Mazina'igan

A Chronicle of the Lake Superior Ojibwe

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April showers kickstart Ojibwe fishing success

By Charlie Otto Rasmussen, Editor

While unpredictable ice-out dates on northern lakes have become the norm, the Ziigwan 2026 fishing opener managed to land squarely in the "average" column. As they often do, St. Croix Band spearfishers ushered in open-water fishing in the southwestern reaches of the Wisconsin Ceded Territory. Fifteen St.Croix spearfishers launched motorboats onto a trio of lakes April 10, registering the first 390 walleyes of the season. Due north in Douglas County, the Eau Claire River offered up three ogaawag for a pair Bad River Band fishermen spearing from a canoe.

Over the last decade the spearfishing opener has ranged from early March to early May. Despite the two-month ice-out pendulum swings, long-term data maintained by GLIFWC researchers reveals that open water fishing typically begins in the first third of April. But on average, it's happening around four days earlier—backsliding from April 11 over the first 20 years to April 7 over the past 20 years. **(see Fishing season, page 9)**

Fond du Lac Band's Resource Department hosted a ziigwan youth fishing event at Lake Mille Lacs for middle and high school students. At the South Garrison boat launch, Terron Ojibway (background) and FdL Fisheries Biologist Eric Torvinen fillet a pair of ogaawag April 29. The group also harvested yellow perch and northern pike during the fishing trip. (DB Jennings photo)

Tribes: escalating concerns over herbicides used in regional waterways

By Dylan Bizhikiins Jennings, Staff Writer & Austen Hilding, Wetland Ecologist

As herbicides are increasingly used to kill unwanted aquatic plants, tribes are advocating for policies and regulations that reflect both sound science and cultural knowledge; the use of chemicals like ProcellaCOR may not reflect either of these. At GLIFWC, Voigt Intertribal Task Force Chairman Conrad St. John has been vocal about the herbicide application.

"Our communities subsist on manoomin, fish, and other aquatic species and plants. We depend on these beings for our own well-being. These are not recreational use concerns, these are concerns related directly to our livelihood," said St. John. "The easy solution is to pause the use of the herbicide until research can catch up to the potential impacts."

Other tribes throughout the region including the Menominee Nation also have voiced strong opposition to the application of ProcellaCOR on some of their ancestral waters, raising concerns about the potential impacts on wild rice and fish populations. In 2025, Midwest Environmental Advocates (MEA) represented the Menominee Nation in a legal challenge pertaining to the chain of lakes within the exterior boundaries of the Menominee Nation. More than 30 acres of Legend Lake were on the docket for application of ProcellaCOR until MEA and Menominee Nation intervened with a petition for a contested case hearing and a permit suspension pending the case outcome.

With primary foods like manoomin originating from regional lakes, Ojibwe and Menominee tribes are calling for more research on the use of chemicals to kill non-native aquatic species. (CO Rasmussen photo)

What is ProcellaCOR?

ProcellaCOR is a chemical herbicide produced by corporation known as SePRO based in Indiana. SePRO brands itself as "The Stewards of Water," and advertises its ability to address localized issues with "aquatic weeds, nuisance algae, and water quality." ProcellaCOR claims to utilize a "new mechanism and a new active herbicide for fast and **(see Chemicals, page 9)**

Make a stop on the pow wow trail this niibin. GLIFWC staff will be at some locations. Stop by and say Boozhoo!

Pow wows are social gatherings open to the public.
All ages can learn about indigenous history, culture, song and dance. Food and craft vendors are also a big highlight at these 1-3 day celebrations. Bring the family!
Our GLIFWC member tribes have some great hometown celebrations coming up this summer.
Check out the dates on page 22!

See the Mille Lacs Band's guide to pow wow etiquette:
millelacsband.com/home/pow-wow-etiquette

WAABIZHESHI RESEARCH

PG. 3

Expanded harvest opportunities, Ceded Territory state park access for Ojibwe tribes

9th biennium stipulation filed in LCO v. Voigt

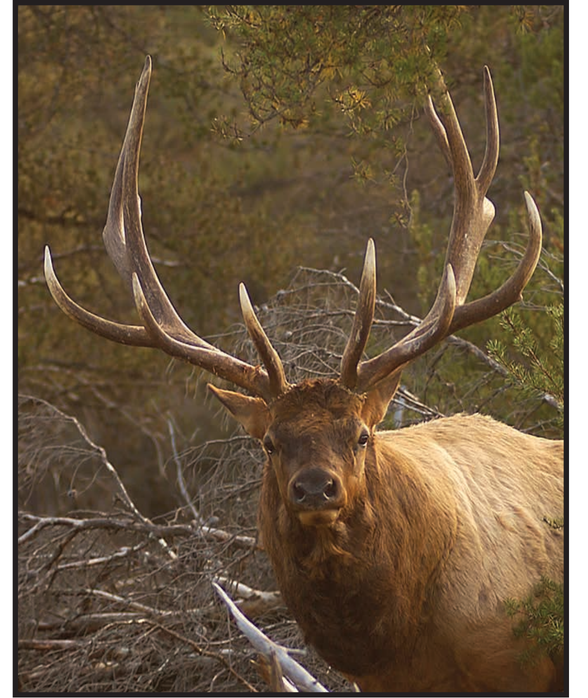
By James Rasmussen, Policy Analyst

Following the final judgment in *LCO v. Voigt*—the federal case that affirmed Ojibwe reserved hunting and fishing rights in the Wisconsin Ceded Territory—the Parties realized there was a need to update regulations to provide for adaptive resource management and account for a changing climate. The harvest of wild turkey and elk, for example, were not even contemplated during the original litigation. In 2001 the Parties jointly reopened the final judgement in a way that allows the state and treaty tribes to update stipulations and formalizes a biennial process—every two years—to review and update the agreements in how treaty resources are managed in the Wisconsin Ceded Territory.

The plaintiff tribes in the *LCO v. Voigt* case litigation, making up all six Wisconsin Ojibwe bands, expect to soon make a joint stipulation filing with the State of Wisconsin. This filing represents a significant modernization of the stipulations by clarifying and combining the six previous filings between the parties since 2001, providing a more user-friendly document that is easier to navigate. In addition to this structural update, the 9th round of biennial stipulations review process has resulted in a significant expansion of treaty harvest opportunities for GLIFWC member bands exercising off-reservation treaty rights in Wisconsin. These include:

- The fee waiver agreement regarding tribal access to state admission and trail fee areas, including state parks within the Ceded Territories, is being made permanent.
- The tribes' alternative monitoring program for the spring spearfishing season has been made permanent, reducing barriers caused by lack of creel team availability.
- Tribal harvest opportunities within Ceded Territory state parks have been expanded to include trapping, in line with state harvesters.
- The deer threshold and quota setting process has been updated to remove unnecessary administrative burdens.
- The experimental gathering regulations on state properties have been made permanent.
- Updated language related to the annual establishment of the tribes' migratory bird regulations to allow increased flexibility under new US Fish & Wildlife Service regulatory changes.
- Updated Commission Order process to provide increased flexibility and promote collaboration between the state and Ojibwe tribes.

