



With no time to spare, Michigan hatches a Great Lakes whitefish rescue plan

With time running out to save the Great Lakes' whitefish from a deadly mussel invasion, Michigan officials have a moonshot plan to pluck fish from Lake Michigan and breed them in captivity.

With sustained money, effort and luck, the fish's offspring could one day help repopulate the lake after humans quell the mussels that have pushed the lake's wild whitefish to near-collapse. Armed with \$350,000 from the recently passed state budget and nearly \$900,000 from the [Great Lakes Fishery Trust](#), state and tribal scientists will fan out from Naubinway to Saugatuck this fall to collect the spawning fish.

For now, the mission is limited in scale, targeting the bloodlines most in danger of disappearing. But those involved in the "genetic rescue" mission told Bridge Michigan they hope it sets the stage for a major whitefish recovery program.



That's a marked change from just a year ago, when beyond some small-scale experiments led by Native American tribes, there was no coordinated plan to intervene as zebra and quagga mussels from Europe [steadily eradicate whitefish](#) from the lower Great Lakes.

The filter-feeding mussels now dominate the food web in every Great

Lake except Superior. They strip away the plankton baby whitefish eat and leave behind water so clear the hatchlings risk deadly sunburns if starvation doesn't kill them first. So far, [nobody has found an effective mussel control strategy](#)—and whitefish don't have long to wait.

In some areas of lakes Michigan and Huron, almost no hatchlings have survived to adulthood for two decades. Commercial harvests have plummeted from 6.9 million pounds in 2009 to less than 2 million pounds last year, and the geriatric fish that remain will soon die of old age.

For now, rescue efforts led by the Michigan Department of Natural Resources and Little Traverse Bay Bands of Odawa Indians will be focused on Lake Michigan, where the crisis is particularly dire. "For the

Whitefish rescue plan

Continued on page 3

In this issue...

GLFC opens first Canadian facility.....	2
DNR checks on young walleye with upcoming fall electrofishing surveys....	3
Would You Rather?: Walleye	4
Lake Erie walleye are booming. Yellow perch are a different story	5
Underwater robot expands ability to survey seafloor	6
DNR to host two open houses Oct 10	6
GLFC funds Atlantic salmon in Lake Champlain	7
Public invited to share observations of DC cormorants' impact in NY	7
Trump announces executive order elevating saltwater recreational fishing	8
Are you fishing the wrong fish?	9
Invasive species cost billions. Can online shoppers cut the losses?	10
MN DNR finalizes Rainy Lake fisheries management plan	10

Aggressive baits for more fall success!

What baits do I fish during fall? That's a question we hear a lot. Answer: stay aggressive by using baits that cover water and trigger bites. Walleye anglers often use jigs and minnows to catch fall walleyes. Admittedly nothing beats the "thump" of a walleye clamping down on a jig. However, you often find better success during mid-fall by staying a bit more aggressive.

For example, I prefer a bottom bouncer and a night crawler well into October for much of my fall walleye angling. I fish this method along various structural elements like the edges of points and underwater humps. I move along at about .8 mph which

lets me cover lots of water to find active fish. Plus, the speed and stuttering action of a night crawler pulled behind a bottom bouncer triggers aggressive bites.

When bass are the target, reach for a bait called "the secret weapon" which is a Hybrid Hunter. This is a unique style crankbait that can be fished quickly and has an aggressive hunting action. Again, I have had very good success with this bait well into October by throwing it across shallow and mid-depth flats. If you want to catch more fish this fall, consider staying aggressive with your bait selections! ✧

Great Lakes Fishery Commission opens first Canadian facility

Promoting efficient and effective cross-border sea lamprey control

SAULT ST. MARIE, ONTARIO – The Great Lakes Fishery Commission (Commission) has completed construction of a new chemical and equipment storage facility in Sault Ste. Marie, Ontario—the Commission's first owned building in Canada. Built by Rand Construction Company with local contractors, the facility marks a significant investment in the infrastructure that supports the binational sea lamprey control program.



Fisheries and Oceans Canada sea lamprey control agents have operated out of deteriorating buildings for more than 50 years. The new 25,000-square-foot facility replaces them with a modern, purpose-built space designed for the specific demands of the program. Roughly 18,000 square feet are dedicated to equipment storage—including approximately 40 boats, 20 ATVs, side-by-sides, and a tractor—with the remaining 7,000 square feet configured for lampricide storage, complete with updated fire suppression systems. Vehicles and boats will no longer need to be winterized; the facility is heated and built to withstand Sault Ste. Marie winters. Located near the U.S.-Canada border on commercially zoned land, the building also improves the logistics of receiving and storing lampricides that agents deploy across the basin each year.

Senator Jim Quinn, Member of Parliament for Sault Ste. Marie—Algoma, Terry Sheehan, and other partners joined the Commission, Fisheries and Oceans Canada, and Rand Construction at a ribbon-cutting ceremony last week.

“The Great Lakes comprise twenty percent of the world’s freshwater and

must be protected and improved,” said Senator Jim Quinn, co-chair of the Parliamentary Great Lakes and St. Lawrence River Task Force. “The fish of the Great Lakes epitomize a healthy system. Probably the biggest threat to the multi-billion-dollar fishery is the

invasive sea lamprey. Each sea lamprey will kill up to twenty kilograms of Great Lakes fish. Fortunately, the Great Lakes Fishery Commission’s Sea Lamprey Control Program, which is carried out expertly by the Department of Fisheries and Oceans Canada, has reduced sea lamprey populations by about ninety-five percent throughout the basin. I was proud to help inaugurate a new facility in Sault Ste. Marie, Ontario, that will allow us to move forward with the strongest possible control program.”

