan's inland lakes, educating leaders, and strengthening stewardship efforts.

The MILP Coordinating Council is the decision-making body of the Partnership. The Council sets the goals of the Partnership, and all Council Partners have a vote in the activities and policies of the Partnership. The Council currently meets four times per year. Coordinating Council member organizations are listed alphabetically below. Clicking on an organization name will take you to that organization's website.

To learn more about the Michigan Inland Lakes Partnership, and its ensemble of inland lake protection focused collaborative organizations, click here

Join Michigan Waterfront Alliance!

- **Are you tired of funding the management of aquatic invasive species on your lake that were introduced by recreational boaters using the local MI Department of Natural Resources public boating access site?**
- **Are you just a bit angry that recreational boaters using your lake are not being asked to contribute their fair share to combat the negative influences of aquatic invasive species?**
- **Are you worried about the fact that your lakefront residential property values are being negatively influenced by the steadily increasing presence of aquatic invasive species?**
- **Are you concerned about the fact that it is nearly impossible to find an inland lake in Michigan that does not currently host one or more potentially harmful aquatic invasive species?**
- **Are you aware of the fact that inland lakes are Michigan's most valuable natural resource, and that our state legislature has thus far appropriated almost nothing in the way of budget resources to help ensure they remain healthy and viable?**

If your answer is yes to any of these important questions, please help ensure that your voice is heard in Lansing by joining Michigan Waterfront Alliance today.

Click here to Join MWA

Visit the Michigan Waterfront Alliance Web Site by Clicking Here

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