The tribes and state will begin the 10th biennium of stipulations review in summer 2026 by exchanging lists of priority issues to work on over the next two years.



When the LCO v Voigt case was solidified between the state of Wisconsin and Ojibwe tribes, the potential for future elk hunting was not considered. (Michigan DNR photo)

By your side

Confluence of knowledge, legal skill, and interagency clout made AMS effective defender of environment, Ojibwe treaties

In 1993 a corporate conglomerate revived a plan to build a massive zinc-copper mine on the edge of the Mole Lake Sokaogon Reservation, directly threatening the lifeway of the Ojibwe community. For young attorney and recent GLIFWC hire Ann McCammon Soltis, helping defend the tribe from the so-called Crandon Mine proposal was the first of many legal challenges over her career.

After nearly 33 years, Ann retired from her leadership role as director of intergovernmental affairs—a position she held since 2006. Accolades from the US Forest Service to Wisconsin Governor Tony Evers accompanied praise from GLIFWC and its member tribes as she turned a page this past spring towards family, travel, and good old free time.

At the Tribal/Forest Service MOU meeting last March, GLIFWC's Ann McCammon Soltis (center) received retirement gifts from USDA agency personnel including a blanket from Jennifer Ballinger, US Forest Service Tribal Relations Specialist, and John Rothlisberger, Acting Director, Northern Research Station & Forest Products Laboratory. (CO Rasmussen photo)

Over her first decade with GLIFWC (1993-2003), the Crandon Mine often stood front-and-center, all the while staying abreast of emerging issues and becoming deeply knowledgeable in Ojibwe tribes' foundational court decisions. Ojibwe citizens, tribal leaders, environmentalists, and attorneys ultimately crushed the mine proposal.

In the late 1990s, a heady time for tribes flexing sovereignty, Ann served on the *Minnesota v Mille Lacs* legal team that witnessed the US Supreme Court ruling in favor of off-reservation hunting and fishing rights for Ojibwe bands in the 1837 Ceded Territory. Around the same time, she co-authored a memorandum of understanding that formally affirmed gathering privileges on National Forests in the 1836, 1837, and 1842 Ceded Territories. The Tribal/USDA Forest Service MOU is hailed as a national model of cooperation between the federal government and American Indian tribes and has been replicated since its 1998 implementation. Closer to home, Ann's invested considerable time helping bring the *Lac Courte Oreilles v Voigt* case updated through the stipulation process.

In compliment to advising tribal leaders and navigating interagency relationships, her participation in ceremonial runs and cultural events throughout her tenure reveals Ann's genuine dedication to Ojibwe people and the health of our shared environment in the upper Great Lakes region. **—CO Rasmussen**

Wild plant expert's data archive highlights quarter century afield

At home in the out-of-doors as much as anyone, Steve Garske navigated Ceded Territory wildlands and overgrown roadsides with equal enthusiasm. Wild plants were ever on his mind during his 25-year GLIFWC career; following his March 2026 retirement, it's a safe bet that Steve will continue roving through many of the same places—especially in his home country of western Upper Michigan.

Steve joined GLIFWC in 2001 as an invasive species coordinator to help identify, catalogue, and manage non-native plants. Since then, he has played a central role in shaping GLIFWC's transition from targeted eradication efforts to today's more thoughtful Non-Native Beings Program. On the way, he created a plant database with more than 10,000 entries from his extensive field work in Ojibwe Country.

Well beyond mapping the distribution of non-native plants, Steve located sensitive indigenous plant communities—including rare and endangered species—helping protect these beings from forest management activities like logging and other disturbance actions on public lands.

As for Mazina'igan, Steve is an All-Star contributor, and his well-crafted articles appeared in the quarterly newspaper regularly throughout his GLIFWC tenure. Housed in the pages of Mazina'igan and the extensive herbarium records at GLIFWC, Steve's deep knowledge and support of wild plants—all widely shared—is a legacy appreciated by staff at GLIFWC, agency partners, and tribal leadership across Michigan, Wisconsin, Minnesota, and beyond. **—CO Rasmussen**

Steve Garske afield in the late 2000s, documenting wild plant distribution in Ashland County, Wis. (CO Rasmussen photo)

Ceded Territory news briefs

USDA shake-up stirs unease in Great Lakes region

The United States Department of Agriculture has announced an unprecedented reorganization of the Forest Service. Since last August, GLIFWC staff have followed the proposed reorganization, repeatedly raising concerns about the lack of meaningful engagement with Tribal Nations and its potential to have a detrimental impact on the exercise of treaty rights in the Ojibwe Ceded Territory.

For GLIFWC and its member tribes, there are serious concerns about the impacts that may occur from restructuring in the Eastern Region's state, private, and tribal forestry organizational structure—notably the relocation of the Northern Research Station from Wisconsin to Colorado. These consolidations are being paired with closures of research stations across the Ceded Territories, including the Houghton, Michigan station that houses scientists working on research vital to the implementation of the tribes' treaty rights. The work includes research related to peatlands, soil carbon, and fire as well as support for implementation of the Commission's Tribal Adaptation Menu efforts. **—J. Rasmussen**

Gile Flowage project conserves wildlands & waters

Montreal, Wis—Support from local and tribal partners—including GLIFWC, along with the Bad River and Lac du Flambeau Band's natural resource departments, are credited in helping Iron County purchase 1,051 acres of the Gile Flowage's undeveloped shoreline, uplands, and over 20 islands from Xcel Energy. These lands will be entered into the Iron County Forest to be managed for conservation purposes and open to the public in perpetuity.

This acquisition adds to the contiguous block of county-owned land managed for conservation values, including habitat corridors, climate resilience, and public access. The project situated on the sprawling 3,100-acre reservoir will support underserved and tribal communities by ensuring permanent public accessibility to the land and enhancing treaty rights usage.