Dr. Marc Gaden, Executive Secretary of the Commission, concluded, “This facility is long overdue, and its completion reflects how seriously both governments take sea lamprey control. Our agents do demanding work in demanding conditions, and they deserve infrastructure that matches the mission.” ✧

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Politics is the art of looking for trouble, finding it everywhere, diagnosing it incorrectly, and applying the wrong remedies.

**Groucho Marx**



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Representing a major interest in the aquatic resources of the Great Lakes states and the province of Ontario, the Great Lakes Sport Fishing Council is a confederation of organizations and individuals with a concern for the present and future of sport fishing, our natural resources and the ecosystem in which we live. We encourage the wise use of our resources and a search for the truth about the issues confronting us.

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## Whitefish rescue plan

*Continued from page 1*

southern Lake Michigan stocks, the only fear I have is, I hope we're not too late," said DNR Fisheries Chief Randy Claramunt.

After retrieving wild adults from several distinct bloodlines, scientists will attempt to incubate their eggs at the Wolf Lake State Fish Hatchery and then transfer the survivors to hatcheries across the state. Ideally, those refugees would remain in human care for years or even decades until the mussel invasion subsides.

But money remains a barrier. There are 18 unique whitefish populations in lakes Michigan and Huron, and most of them are imperiled. Current funding will cover only a couple of years of hatchery space, fish food and other expenses for only some of those populations.

Great Lakes Fishery Trust Manager Dan Lord said leaders of the effort

hope to recruit deeper-pocketed partners, such as neighboring states and the U.S. and Canadian governments. For context, the federally funded recovery of Great Lakes lake trout has taken decades and hundreds of millions of dollars—and [the work is not yet done](#).

Hoping to be prepared if the money materializes, state, federal, tribal and nonprofit scientists are developing a menu of options for broader rescue efforts that could involve hatcheries, [inland ponds and lakes](#) or new attempts to [spawn whitefish in rivers](#). "We're looking comprehensively at all the places where we could possibly create (a refuge) for fish," said Matt Herbert, a senior conservation scientist with the Nature Conservancy in Michigan. The species' long-term survival in the Great Lakes depends upon efforts to curb the mussel invasion. A Bridge Michigan analysis found those efforts are [so meagerly funded](#) that scientists build research

equipment out of scrap metal while worrying whether their work can continue another year.

In the wake of that reporting, U.S. Reps. Debbie Dingell and Tim Walberg, both of Michigan, co-sponsored legislation that would devote \$500 million to mussel control research over the next decade. So far, the bill has shown no sign of momentum, prompting mounting calls for Congress to act.

"Whitefish are the canary in the coal mine," said Doug Craven, natural resources director for the Little Traverse Bay Band of Odawa Indians Craven. "They're not the only species being affected by quagga mussels. So it's important to address this for the sake of those ecosystems and those other fisheries, too."

"It's really about saving those genetic stocks right now," Craven said. "If we don't do it this year, there may not be enough wild fish in those stocks" to do it in the future. ✧

## DNR checks on young walleye with upcoming fall electrofishing surveys

Any night fishing plans in your future this fall? Michigan DNR personnel will be conducting nighttime walleye recruitment surveys from late September to mid-October, so be on the lookout for survey crews when you're on the water. These surveys are an important tool for fisheries managers to determine whether walleye that hatched in the spring (known as young-of-year) did so in the wild or were stocked, as well as how many of those fish are present in an area. This information about the status of young walleye in lakes helps the DNR make informed management decisions

Using electrofishing boats, crews will survey shallow areas near the shoreline of lakes at night with the goal of capturing young-of-year walleye. Since [walleye](#) prefer cooler, deeper areas of lakes during the day but move into shallow, nearshore areas at night, nighttime surveys are more

efficient. On larger lakes, two or more electrofishing crews using separate boats may operate at the same time to cover more area. The crews will work both on lakes that have been stocked with walleye and lakes that have not.

Biologists also will collect and keep a sample of young-of-year walleye from stocked lakes to determine whether the fish are primarily reproducing naturally or if young-of-year are from stocking. All other walleye will be released back into the waters where they were captured. Modern genetic techniques that allow more accurate assessment of stocking success, by comparing young-of-year walleye genetics to brood stock fish, will be completed at Michigan State University on walleye tissue samples collected during some of these fall surveys.

Some surveys will be conducted collaboratively with tribal agencies,

and tribal natural resource departments also will be conducting surveys independently of the DNR. In the Upper Peninsula, the U.S. Department of Agriculture's Forest Service will also be collaborating on surveys and conducting independent surveys in the Hiawatha National Forest as part of an effort to create long-term datasets for a number of inland lakes managed for walleye.

### Safety reminders.

**Everyone is urged to use caution when fishing or on the water near electrofishing boats, and those wading will be asked to exit the water when a survey boat approaches and during electrofishing work. Crews will be using bright lights to illuminate the water around the boats and running generators on board, which may make it difficult to hear and speak with anyone on shore.** ✧

## Would You Rather?: Walleye

Would you rather haul a five-pound walleye up from the nearby reservoir on a downrigger or would you rather have the same fish filleted and beer-battered, sending flecks of sizzling grease arcing off the stovetop? “Yes,” to both is probably any ardent angler’s answer.

You cannot have one without the other, and getting into a boat on a Saturday morning often leads to fish in the skillet. But that is not the first step to putting a delectable on the plate. The progression to the skillet starts in of all places, the C-suite office of the tackle manufacturer or importer.

Every fiscal quarter fishing tackle company accountants and comptrollers, in accordance with the Sport Fish Restoration Act (SFR), cut a federal excise tax check to the U.S. Treasury. Those dollars, coupled with proceeds from fishing license sales, make their way to state fish and wildlife agencies to fund fisheries research and management, aquatic education, and boater and angler access to public waters.

Money changing hands is not the story: it is what’s done with it that makes a difference in the lives of Americans.