The purchase was funded by a $4.1 million grant from the National Oceanic and Atmospheric Administration (NOAA) Climate Resiliency Program, through the Wisconsin Coastal Management Program. Projects were selected that provided landscape-scale habitat conservation that increased climate resilience in underserved coastal communities, as well as those most vulnerable to climate impacts.

The Gile Flowage Conservation Project was one of only 30 projects nationwide that were selected for funding. Additional funding was secured with a state Knowles-Nelson Stewardship grant. The project is being administered by the Iron County Forestry Department. A public celebration to mark the purchase is planned for early June. **—C. Techtmann**

Environmental knowledge systems merge in BS degree program

Reserve, Wis—GLIFWC and Lac Courte Oreilles Ojibwe University (LCOOU) signed an MOU April 13 to kick off a new Bachelor of Science degree in Treaty Natural Resources. Students can now enroll at LCOOU in the Nanda-gikenjigeng Program, which emphasizes Ojibwe worldview, scientific methodologies, and knowledge integration to solve contemporary environmental issues.

"Today is a momentous day. As a former graduate of LCOOU myself, I know the value of education and tribal knowledge systems. We are excited to be a part of a program that will increase our abilities to protect our homelands and ensure clean water and forests for the future generations to come," said GLIFWC Executive Administrator Jason Schlender.

Under the Nanda-gikenjigeng Program, students may pursue a Bachelor of Science in Biology with an emphasis in Treaty Natural Resources. This degree prepares students to understand, steward, and protect natural resources through both Indigenous knowledge systems and Western scientific foundations. Designed for students who seek careers in environmental stewardship, tribal natural resource management, conservation, ecology, or graduate study, this program integrates rigorous biological sciences with culturally grounded approaches to land, water, and ecosystem care.

To learn more about the Nanda-gikenjigeng Program see *lco.edu/science* or contact the LCOOU Admissions team at 715-634-4790. **—GLIFWC staff**

LdF Tribe Sued by State of Wisconsin

Tribe cites decline in walleye and muskellunge on reservation waters

The State of Wisconsin filed a lawsuit against the Lac du Flambeau Band of Lake Superior Chippewa Indians on Thursday, April 30th. This spring, the tribe issued fishing restrictions on 19 reservation lakes, citing walleye and muskellunge decline across reservation waters. The restrictions applied to non-tribal members fishing for walleye and muskellunge.

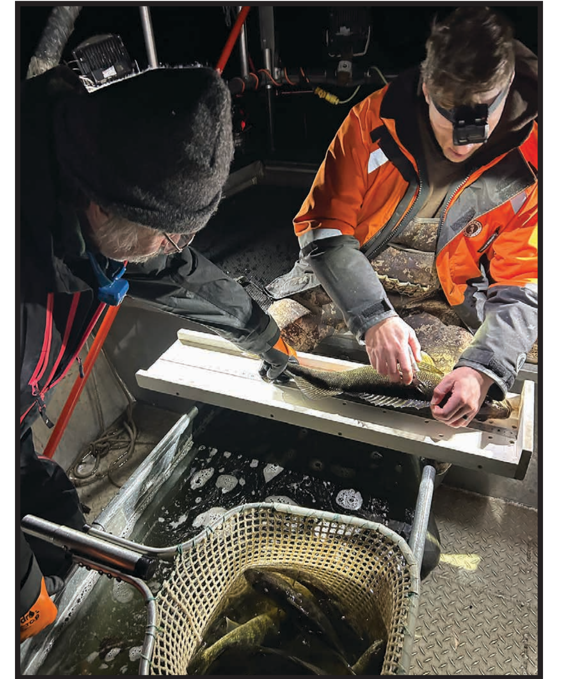
On Friday, May 1st, the Western District of Wisconsin issued a temporary restraining order against the tribe, which temporarily stops the restrictions on walleye and muskellunge harvest until a hearing before the court. **—DB Jennings**

Wisconsin passes PFAS regulations and funding bill

Wisconsin lawmakers reached an agreement with Governor Evers who signed into law a funding package that releases $125 million to address PFAS contamination in the state's water supplies. While the bill notably exempts the land-spreading of human waste under a Department of Natural Resources authorized permit from responsibility under the state's toxic spills law, it stands to provide significant support to communities impacted by PFAS contamination.

Some of the highest levels of PFAS contamination in the country have been found in the Ojibwe Ceded Territory in private wells, lakes, and waterways near the Town of Stella, Wis. The immediate area around Stella is currently under a consumption advisory for venison and fish, posing a significant threat to primary treaty resources.

As grant programs are being developed, assuring these programs provide funding to areas and communities most at risk from PFAS contamination will be crucial. The Wisconsin DNR has stated that private well owners and tribes will be among those eligible for funding under the agencies' grant programs. Known as "forever chemicals," PFAS are found in many consumer products, like non-stick kitchenware, and once discarded in the environment may cause harmful health effects in fish, animals, and humans. **—J. Rasmussen**



GLIFWC Inland Fisheries survey crews visited 19 Ceded Territory lakes in Wisconsin and Michigan during annual springtime adult walleye assessments in 2026. These assessments help biologists estimate fish population abundance, which in turn helps to determine harvest regulations for Ojibwe and state-licensed fishers. Inland Fisheries Section staff also collect individual fish from select lakes for GLIFWC's chemical contaminant testing program. Zachary Kleemann (right) from US Fish & Wildlife Service joined GLIFWC's Rick Barnaby and other tribal staff during the survey season. (Ed White photo)

Plan your late season mizise hunt

While many Ojibwe Ceded Territory mizise hens have already copulated—spending long hours on their ground nests tucked into underbrush—gobblers remain on the move, looking for late season breeding opportunities. Tom turkeys are also making daily visits to primary food sources, including acorn-producing oak woods and mature pine stands, where evidence of birds using their powerful three-toed feet to forage red and white pine seeds under the needle duff is a good sign for hunters.

Over the first third of the 2026 off-reservation spring misize season, hunters registered zero birds in the 1842 Michigan Territory, 34 in Wisconsin and five in Minnesota through April 30. With many tribal members focused on fishing in April, early turkey harvests are typically modest.

NWTF photo

Since the Lac du Flambeau Band launched its wild turkey release program in 1999, the big birds have made steady inroads throughout the Ceded Territory. Additional wintertime trap-and-transfer efforts by state Departments of Natural Resources in the mid-2000s helped kickstart wild turkey expansion into northern ranges where wildlife biologists once thought deep snow and long northern winters **(see Ziigwang, page 21)**

On the waabizheshi trail

Researchers explore habitat, predation in the marten woods

By Ben Murley for Mazina'igan

Picture an animal moving through the woods. Does that animal use the entire forest as it travels? Or does it carefully pick its path, sticking only to dense stands of conifer, or perhaps strictly deciduous trees? Is it searching for food in wet, lowland swamps, or sticking to drier uplands? What about the forest floor? Does it depend on the dead, downed logs scattered across the ground to survive or the standing dead trees? Now, complicate that picture: add in the constant threat of larger predators, the shifting availability of prey, and a landscape periodically altered by timber harvests or wildfires.

Martens fitted with radio collars enable researchers to track the elusive animals, helping identify critical habitats in Ceded Territory forests. (J. White photo)

When you look at all these moving parts, understanding how an animal survives becomes an incredibly complex puzzle. In Wisconsin's Northwoods, waabizheshi (marten) is at the center of one of our most challenging ecological mysteries. As a clan animal representing the community warrior, waabizheshi shares a close, enduring relationship with the Ojibwe. Martens are fierce, agile predators capable of hunting a wide variety of prey, from tiny mice all the way up to snowshoe hares.

Prior to European colonization, waabizheshiwag were a common sight across the coniferous forests of the Ceded Territory. Unfortunately, due to the overharvesting of timber and furs, paired with increased wildfire events, waabizheshiwag were completely driven to extirpation in Wisconsin by the 1930s. Thanks to a series of dedicated reintroductions spanning the 1950s to the early 2000s, driven by partnerships between GLIFWC, the US Forest Service, the Wisconsin Department of Natural Resources, and others, waabizheshiwag have returned to the state. Today, subpopulations have been reestablished in the Apostle Islands, and the Chequamegon-Nicolet National Forest.

The recovery of these subpopulations, however, has been slower than expected, and waabizheshiwag are still classified as an tribal and state endangered species in Wisconsin. This slow recovery is likely tied directly back to the complicated questions of how they use their habitat and who they share it with.

When it comes to competition, ojiig (fisher) is waabizheshi's biggest hurdle. Because ojiigag are two to five times larger, they can easily outcompete and even kill waabizheshi; in fact, researchers have found that ojiigag are currently the largest source of mortality for waabizheshiwag in Wisconsin. Historically though, waabizheshiwag have had one major advantage: deep winter snow. The smaller, lighter waabizheshi has a much easier time running on top of the snow crust and utilizing subnivean tunnels (burrows beneath the snow) to escape ojiigag, who often sink and struggle in deep powder. But with climate change increasingly altering the depth and duration of our winter snowpack, waabizheshiwag and ojiigag are likely to cross paths more often, and we already know how those encounters usually end.

To help support waabizheshi's recovery, current fieldwork conducted by an interagency research team is taking a closer look at how these animals use the landscape in relation to timber harvests. To figure this out, we are using a few different tools. First, we set up hair snares made of PVC pipe resting on logs, outfitted with wire brushes on either end and a piece of beaver bait in the middle. When a waabizheshi goes in to grab the bait, it leaves a small hair sample behind on the brush. We then extract DNA from these samples and analyze specific microsatellite markers, which allows us to accurately identify individuals. We can then start piecing together a rough family tree and evaluate how the populations change over multiple years. While these snares work perfectly for waabizheshiwag, ojiigag are a bit too big to squeeze inside (though that doesn't stop them from trying). Because ojiigag are still very interested in the bait, we pair these snares with trail cameras to monitor their activity in the area, even if they don't leave hair behind.

Additionally, we are tracking their movements in real-time by capturing waabizheshiwag in live traps. Once safely captured, we fit the waabizheshi with GPS collars. This technology allows us to see exactly how waabizheshiwag are moving through the landscape, showing us which parts of the forest they use and which parts they avoid. Importantly, it also helps us identify exactly where they are resting or denning, sometimes allowing us to track them down to a single individual tree or a specific burrow in the snow.

An ojiig–which grows considerably larger than waabizheshi–moves across the top of a hair snare situated on the Nicolet-side of the Chequamegon-Nicolet National Forest in northern Wisconsin. (B. Murley photo)

Knowing exactly which trees and burrows these animals depend on is where our tracking data meets real-world conservation. Timber harvest is a necessary and ongoing part of Northwoods management that is unlikely to disappear from the landscape. If our research can identify exactly how waabizheshiwag react to these changes in the forest structure, and what types of micro-habitats they rely on to survive and hide from predators, we can figure out the best ways to protect their most vital areas. By understanding the complicated ways waabizheshi interacts with its environment, we can better support their recovery. *—Murley is a University of Wisconsin Forest and Wildlife Ecology PhD student collaborating with GLIFWC and partner agencies in waabizheshi research.*

MAZINA'IGAN STAFF:

Charlie Otto Rasmussen................Editor
Dylan Bizhikiins Jennings ....PIO Director
Jenny Van Sickle ....Staff Writer
N. Bay Paulsen..............................Staff Writer • Layout

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Although **MAZINA'IGAN** enjoys hearing from its readership, there is no "Letters to the Editor" section in the paper, and opinions to be published in the paper are not solicited. Queries as to potential articles relating to off-reservation treaty rights and/or resource management or Ojibwe cultural information can be directed to the editor at the above address.

For more information see GLIFWC's website *glifwc.org* and our *Facebook* page.

On the cover

The rusty crayfish is native to the United States and historically has been found in places such as the Ohio River Basin. In recent years, the Rusty crayfish has expanded throughout North America often outcompeting native species of crayfish. Identify rusty crayfish by a reddish spot right behind each of the claws. Check out the rusty crayfish recipe on page 11.

GLIFWC member tribes oppose rollback of roadless protections

By Bizhikiins Jennings, Staff Writer

The United States federal government has attempted to make many changes to multiple environmental laws, rules, and regulations, which offer crucial protections for water, species, and overall biodiversity. This year marks the 25th anniversary of the Roadless Area Conservation Rule, but under the current administration, the US Forest Service (USFS) is proposing to rescind the rule entirely, effectively removing the protections for USFS lands.

National forests located in the Ceded Territories and throughout the country continue to provide ecological and social benefits. (CO Rasmussen photo)

In 2001, after years of extensive public input and stakeholder meetings, the Clinton Administration implemented the Roadless Area Conservation Rule, which was developed by the USFS. The intent of the rule was to protect USFS lands from unnecessary road construction, timber harvesting and coal, gas, oil and mineral leasing. Over the years, an estimated 60 million acres of National Forest lands have been protected from the rule's implementation.