### Home Field Advantage

Biologists with the Minnesota Department of Natural Resources used SFR dollars to learn more about walleye in the southern part of the state to refine management strategies. Through careful collection and analysis of data, their multi-year examination of walleye fry survival to fingerling size revealed that locally sourced walleye have a home field advantage.

Fisheries managers for many years stocked walleye fry in southern Minnesota lakes from an easily

accessed, well established brood stock in northern Minnesota. cursory studies indicated that the genetically adapted southern-strain appeared to outlive the northern cousins that had been stocked on top of them en masse, spring after spring, year after year.

To suss out a potential course of action, biologists stocked equal numbers of southern-strain and northern-strain walleye fry in six lakes in spring over four years. All walleye fry were marked according to origin. Then in the autumn, biologists returned and collected fingerling walleye to determine survival. The results were clear: the locally sourced southern Minnesota walleye outlived the northern-strain. The native walleye were better suited to their native habitats.



This walleye research was partly an economics study, too. The biologists calculated and compared costs of using a local source of walleye rather than continuing with the northern-strain as they had done for decades.

The heavy upfront cost of creating a southern-strain brood stock would ultimately result in long-term savings. Locally sourced walleye are better adapted to their home waters, increasing their chances of surviving the first summer and eventually making it to the live well, and the skillet. That improved survival could make the investment worthwhile by reducing the need to repeatedly stock fish that are less likely to survive. In turn, those savings could help preserve SFR and fishing license funds for other sport fish conservation needs.

### Virginia is for Walleye Lovers

Biologists with the Virginia Department of Wildlife Resources (VDWR) also seek to refine walleye management.

Walleye native to the Appalachian region, called Highlands walleye, are genetically different from northern walleye that have been introduced through past stocking efforts. The two strains can interbreed gradually diluting or erasing the unique genetic characteristics that allow native Highlands walleye to thrive in local conditions. Over time, this genetic mixing could make it more difficult to conserve and maintain the native Highlands walleye population.

Using SFR dollars, VDWR biologists are creating a rapid and affordable genetic test to identify walleye with strong Highlands ancestry. From those fish, they intend to create a brood stock for the Appalachian walleye. Researchers will collect small fin clips from 400 adult walleye in the New and Clinch rivers. Geneticists will use these samples to develop a panel of genetic markers that can distinguish Highlands walleye ancestry from northern walleye ancestry. The VDWR can then use this information to select future brood stock that best represent native Highlands walleye.

By improving brood stock selection, the project will help reduce genetic mixing between introduced and native walleye, protect the genetic integrity of Highlands walleye, and support long-term conservation and restoration of walleye in Virginia.

These methods and results may also benefit other state fish and wildlife agencies working to manage endemic walleye populations by providing a practical, cost-effective approach for identifying and conserving native fish.

SFR dollars yield a public benefit—advancing fisheries science, generating cost-savings, improving fishing opportunities, and in the case of walleye, putting great-tasting locally sourced food in skillets. So, would you rather? ◇

## Lake Erie walleye are booming. Yellow perch are a different story

MONROE, MI – Lake Erie walleye fishing isn't just good right now. It's historically good. "This is the best walleye fishing ever," said Ohio DNR fisheries administrator Travis Hartman. "Enjoy it."

Fisheries managers in Michigan and Ohio say [the lake's walleye population is enjoying a historic run](#). The shallowest Great Lake is estimated to hold about 57 million walleye age 2 and older this year following a remarkable run of successful reproduction. Eight of the past 11 hatches were unusually large, including three that produced more young fish than the celebrated 2003 hatch, Hartman told outdoor writers and charter captains in late August at Ohio State University's [Stone Laboratory on Gibraltar Island](#).

Anglers are benefiting from that abundance. Catch rates have exceeded the best year of Lake Erie's supposed 1980s 'golden age of walleye' for eight consecutive years. Ohio anglers caught walleye at the highest rate ever measured in 2025 and preliminary 2026 results were close behind. Michigan walleye numbers are similarly robust. "The good ole' days are today," echoed Jim Francis, the Michigan DNR fisheries division assistant chief.

But Lake Erie's other signature fish is having a much rougher ride.

Yellow perch numbers have fallen badly enough in parts of the lake that fishery managers cut the amount anglers and commercial crews can harvest this year. They also stopped using the computer models that had long helped them estimate perch populations after finding the results did not line up well with what surveys were showing. But the picture is not equally bleak everywhere. Walleye move widely around Lake Erie, but yellow perch tend to remain closer to home. Managers consequently divide Lake Erie's perch into four regional populations stretching from the shallow western basin to the lake's

deeper eastern waters. The two populations in central Lake Erie have struggled most. Recent surveys offer more reason for optimism in Michigan waters and elsewhere in the western basin. "Yellow perch are very regional," Francis said.

According to Hartman, fishery managers reduced the allowable perch harvest by 20 percent in the western basin and in one central Lake Erie zone this year. They imposed a 40 percent cut in another central zone.

In Ohio, commercial fishermen received a combined allocation of 551,989 pounds, the state's lowest since it began setting perch quotas in 1996. If the western population declines again, Ohio could reduce its recreational limit from 30 perch per day to 20 next year, said Hartman.

Michigan's allocation fell 20 percent, from about 208,000 pounds in 2025 to 167,000 pounds this year, said Francis. But that doesn't mean Michigan anglers are likely to see their current 50-perch daily limit reduced. Francis called such a change in 2027 "very, very unlikely" because anglers typically catch far less than Michigan's total allowance.

In 2025, anglers harvested only about 50,000 pounds of yellow perch—less than one-quarter of the state's allocation. Unusually warm near-shore water contributed to the weak catch by delaying the usual fall movement into Michigan waters, Francis said.

Francis said there are signs that better fishing could be ahead. Michigan surveys found above average numbers of newly hatched perch in both 2025 and 2026. The 2025 survey recorded the second-highest number of juvenile perch in the state's Lake Erie data series. Anglers this year have also reported releasing five or six small perch for every keeper, Francis said. That suggests many fish from the strong 2025 hatch remain in the lake and could reach sizes anglers want to keep next year.

"Things definitely don't look as bad in Michigan as they do in the central part of Ohio," Francis said. Lake Erie yellow perch fishermen rely on native emerald shiner minnows, a brightly-scaled baitfish that attracts the attention of yellow perch everywhere they're found.

The wider Lake Erie perch fishery remains harder to predict—partly because the tools managers used to track it stopped working reliably. Each regional perch population has a computer model designed to combine information such as fish ages, survey catches and harvests numbers. Those models help estimate how many perch live in each part of the lake and how many could be caught without harming the population.

According to Hartman, managers found that some models could not settle on a dependable answer during the latest assessment. Their population estimates also did not match what crews were finding in fishery surveys. The binational Lake Erie Committee, which coordinates management

among Michigan, Ohio, Pennsylvania, New York and Ontario, declined to use those estimates when setting 2026 harvest levels. Instead, fishery managers combined several survey measurements

**Continued on page 6, column 2**



## Underwater robot expands our ability to survey the seafloor

### [Autonomous underwater robots are enhancing how we study the seafloor](#)

through a collaboration between our science center and the Woods Hole Oceanographic Institution. These torpedo-shaped long-range autonomous vehicles weigh about 250 lbs. and can be launched from a small boat. They propel themselves through the water and capture thousands of high-quality images, allowing researchers to survey areas that are otherwise difficult or impossible for traditional vessels to reach. They complement our Habitat Camera Survey, providing critical information that helps scientists generate more accurate population estimates. By expanding our survey capabilities, this technology strengthens fisheries stock assessments that guide sustainable fisheries management.

At 9 ft. long, 12 in. in diameter,



and 250 lbs., the LRAUV can be deployed over the side of a small boat, reducing the cost of deployment. It is a hybrid vehicle that combines the long battery life of a glider with the power capabilities of a propeller-driven AUV, allowing it to power more sensors. On a HabCam mission, the LRAUV's rechargeable lithium batteries can last for about a week.

LRAUVs can dive up to 984 feet. It controls its buoyancy and position in the water by shifting its internal battery weight to tilt its nose up or down and using a buoyancy engine to pump mineral oil inside or outside of its pressure housing. It drives itself through the water using a combination of a thruster, elevator, and rudder fins. ◇

### Continued from page 5

into a temporary population index and generally limited quota changes to 20 percent. New perch models are expected to be ready in 2028.

Why Lake Erie currently works so well for walleye but produces such uneven results for perch is not entirely clear. The enormous walleye population stems from a string of strong hatches, but simply having more adult fish does not guarantee another successful year. Young walleye also need favorable water conditions and enough food at precisely the right time.

There are now so many walleye competing for food that individual fish are growing more slowly, Francis said. Walleye eat young perch, but perch appear only infrequently in the stomach samples examined by Michigan biologists. Francis said Michigan has not found the same broad failure of young perch to survive into adulthood that biologists have documented in Saginaw Bay.

He attributed that partly to Lake Erie's high productivity. Because the lake is relatively shallow, warm and rich in nutrients ([far too rich in nutrients, actually](#)), it produces abundant plant and animal life throughout the food web. "It almost gives you a larger margin of error because it is so productive and some of the challenges that the other lakes are seeing might not be as obvious on Lake Erie," he said. ◇

### Continued from column 3

facility. The Algoma Keweenaw Great Lakes Sport Fishermen will be on hand to provide wagon rides to the facility from the parking area from 9 a.m. until 2 p.m.

The Besadny Anadromous Fish Facility is the first step in stocking trout and salmon in Lake Michigan. Returning adult trout and salmon are collected during their spawning run up the Keweenaw River to collect eggs to produce fish for stocking in the following year. Eggs from the facility are taken to other hatcheries to be raised and stocked back into Lake the Great Lakes sport fishery for years to come.

## DNR to host two open houses on Sat, Oct. 10

**MADISON, Wis.** – The Wisconsin DNR invites the public to attend two free open house events on Saturday, Oct. 10, at the [Besadny Anadromous Fish Facility](#) in Keweenaw and the [Root River Steelhead Facility](#) in Racine. "These family-friendly events are not only educational but also a fun and engaging way to connect with our natural resources," said Cheryl Masterson, DNR southern Lake Michigan fisheries unit supervisor.

### Root River Steelhead Open House

Saturday, Oct. 10, 9 a.m. to 3 p.m.  
2200 Domanik Dr., Lincoln Park, Racine.

This free, family-friendly event will offer a behind-the-scenes look at Wisconsin's southernmost Lake Michigan trout and salmon egg collection facility.

Fish enthusiasts of all ages can join one of our guided tours to learn how DNR crews capture fish and why we need to collect trout and salmon eggs to raise in hatcheries for stocking into Lake Michigan. Volunteers from Salmon Unlimited, the Outdoor Heritage Education Center, Milwaukee Great Lakes Sport Fishermen, Southeast Wisconsin Trout Unlimited, and the Kenosha Sportfishing and Conservation Association will be offering fun, hands-on learning experiences through the Touch of the Wild Education Trailer, fly casting clinic, trolling boat display and more.

The Root River Steelhead Facility was built in the early 1990s to help the DNR more effectively manage Lake Michigan's trout and salmon fishery. Each spring and fall, migrating rainbow trout (steelhead), Chinook and coho salmon enter the streams for their annual spawning ritual.