Prior to the Clinton Administration's directive in 1998, Forest Service Chief Michael Dombeck had proposed a road moratorium on over 100 National Forests while the USFS created a more comprehensive transportation policy for the National Forest System. The moratorium was immediately challenged by some states and large timber companies including the Wyoming Timber Industry Association in Federal District Court—which would later be dismissed.

The 2001 rule was not however an absolute prohibition of forest management. There are many caveats within the existing framework to allow for cutting, selling, or removing timber if the action improves habitat for specific endangered, threatened or sensitive species. Restoring basic ecosystem functions could also be permitted under the existing rule.

Many USFS lands across the United States are often ancestral tribal territories located adjacent or near tribal reservation boundaries. These lands are also tied to treaty harvesting grounds, sacred sites, and sites of ceremonial usage. GLIFWC member tribes maintain treaty reserved rights that pertain to the harvesting and usage of resources on National Forest lands within treaty-Ceded Territories. An MOU agreement with the USFS adopted in 1999 has served Ojibwe tribes and USFS with a great working model and example of agency-tribal cooperation.

GLIFWC and its member tribes have voiced strong opposition to the rule recission citing the irreversible impact the decision could have on water resources. The roadless areas in the Ceded Territories also serve as critical headwaters to the Mississippi Basin and the Great Lakes, providing crucial wetlands and filtration systems for ground water recharge and for rivers and waterways that many tribal communities depend upon for subsistence purposes. Tribal communities continue to maintain a heavy reliance upon healthy ecosystems. When Ojibwe communities throughout the region experience impacts on subsistence resources, **(see Roadless rule, page 21)**

Tribal Camping: family tradition on the land

Roasting marshmallows—flame throwing and all—the smell of campfire smoke, hot dogs, and burnt popcorn intermingled with the sounds of laughter. There's something special about gathering with family, sharing stories around a fire, and spending time on the land. National Forest camping offers tribal members an opportunity to connect with nature, culture, and one another, across beautiful landscapes.

Camping within the Ceded Territory on National Forest and the Apostle Islands National Lakeshore lands is open to tribal members with a valid camping permit. The process is simple and accessible. Whether you're planning a weekend getaway or a longer stay, families can enjoy both reservable campgrounds and more flexible, dispersed camping options throughout regional National Forests.

To get started, campers must obtain a permit, either through their tribal conservation department or the NAGFA online permitting system. After that, an individual may choose to reserve a campsite in advance or arrive and use first-come, first-served sites. Upon arrival, campers simply go to the registration kiosk and fill out a fee envelope (without payment, as tribal members are fee-exempt) and follow posted campground guidelines to ensure a safe and enjoyable stay for everyone.

Camping offers something for all ages. Kids can explore the woods, learn about plants and wildlife, and hear stories passed down through generations. Adults can relax and enjoy time together away from daily routines. Elders can share knowledge and traditions that strengthen cultural connections to the land, passing down generational knowledge.

It's important to remember a few key guidelines:

- Campgrounds must be open to be occupied.
- Campsites may not be left unattended for more than 24 hours.
- Length of Stay Restrictions may apply and can vary.

If you are looking for a more remote camping experience, tribal members may also disperse camp upon National Forest lands, offering even more opportunities for quiet, family-centered experiences. For more info, please visit *glifwc.org*.

—Z. Wilson

Getting your camping permit

Before heading out, campers must obtain a valid off-reservation camping permit. This can be done in two easy ways; either through your **Tribal Registration Station** or through the **NAGFA Online Permitting System**.

To self-issue a camping permit through NAGFA, follow the steps below.

- Visit the NAGFA self-permitting site: *glifwc.nagfa.net/online/*
- Log in using your full name and NAGFA ID number
- Complete the permit request and keep a copy for your trip

Please bring your camping permit with you while camping and be prepared to present it if asked. Your camping permit stamp number will be used while filling out the camping registration envelope.

Reserving a campsite on *Recreation.gov*

For those who like to plan ahead, many campgrounds of the US Forest Service can be reserved in advance through *Recreation.gov*. Here's how:

1. **Create a free account on *Recreation.gov***
2. **Search for a campground**
   - Chequamegon-Nicolet, Hiawatha, Huron-Manistee, Ottawa National Forests are signatory to the 1836,1837,1842 Ceded Territory Memorandum of Understanding.
3. **Check site availability**:
   - *FF* = First Come, First Served
   - *A* = Available
   - *R* = Reserved
4. **Select your dates and campsite**, then click "Add to Cart."
5. **Enter your trip details**, including:
   - Group size
   - Camping equipment
   - Number of vehicles
6. **Apply your Tribal Fee Waiver**:
   - Click "Apply a Pass Discount."
   - Select "Add a Pass Discount."
   - Choose "Tribal Fee Waiver" under Pass Type
   - Select your tribe of enrollment
7. **Review and confirm your reservation**

Once you arrive at the campground:

- Fill out the fee envelope (no payment required)
- Hang the campsite receipt as instructed
- Enjoy your stay!

If you're asked about fees by campground staff or concessionaires, simply present your GLIFWC camping permit—no Tribal ID should be required.

Camping is more than just recreation; it's a way to honor treaty rights, strengthen family bonds, and keep traditions alive. Whether it's your first trip or a yearly tradition, your National Forest is waiting.

Abundance in the iskigamizigan

By N. Bay Paulsen, Staff Writer

The omagakiig are singing, the binesiwag are thundering above, and the Anishinaabeg have pulled their taps from the maple trees. Summer is quickly approaching in Anishinaabewakiing which means the last of this year's sugar harvest is being bottled and stored for future sweet treats.

Eaten pours the class some ziinzibaakwadaaboo, or maple sap, at two different points in the iskigamizige process. They try the sap right after gathering it from the trees and again after the sap has gone through a reverse osmosis cycle. (B Paulsen photos)

I've noticed that the aninaatigoog have been very generous this year with many sugarbushes reporting bountiful sap flow and finished bottles of syrup in numbers rivaling the best years of zhiiwaagamizigan production.

This year, the Ceded Territory largely experienced cooler temperatures and long stretches of the ideal fluctuations between below freezing at night and above freezing during the day.

In early-April, Hayward Intermediate School's 4th grade class experienced a day in the iskigamizigan when Pat Eaten invited them onto his sugarbush on the Lac Courte Oreilles Reservation. The students dispersed through the woods to gather sap, which had been steadily dripping throughout the morning into those classic blue bags.

They poured the fresh ziinzibaakwadaaboo into a small holding tank strapped to the back of an ATV until they cleared that section of woods, collecting a little over 20 gallons. The young helpers were astonished to learn that all they gathered that morning would make only half of a gallon of finished syrup.

Back inside the building, Eaten poured each student a small amount of the fresh sap they had gathered. After seeing them remark at how it tasted like just-barely-sweeter water, he then poured them a small amount of sap that had gone through a cycle of reverse osmosis. They very much enjoyed the sweet treat, though it still wasn't quite syrup.

Eaten showed them his setup for finishing the sap, explaining how it had to boil all the way down to a specific sugar concentration to produce syrup that wouldn't go bad in a sealed jar.

After the students filed back onto the bus and pulled out of the sugarbush, I had the pleasure to stay behind and ask some of my own questions. Eaten explained that the reverse osmosis system is most often used for purifying water by using high-powered pumps to force it through a semi-permeable membrane, separating pure water from impurities. But this same modern system can be used to separate up to 75% of the water from fresh sap, reducing both time and fuel consumption during the boiling and finishing process.

Post-season reflections

Sugarbush season—which generally runs from mid-March to mid-April—is my absolute favorite time of year. After the post-holiday slump, it always comes at the perfect time to enjoy the company of dear friends and relatives. I learn more every year and gain a deeper appreciation for the aninaatigoog who are so generous to us for offering up their ziinzibaakwadaaboo—their own sustenance—to us as Anishinaabeg.

For me, it's a time of year for deep reflection. As we spend long hours watching over the boiling sap, we get to watch the woods slowly wake up from winter. The migratory birds begin to return, the snow begins to melt, and the red maples begin to grow their buds followed quickly by the sugar maples.

Sap starts as a clear liquid and then quickly darkens as the boiling process ensues. Each sugarbush has its own unique setup. (COR photo)

B Paulsen photo

Important teachings are shared across the steam rising out of the boiling sap as well as jokes that make everyone erupt in laughter; often they are one and the same.

Elders point with their lips at the wood pile to remind the younger ones to keep the fire fed while both the young and young-at-heart are sneaking samples of the ever-sweetening liquid into their coffee mugs.

At the end of a typical season, taps are pulled from the trees when they stop offering up tasty, usable sap. This year however, especially for the small family and hobby iskigamizigan, taps were more often pulled when everyone felt too exhausted for another round of boiling. At the end of it though, my heart was full, my muscles were tired, and my energy for a new year was freshly restored.

If you find yourself wanting to be involved in a sugarbush season, offer to help in an iskigamizigan near you. The best way to learn is to get hands-on experience, and those who can offer that experience are almost always grateful for extra help. Additionally, if you are a tribal entity looking to expand sugarbush capacity, see "Ininaatig workshops in your neighborhood" on page 23.

Problem plants targeted during summer control season

By Travis Bartnick, Wildlife Biologist

Over niibin 2026, GLIFWC is continuing to work with populations of potentially harmful non-native plant species. These efforts include a focus on priority species such as Dalmatian toadflax, European marsh thistle, leafy and cypress spurge, purple loosestrife, wild parsnip, garlic mustard, teasel, yellow flag iris, and non-native phragmites, among others. Most of the planned work will take place in far northern Wisconsin from June through September, primarily within the road rights-of-way of Ashland, Bayfield, Douglas, and Iron counties. Efforts may include manual removal (hand-pulling, digging, removing flower heads, etc.), careful and conservative spot applications of herbicide, and biological control for spurge and loosestrife. Roadsides often serve as pathways of spread and are targeted as a measure to help prevent the further spread of various target species to more vulnerable and biologically diverse natural areas.

Non-local species have aggressively moved into native ecosystems where they have been documented to cause environmental and economic harm—even harm to human health.

Hundreds of non-native species (or "non-local" beings) have been introduced to the western Great Lakes region, primarily as a result of human activities. Many of these introduced species are relatively harmless and aren't known to cause significant ecological degradation. However, some non-local beings have aggressively moved into native ecosystems where they have been documented to cause environmental and economic harm, and even harm to human health. These species typically lack the natural predators and other natural forms of control that typically help maintain a balance in their native ranges (often parts of Europe and Asia).

Some of these introduced species can negatively impact plants, wildlife, livestock, and humans. For example, garlic mustard can outcompete many native plant species, such as spring ephemerals in wooded floodplains. Purple loosestrife and non-native phragmites threaten wetlands and coastal estuaries by displacing native plants, reducing diversity, and degrading habitat for native wildlife. The sap of leafy and cypress spurge contains a compound that can be toxic to deer and cattle, and spurge plants can displace native plants and forage crops. Yellow flag iris is also considered poisonous, and populations can expand quickly, forming dense monotypic stands that replace and crowd out native aquatic plants, including the native blue flag iris. Exposure to the sap of wild parsnip can lead to a condition called phytophotodermatitis, caused by chemicals that

(see Non-local plants, page 21)

GLIFWC's John Wilmer is a key member of the non-native plant control team. In addition to extensive roadside management work, he participates in the annual effort to hand-pull garlic mustard from the Bad River floodplain near Copper Falls State Park. (CO Rasmussen photo)

Native publishers aim to boost literacy in tribal communities with new series

By Jenny Van Sickle, Staff Writer

Thomas Peacock and Elizabeth Albert-Peacock started their business, Black Bears and Blueberries Publishing in 2018 and began publishing books the following year, "that Native children could see themselves in the story and learn their history, culture and language," said Albert-Peacock. Since 2019 Black Bears and Blueberries has published 60 books written and illustrated by Native writers and illustrators. In just eight years, the Peacocks have made an enormous impact on the materials that are available to teachers, leaders, and caregivers.

"Our books are in libraries, schools, universities, museums, clinics, bookstores, gift shops in many communities," said Peacock.

The Peacocks are now developing an Indigenous collection of seven new books with Room to Read, an international foundation that focuses on literacy development in underserved communities. The books will be distributed free of charge to schools and the tribal communities. "We've selected the authors and illustrators and have final manuscripts," explained Albertson-Peacock. The books are set to be released in September 2026.

The Gift of Timpsula, (Oceti Sakowin—Dakota, Lakota and Nakota) authored by Leslie Apple (Lakota from Pine Ridge), illustrated by Chloe Mustooch (Nakota from Alberta). Leslie's story is beautifully written prose about the prairie turnip, used as food and medicine by the Oceti Sakowin people. Completely bilingual in three dialects.