### Besadny Anadromous Fish Facility Open House

Saturday, Oct. 10, 9 a.m. to 3 p.m.  
N3884 Ransom Moore Ln, Keweenaw. This free annual event will give attendees an opportunity to watch salmon egg collection demonstrations, enjoy educational displays, presentations and take a guided tour of the

**Continued column 2**

## Great Lakes Fishery Commission funds Atlantic salmon in Lake Champlain

**BURLINGTON, VERMONT** – Scientists and fisheries managers are testing a novel breeding strategy to help Atlantic salmon overcome a persistent and potentially fatal nutritional problem in Lake Champlain, with funding from the Great Lakes Fishery Commission (Commission). The work brings together researchers and hatchery managers from the USFWS, Vermont Fish and Wildlife Dept, New York DEC, USGS, and several national fish hatcheries and research laboratories.

The problem is thiamine deficiency complex (TDC). Thiamine (vitamin B1) is an essential nutrient for fish development. In Lake Champlain, Atlantic salmon feed heavily on invasive alewife, a small fish that contains thiaminase, an enzyme that breaks down thiamine in the body. Female salmon accumulate too little thiamine to pass adequate amounts into their eggs, and many offspring die before they are old enough to feed on their own. Since alewife became established in the lake, 75% of salmon eggs tested have fallen below the thiamine levels needed to survive to

the next life stage.

Not all salmon respond to TDC equally. Researchers noticed that some fish survived the thiamine problem far better than others—and they are now testing whether those differences can be put to work. The approach, called assisted evolution, involves identifying salmon that tolerate thiamine deficiency and breeding them selectively to form an experimental brood stock. The goal is to increase the frequency of survival-linked traits in fish stocked into Lake Champlain. To date, researchers have released approximately 1.6 million salmon from two experimental brood stocks into the lake. Researchers are monitoring those fish to determine whether this strategy produces salmon that survive and reproduce more successfully than fish from standard brood stock practices.

There are trade-offs. Selecting only the most resilient individuals for breeding reduces the genetic diversity of the stocked population—and diversity is what gives a population the flexibility to adapt to future threats. Researchers are still working to

determine whether assisted evolution can improve TDC survival without causing longer-term genetic harm. The outcomes of this work may also offer lessons for managing other fish and wildlife populations facing mounting pressures from invasive species, disease, and environmental change.

"Atlantic salmon face a gauntlet of challenges in Lake Champlain, and thiamine deficiency is one of the most difficult to address because it is driven by an invasive species we can't simply remove. This research asks whether the salmon themselves can be part of the solution—and that is exactly the kind of forward-thinking science the Commission was built to support," said Dr. Marc Gaden, Executive Secretary of the Commission.

The U.S. section of the Commission, at the request of Congress, supports Lake Champlain and Lake Memphremagog programs that fund leading-edge fisheries research, yielding discoveries and solutions that address emerging threats to fish populations and inform adaptive management strategies. ✧

## Public invited to share observations of DC cormorants' impact in NY

Oswego, NY - New York Sea Grant is inviting the public to document the presence and activities of double-crested cormorants.

Cormorants are a native, fish eating, federally protected migratory bird species. New York Sea Grant partnered with Wayne County GIS to develop an online reporting tool at [nyseagrant.org/cormorant](http://nyseagrant.org/cormorant) for the public to upload photos and report observations of double-crested cormorants' numbers, nesting, and feeding activities.

The survey includes options for logging the birds' impact to natural habitat, water quality, infrastructure, and recreational usage. The survey developers strongly encourage users to submit photos to show the birds' activity and impact. Although originating in Wayne County, the [nyseagrant.org/cormorant](http://nyseagrant.org/cormorant) survey is

designed for use by the public across New York's Great Lakes region and statewide. The site includes a link to an observation viewer to see updates in real-time and as a resource for New York State, American, Canadian and other environmental, wildlife and fisheries resource managers.

New York Sea Grant Associate Director Katherine Bunting-Howarth said, "This new reporting tool responds to local leaders' interest in having a way for community members to report, track, and share information about double-crested cormorants' activity statewide."

Double-crested cormorants utilize the Great Lakes region for breeding, with nesting colonies of a few dozen birds to more than a thousand pairs. Their droppings can destroy the trees and vegetation below their nests.

The birds' wide-ranging diet of fish is a cause of concern for the recreational fishing industry. Cormorants were identified as a serious issue by New York's charter fishing industry during industry meetings held by NY Sea Grant along New York's Great Lakes-St. Lawrence shoreline.

"In meetings in Oak Orchard, Irondequoit, Oswego, Henderson, and Alexandria Bay, charter captains expressed concerns about increasing populations of cormorants and interest in seeing more research on the birds and their predation of fish, particularly after stocking," New York Sea Grant Great Lakes Fisheries and Ecosystem Health Specialist Stacy Furgal said.

Double-crested cormorants, their nests, and eggs are all federally protected under the Migratory Bird Treaty Act updated by the U.S. Congress in 1972. ✧

## Trump announces executive order elevating saltwater recreational fishing

WASHINGTON, D.C. – President Trump announced the **“Restoring America’s Saltwater Angling and Recreation”** Executive Order in the White House Rose Garden. The order establishes a national policy to elevate marine recreational fishing in federal fisheries management and directs federal agencies to pursue better data and more modern management approaches, strengthen State-Federal partnerships, remove unnecessary barriers to access and advance innovative solutions for American anglers.

“This Executive Order is a historic recognition of what millions of American anglers and coastal communities have known for decades: marine recreational fishing deserves a management system built for the way Americans fish,” said Jeff Angers, president of the Center for Sportfishing Policy.

“The American Sportfishing Association thanks President Trump for this decisive action to improve management and data collection for America’s saltwater fisheries,” added Glenn Hughes, president and CEO of the American Sportfishing Association. “This Executive Order will have long-term benefits for the sportfishing industry and America’s 15.5 million saltwater recreational anglers.”

Under the Executive Order, federal agencies are directed, consistent with existing law, to:

- Modernize recreational fisheries data collection by evaluating outdated survey methods, expanding electronic and mobile reporting and incorporating real-time catch, effort and observational data into federal fisheries management;
- Strengthen State-Federal partnerships and improve the use of state data, including consideration of more precise state recreational catch-and-effort data in federal management decisions;

- Improve recreational fisheries economic data so the economic value of recreational fishing, for-hire fisheries and shoreside businesses is more fully considered in federal fisheries management decisions;
- Advance technology-based approaches to marine mammal avoidance, including directing NOAA to work with the private sector to integrate new technologies that can improve marine mammal detection and avoidance;
- Fast-track artificial reef and habitat creation, including establishing a federal Reef-in-Place Program for eligible offshore structures and streamlining permitting for qualifying artificial reef projects, and
- Address shark and pinniped depredation and their impacts on recreational fishing by improving research and coordination among federal and state fisheries managers, anglers and the recreational fishing community and advancing management strategies to reduce harmful interactions.

The order also directs federal agencies to streamline permitting, remove administrative barriers to recreational fishing and habitat projects, improve the delivery of Dingell-Johnson Sport Fish Restoration funds, and strengthen coordination of habitat restoration efforts.

The order builds on a bipartisan history of presidential support for recreational fishing. President Bill Clinton issued Executive Order 12962 in 1995 establishing recreational fishing as a federal policy priority. President George W. Bush strengthened that order in 2008 by explicitly protecting recreational fishing as a sustainable activity on federal lands and waters.

This Executive Order recognizes the significant economic contributions of

America’s outdoor recreation, noting that the sector generates more than \$1.2 trillion annually, supports 5.2 million jobs and accounts for 2.4 percent of U.S. GDP. Recreational boating and fishing are the nation’s largest conventional outdoor recreation activity, contributing \$38.4 billion in value added to the U.S. economy. Saltwater recreational fishing alone generates \$145.4 billion in sales impacts and supports nearly 700,000 jobs nationwide.

“President Trump is sending a clear message that America’s saltwater anglers matter. Better data, modern management and stronger state partnerships can deliver what anglers and coastal communities have needed for years: healthier public fisheries and more reliable access to them,” Angers continued.

Recreational boating and fishing are the foundation of America’s outdoor heritage and an important driver of our nation’s recreation economy,” said Frank Hugelmeyer, president and CEO of the National Marine Manufacturers Association. “Today’s actions further reaffirm the importance of ensuring Americans can access and enjoy our nation’s waters. Access supports American manufacturing, jobs and small businesses across the country. Thank you to President Trump and his administration for recognizing the value of outdoor recreation and the American industries and communities it supports.”

“We’re grateful the Administration has taken this opportunity to emphasize the social and economic importance of recreational fishing,” said Pat Murray, president and CEO of Coastal Conservation Association. “State-based management has never been more important for our federal fisheries, and we applaud this critical need **being** highlighted in this Executive Order.” ✧

## Are you fishing the wrong fish?

*How a salmon run quietly turns into the best trout and steelhead fishing of the year*

MUSKEGON, Mich. – Numerous fish species migrate upstream to spawn, but nothing commands an angler's attention quite like a salmon run. Some of the world's most notorious fisheries erupt into an annual frenzy as anglers travel far and wide for a shot at a burly salmon during peak season.

### Species and Timing

Pacific salmon species—including Chinook (king), coho (silver), sockeye (and their landlocked cousins, Kokanee), pink, and chum—jam into natal river systems draining into the Pacific Ocean, as well as the Great Lakes, where Chinook, coho, and pink are well-established.



From a table-fare perspective, spawning salmon lose their appeal fast. The longer they sit in the river, the less palatable they get, since they're on a one-way mission to spawn and die, usually within weeks. That matters for one reason: anglers locked in on salmon alone are missing the better option, and it's often sitting right in front of them.

### The Underwater Buffet

Most anglers view salmon as the star of the show. Experienced anglers know better – the salmon are the sideshow. They're a moving feast, with females hauling precious, high-protein egg cargo upstream into the territory of fish built to capitalize on it.

As salmon excavate gravel beds (redds) to deposit their eggs, they inevitably dislodge eggs and aquatic insects like caddis larvae, stonefly, and

mayfly nymphs. Resident trout and temporary residents like steelhead abandon their usual wariness to feed heavily on this temporary buffet. And as salmon break down during the dying process, even their flesh becomes a food source for a wide range of species, fish included.

### The Angler's Opportunity: Targeting Trout and Steelhead

The biggest challenge for anglers is ignoring the salmon to focus on species that are in peak condition and fight with real zest when hooked. When conditions line up, you'll find multiple trout and char species of various age just downstream of the salmon. Where grayling exist, count on them too.

As a guide, I call this scenario "ripping eggs"—trout and steelhead darting around chasing eggs, occasionally bumping into each other in the chaos. Most anglers miss this opportunity entirely because they're too locked in on the salmon, casting to them repeatedly expecting different results. These fish rarely bite voluntarily, and casting to them frequently ends in a snagged fish instead of a hooked one.

That's where the terms "flossing" and "lining" come from—feeding the leader into a salmon's mouth and setting the hook so it buries somewhere in or near the mouth, which is typically viewed as a legally hooked fish.

To be clear, fresh salmon staging to spawn are some of the sportiest fish you'll ever hook, and they provide outstanding sport the moment they enter the stream. But that window only lasts two or three weeks before they congregate on gravel flats with moderate-to-fast current to spawn. Chinook in particular dig huge, deep redds to incubate eggs—activity that, over the years, has reshaped entire stretches of river bottom.