Juniper Medicine, (Dine', or Navajo) authored by Allison Waukau (Dine' and Menominee from Minneapolis), illustrated by Corey Begay, Navajo, from Flagstaff, AZ). Allison's story is a very beautiful telling of the juniper tree, used as fuel and medicine by the Dine'. Completely bilingual.

Cricket's Day, (Cherokee) authored by Brad Wagnon (Cherokee from Oklahoma), illustrated by Beth Anderson (Cherokee from N. Carolina). The story of Cricket, a day in the life of a Cherokee boy. Completely bilingual in Oklahoma Cherokee.

Let's Build a Winter Chukka, (Choctaw) authored by Chelsea Elizabeth Tyagi (Choctaw from Oklahoma), illustrated by Laura Huskey (Choctaw from Oklahoma). Chelsea is a talented young writer. Her story is about building the Choctaw's traditional winter house. Bilingual in both Oklahoma and Mississippi dialects.

I Am Inupiaq, authored by Jackie Schaeffer (Inupiaq from Alaska), illustrated by Taylon Nelson (Inupiaq from Alaska). Jackie has written a beautiful pre-K–grade 1 story about a child still in the womb, wondering about the world she will soon enter. Bilingual in English and Inupiaq.

We are the Land, the Land is Us, (Native Hawaiian) authored by Sheri Maxwell (Hawaiian from Maui) and illustrated by Tioni Acain (Hawaiian from Maui). Sheri's story is about a journey through Hawaii, told by the frigate bird. Bilingual.

A Dream for You, (Ojibwe) authored by Thomas Peacock, illustrated by Moira Villiard (both Ojibwe from Fond du Lac Band). The story tells of a young girl's experience hearing the story of the eighth fire. Key words in Ojibwemowin.

The Peacocks will join our Maadagindan virtual book club Wednesday May 27th at 4:30 CT to discuss their book, Black Bears and Blueberries.

For more information, please contact *facebook.com/Nativepublisher/blackbearsandblueberries@gmail.com blackbearsandblueberries.com/*

Black Bears & Blueberries
Words by Elizabeth Albert Peacock
Pictures by Erin Kant Barnard
Maadagindaan!
Wednesday May 27, 2026
Monthly Virtual Book Club
at 4:30pm
With honored guests: Elizabeth Albert Peacock & Thomas Peacock
Elizabeth & Thomas Peacock, Owners/operators of Blackbears & Blueberries Publishing. Native owned publisher of Native books authored and illustrated by Native people. To date (2025) we have published 59 books. Many of our books contain Ojibwe language with glossaries, some bilingual. We are online and in person. We sell to individuals, schools, libraries, museums, and wholesale to bookstores, gift shops, art galleries.
Learn more about their partnership with Room to Read and be sure to register for this virtual treat!
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Ceded Territory SCIENCE

Creating walleye spawning reefs in northern lakes

Habitat enhancements key element in ogaa recovery, sustainability

By Mark Luehring, Inland Fisheries Section Leader

The ongoing trend of declining ogaa populations in the Ceded Territory and throughout the Upper Midwest is well documented. Many previously self-sustaining walleye populations are being affected by declining reproduction, habitat destruction, harvest, and chemical treatments. Multi-faceted approaches are needed to help these populations and Ojibwe tribes are working with partners on rehabilitation plans in multiple lakes. In two northern Wisconsin lakes, spawning reef construction projects are underway to help with natural reproduction.

In Franklin Lake, Forest County, natural reproduction has been declining for about two decades. Because of this, the adult ogaa population is quite low. The Sokaogon Band is working with the Wisconsin Department of Natural Resources, United States Forest Service, and other partners to rebuild the adult population and establish consistent natural reproduction. The plan to improve walleye populations has multiple parts. First, harvest has been reduced in both the state and tribal fisheries. An 18-inch minimum size limit has been in place for state anglers since 2015, and Mole Lake has voluntarily limited spear harvest to 90 total walleyes (with only 3 years of harvest) from 2016-2025. In addition, stocking hatchery-produced ogaawag continues in the lake with both the Mole Lake Tribe and Wisconsin DNR contributing in different years.

Tribes are collaborating with local volunteer groups and state agencies to enhance or construct spawning areas as part of an effort to encourage natural ogaa reproduction. (photos courtesy of Mike Pruel)

Taking it up a notch

To push the rehabilitation plan to the next level, the partners are working to install a spawning reef on the eastern shoreline. Previous surveys have shown that ogaa already use this area, but when the water level is low, the cobble substrate in the nearshore area that they use for spawning can be left high-and-dry. The project, likely moving forward in winter 2026-27, is intended to extend the rocky substrate into deeper water so that there is good spawning habitat even in low water years.

Westward in Burnett County, Big Sand Lake is connected to the Yellow River system and had a historical walleye population that used to spawn in a creek on the south side of the lake. However, area culverts installed since the 1970s have altered the flow, and the creek is no longer viable for spawning. The walleye population has been extremely low in recent years, and there is currently very little suitable spawning habitat in the lake. To help restore the population, the St. Croix Tribe is planning to put in a spawning reef near the windblown southeast point of the lake and boost the adult population by stocking. If it works, the reef combined with stocking could kickstart natural reproduction and provide a sustainable walleye population into the future.

In addition to these projects, tribes continue to collaborate with partners to develop additional plans for walleye rehabilitation. The goal of all these plans is to provide long-term sustainability for Ceded Territory walleye populations.

Mike Pruel photo

Walleyes spawn in shallow water with a large gravel or cobble bottom. Often located in nearshore areas, changes caused by development or drought conditions can render the sites unusable for spawning fish.

Fishing season impacted by rain, high water

(continued from page 1)

"As we continue to experience more frequent warmer winters, we can continue to expect earlier ice out dates," said Hannah Panci, GLIFWC climate change scientist. "We have already heard reports from tribal members that in some locations during early ice out years, there may be an overlap between spearing and maple sugaring seasons, forcing them to choose between the overlapping harvesting opportunities."

Ceded Territory snapshots

With the springtime sun rising higher each day, lakes shed their ice—generally along a southwest to northerly gradient—tribal officials open, or "name," individual walleye waters on a daily schedule. Boat landing-based GLIFWC creel teams count and record each fish speared, including maashkinoozhe (muskellunge) —a big fish with harvest quotas set at just a fraction of ogaa numbers.

For the 2026 season, community leaders across the Ceded Territory organized youth fishing events where volunteers supplied watercraft, lifejackets, and 10-foot spears (in some cases gillnets) to native kids, helping empower the upcoming generation with the experience and know-how to become family providers.