### Guide to Finding and Fishing the Feeders

**Locating Redds:** Heavily redded areas are easy to spot—lighter-colored, round depressions on the bottom, with a high spot on the downstream side where eggs were



layered in and incubated. Just off the back of that high spot, there's often a sharp drop-off into moderately deeper water. River current scours the beds to prevent sedimentation and keep eggs oxygenated, and stray eggs naturally wash into this deeper "egg dump" just downstream, where hydraulics hold eggs and insects in place for feeding trout and steelhead.

**Finding "Dark Water" Refuges:** Salmon are often aggressive toward



fish that creep into their spawning zone, but displaced feeders rarely travel far. Some trout and steelhead feed out in the open flats, but many take refuge in deeper troughs and pools downstream – what I call "dark water." These spots almost always hold big fish keyed in on eggs and dislodged insects.

**Tackle and Techniques:** Targeting feeders works with conventional or fly gear alike. Some anglers prefer skein or spawn bags, but yarn eggs (like glo-bugs) and beads are hard to beat when

### Are you fishing the wrong fish?

*Continued on page 11*

## Invasive species cost billions. Can online shoppers cut the losses?

Small invasive zebra mussels closed the opening of a native South Carolina mussel.

With invasive species causing \$138 billion in U.S. economic losses yearly, a new online database from the Great Lakes Commission aims to help e-commerce buyers and sellers in 50 states identify non-native aquatic plants and animals to avoid.



***Invasive Malaysian Trumpet Snails ferociously feeding on soft algae and other edible matter in an aquarium.***

“The growing popularity of online sales of plants and animals has created new challenges in preventing the spread of harmful invasive species to the Great Lakes,” noted Timothy Bruno, Great Lakes Program coordinator at the Pennsylvania Department of Environmental Protection. “Many invasive plants and animals can be purchased online with just a few clicks.”

The GLC is spearheading efforts to protect the environment and economy of the Great Lakes region, especially from aquatic invasive species bought online and improperly released when no longer needed.

Bruno thanked the National Sea Grant Law Center for providing legal help to ensure regulations are understandable. The center also hosts the database and will maintain it with current invasive species regulations.

Sales are typically made using eBay, Bing, Amazon and Etsy search engines. Common invasive species

bought online include Asian clams, Malaysian trumpet snails, Red Swamp Crayfish and a wide variety of plants such as water lettuce and Indian hygrophylla. AquaSale was made possible by a grant agreement between the GLC and the U.S. Fish and Wildlife Service, a bureau of the U.S. Department of the Interior.

### Rising Costs of Invasive Species

Red Swamp Crayfish are another invasive species.

The report stated that invasive species have resulted in “an estimated \$1.22 trillion burden on the U.S. economy between 1960 and 2020—costing billions annually.” To hem the tide of rising economic damage, the department has undertaken large projects such as managing “invasive plant treatments in the West, conservation efforts to protect forest birds in Hawaii and new tools to manage damaging species such as invasive pythons, rodents, mussels and carps,” it noted.



***Invasive species alert sign at a pond containing Eurasian Watermilfoil.***

Invasive species can also cause public health threats, damage infrastructure, pose wildfire threats and change forests, fisheries and ranges.

“Non-native invasive species have significant economic and environmental impacts in the United States. Studies show that economic losses caused by non-native invasive species exceed \$138 billion annually,” says the [U.S. Forest Service](#). “Many

species listed by the Federal Government as threatened or endangered have been negatively affected by non-native invasive species.”

Proactive deterrents can lower economic costs and protect invasive species from negatively impacting the environment and potentially cause the extinction of native U.S. plant and animal species. Effective management helps to protect people and places, conserve native plants and wildlife, and preserve the recreational and cultural values that millions of Americans enjoy. ✧

## Minnesota DNR finalizes Rainy Lake fisheries management plan

The Minnesota DNR has finalized its update to the Rainy Lake Fisheries Management Plan. The plan is available on the [Minnesota DNR Rainy Lake webpage](#) ([mndnr.gov/rainylake](http://mndnr.gov/rainylake)) and will be used to guide fishery management for the Minnesota waters of Rainy Lake through 2036.

The plan uses information from recently completed fish surveys focused on population and condition, along with extensive stakeholder input from organizational partners and members of the Rainy Lake Fisheries Input Group. Updates to the plan include revised management goals, objectives, and strategies centered on maintaining high-quality fisheries, and protecting and enhancing valuable fish habitat in Rainy Lake. More info about Rainy Lake is available on the [Minnesota DNR Rainy Lake webpage](#) ([mndnr.gov/rainylake](http://mndnr.gov/rainylake)). **Contact:** [Phil Talmage](#), DNR International Falls area fisheries supervisor, 218-598-8196. ✧

**Are you fishing the wrong fish?***Continued from page 9*

bouncing with a drift rod or fly rod is very productive, and float-fishing with feeding activity peaks. Bottom-center pin or drift rods – or an indicator setup on a fly rod – helps keep your offering in the zone while avoiding the bottom.

**Alternative Protein:** If the egg bite goes quiet, throw them a curveball. Flies mimicking aquatic insects – green caddis larvae, stonefly, and mayfly nymphs – often do the job, especially teamed with an egg in a tandem rig where legal.

**To Move or Not to Move:** Don't abandon a spot just because you've pounded it. Feeding fish shuffle around searching for active lanes, and a big hen salmon actively spawning will ring the dinner bell for any feeders downstream, so stay alert for spawning activity.

**Targeting Steelhead:** Steelhead – both summer-run and winter-run – feed heavily during this window. Summer-runs have likely been around a while, but fresh, chrome winter-run steelhead arrive in peak shape come

fall for an incredible fight.

**Gear Selection:** Lean lighter than a dedicated salmon setup to protect the leaders and tippets suited for trout and steelhead. A 10- or 12-pound fluorocarbon leader is ideal – heavy enough to handle a stray salmon, light enough for trout and steelhead. Make sure reels carry a strong drag and leaders and tippet are fresh for severe duty.

**Timing and Conditions:** Spawning salmon often take cover on bright days or spawn at night. Search deeper water with cover, since feeding fish keep taking eggs and insects even when salmon go idle. Early morning, evening, low light – that's prime time.

**Tactical Comfort:** Some of the best days on the water are drizzly, wet, miserable, and sunless. Fish that would normally stay wary in bright sun get bold hunting for food, so dress for it or you'll be miserable too. Lean on polarized sunglasses rated for low light to spot fish, and skip bright colors like a cheap yellow rain slicker – these fish notice, even against a backdrop of fall leaves. Move with stealth. You're

surrounded by eyes evolved to dodge eagles, ospreys, and bears. Death comes from above – don't be it.

**Conservation:** Many fisheries rely on natural reproduction, so avoid stepping on redds and crushing eggs or disrupting the delicate hydrology that keeps them viable. Resident trout and char spawn in fall too, and steelhead spawn in late winter and spring – consider releasing fish so they survive to spawn.

**Bonus Tip:** The same scenario plays out when steelhead spawn in late winter and spring. Resident trout and pre-spawn and “dropback” steelhead will be on the egg bite, offering some of the most consistent action just downstream of active spawners.

**One Last Cast**

Next time you're staring down a river full of thrashing salmon, remember: they're not the whole story. Downstream, in the dark water and gravel flats, trout and steelhead are stacked up and feeding like it's the last meal of the year. Fish the salmon if you want the photo. Fish the feeders if you want the fight of your life. ✧

**Other Breaking News Items:****(Click on title or URL to read full article)****[Hikers' tip to Michigan DNR hotline leads to rescue of 27 stranded sturgeon](#)**

Hikers spotted stranded lake sturgeon in a low-water channel of Michigan's Ontonagon River, prompting three rescue missions that ultimately saved 27 threatened fish. The Michigan Department of Natural Resources, Keweenaw Bay Indian Community and Upper Peninsula Power Company worked together to move the sturgeon to deeper water and are reviewing conditions to help prevent future strandings

**[Special bag and size limits approved to aid struggling walleye populations in Wisconsin](#)**

The Wisconsin Department of Natural Resources can now set special bag and size limits for fishing in lakes where walleye populations are struggling. Under the rule, the DNR could more quickly apply limits on lakes where surveys have detected fewer than 15 juvenile fish per mile

**[Lake Huron town turns to grazing goats for eco-friendly attack on invasive species](#)**

Goderich, Ontario, is utilizing a team of over 50 goats and 20 sheep to eat their way through invasive species, an alternative approach to mechanical or herbicide techniques so close to Lake Huron.

**[Aboard the Lake Guardian, scientists search for clues about the Great Lakes' health](#)**

Data from *Lake Guardian* surveys help scientists and natural resource managers track how stressors like nutrient pollution, chemical contaminants, and invasive species affect the ecology of the Great Lakes over time.

### [Lake Erie's baby sturgeon are thriving a year after release](#)

Early tracking data shows many of the young sturgeon released last year are staying near the Cuyahoga River – and growing fast

### [Once polluted by industry, a Lake Superior bay is now in the clear](#)

For decades, Canada and the U.S. have had an agreement to clean up the most polluted sites on the Great Lakes. Nipigon Bay at the northernmost point of Lake Superior in Ontario, Canada, is one of the success stories.

### [Great Lakes mapping plan seeks to chart 94,000 square miles, costing \\$200 million](#)

Experts and advocates from the Great Lakes are meeting for the Lakebed 2030 Conference. The focus is on an initiative to fully map the more than 94,000 square miles of the Great Lakes in high resolution by 2030

### [Copperwood Mine foes sue to block \\$50M grant for project near Lake Superior](#)

Opponents are going to court in hopes of blocking a controversial \$50 million grant Michigan awarded in August to fund construction of a Canadian company's copper mine in the western Upper Peninsula. Critics point to the site's proximity to Lake Superior, the North Country Trail and Porcupine Mountain State Park

### [Rare find in Great Lakes after meteor crashes on Lake Huron island](#)

A meteor that crashed through the atmosphere over the Great Lakes produced shockwaves before landing near Lake Huron. Canadian meteor hunters eventually tracked the space rocks to Cockburn Island in Ontario, Canada.

### [Wisconsin's wild rice harvest is expected to be up this year](#)

Wisconsin tribal officials are working together to promote protection and restoration and of wild rice and this year they expect an increase in harvest due to heavy spring rainfall followed by drought that has created stable conditions for the plant to grow.

### [Research group calls for funding to study algal blooms on Lake Superior](#)

A research group is calling for funding to find out why Lake Superior is seeing algal blooms. The Wisconsin city of Superior closed Barkers Island Beach last week due to blue-green algae. That type of algae was not seen on Lake Superior until 2012

### [Federal funding for Great Lakes restoration faces Sept. 30 deadline](#)

Lawmakers have until the end of September to pass bipartisan legislation reauthorizing the landmark program that supports Great Lakes restoration and protection before its current authorization expires – creating a lapse that could jeopardize future projects and long-term planning.

### [After decades of pollution, St. Louis River Estuary moves closer to recovery](#)

For over a century, the St. Louis River Estuary had a bad reputation due to years of wastewater dumping and industrialization. Since being designated as an area of concern, state and tribal agencies across both Minnesota and Wisconsin split the 12,000-acre estuary into different habitat restoration projects digging out contaminated sediment, building new storm water culverts, replanting native plants, and creating safe water access for public recreation

### [Milwaukee court reverses Shorewood Lake Michigan beach access ruling](#)

A Milwaukee County circuit judge has reversed a lower-court decision in a closely watched Lake Michigan shoreline access case, a ruling that could influence how Wisconsin courts interpret the public's right to walk along the Great Lakes shoreline

End