By May 4, Ojibwe harvesters in the Wisconsin Ceded Territory had landed 32,629 walleyes and 138 muskies. In the Yellow Lake and river system, spearfishers boated 17 lake sturgeon in northwest Wisconsin.

In the eastern Ojibwe Ceded Territory, 1836 Treaty fishers encountered springtime lakes and rivers overflowing from snowmelt and torrential rains.

"Walleye spearing got off to a slow start because of high water levels," said Justin Carrick, Bay Mills Indian Community Conservation Dept.

When streams subsided later in April, Bay Mills citizens harvested 131 ogaawag from the traditionally-productive waters of Rapid River—a Lake Michigan tributary that empties into Little Bay de Noc. However, tribal officials postponed the lake sturgeon season at Black Lake in Lower Michigan well into May until water levels leveled out, Carrick said.

At the Lac Courte Oreilles youth spearing event, up-and-coming harvesters came away with new fishing gear. (J Cadotte photo)

Western Upper Michigan fishing for Lac Vieux Desert (LVD) Band members hit a sweet spot between rain events across the third week of April. GLIFWC Conservation Warden Jason Higgins said that following a round of heavy precipitation, spearing kicked into high gear.

"That first rain opened up pretty much all the lakes overnight," said Higgins from his station in the Michigan 1842 Ceded Territory. The arrival of additional storm systems hampered fishing success until water temperatures and water depth struck an equilibrium that produced an outstanding night on Lake Gogebic when LVD fishers took home 903 walleyes on May 2. The preliminary ogaa harvest for all Michigan 1842 Ceded Territory lakes settled at 4,184 fish, plus four maashkinoozheg.

Rain showers with a strong dose of variable winds helped clear the ice on Lake Mille Lacs (Minnesota) in the far western extent of the Ceded Territory. Ojibwe bands and state-licensed fishers entered the open water season sharing an ogaa quota of 185,000-lb. For the tribes—Ojibwe bands that negotiated the 1837 Treaty—spearfishers and gillnetters harvested 55,297.4 pounds of ogaawag from their 79,700-lb quota. The tribal tally came in the form of 19,307 individual walleyes – each one measured and accounted for by a GLIFWC creel team. Like the state of Wisconsin, Minnesota natural resources managers make walleye harvest estimates based on a number of angler interviews.

All harvest figures are preliminary as some Ojibwe leaders continued to offer spearfishing opportunities for tribal citizens into mid-May. While giigoonh harvests peak in the period after ice-out each year, tribes may seek out fresh fish anytime using various gear—notably for feasts, funerals, and ceremonies.

Freshly cleaned ogaa fillets. (COR photo)

Chemicals widespread use raises red flag

(continued from page 1)

long-lasting spot treatment." ProcellaCOR (florpyrauxifen-benzyl) is an EPA-approved systemic herbicide used to manage invasive aquatic plants like Eurasian watermilfoil (*Myriophyllum spicatum*). It is absorbed by aquatic broadleaf plants, grasses, and sedges through their leaves and shoots. ProcellaCOR is a synthetic auxin herbicide that mimics plant hormones critical for regulating growth. The herbicide works by causing unregulated growth, abnormal cell elongation and division, reduced vascular function, and systemic death throughout the plant. It has a half-life ranging from four to six days in aerobic aquatic environments and two days in anaerobic aquatic environments.

Can ProcellaCOR adversely impact other beings?

Preliminary findings do show adverse impacts from ProcellaCOR treatments on wild rice, especially in early growth and development stages. In the only ProcellaCOR study conducted on wild rice, exposed plants had higher mortality than those not exposed at the submerged and floating leaf stages, which is often when the herbicide is applied to regional waterbodies. Exposed plants also expressed other phenotypic changes with unknown consequences on individual fitness and long-term population health. To date, there are no long-term studies on ProcellaCOR's impact on manoomin, ogaa, maazhkinoozhe, and other native wildlife. Additionally, field evaluations from 14 Wisconsin lakes in 2020 and 2021 provided evidence that the observed impacts following localized ProcellaCOR treatments extended to areas beyond the immediate treatment areas, suggesting the need for additional research on chemical dissipation and distribution under varying environmental conditions to better inform broad ecological impacts. There remains no scientific evidence that demonstrates ProcellaCOR does not impact wild rice or rice habitat, and non-chemical aquatic plant management alternatives are available that do not pose the same hazard to wild rice.

In the State of Wisconsin, the Wisconsin Department of Natural Resources has and continues to permit the use of ProcellaCOR EC (emulsifiable concentrate) to address non-native species control through the Aquatic Plant Management permitting process. Typically, lake associations or entities with management authority on specific waterbodies develop a plan and submit for permitting through the WDNR portal. For Ojibwe Ceded Territory permitting, existing wild rice stipulations require the Wisconsin DNR to consult with the Voigt Intertribal Task Force on activities that may impact wild rice abundance or habitat. The WDNR reviews the use of ProcellaCOR in wild rice waters on a case-by-case basis. Currently, ProcellaCOR isn't typically considered for application if there is known wild rice and no water flow on the waterbody. Additional project information is required if there is water flow on the waterbody and wild rice is located downstream of the treatment.

GLIFWC member tribes note that wild rice is oftentimes found in waterbodies with some form of water flow. Critics of ProcellaCOR say that additional research on ProcellaCOR and its potential impacts on ancillary species, such as wild rice, is imperative before it's considered for application in waterbodies.

This isn't the first time that tribes located in the Great Lakes region have opposed chemical application to waterways. A common practice employed by the US Fish & Wildlife Service involves the application of a lampricide known as TFM or 3-trifluoromethyl-4-nitrphenol to waterways in Lake Superior, specifically inland tributaries that non-native lampreys utilize for spawning. TFM is a pesticide that kills lamprey larvae. Tribes like the Bad River and Red Cliff Bands are often left with the difficult decision to apply chemicals to the watershed or potentially allow non-native species to increase in numbers. Funding cuts and agency capacity often lead to reduced research, minimal available data, and reduced options for these types of environmental issues. Some fruitful collaborations cited by the Great Lakes Fishery Commission have led to the implementation of lamprey barriers, fixed structures that come in various forms including electrical, adjustable/inflatable, and fixed-crest. These are not always perfect solutions as native fish populations can also be deterred by the barriers, and some Tribal Nations prefer not to add structures or mechanization to their waterways. Over the years, communities like Bad River Band have requested additional data and research on TFM, especially on impacts to fish, amphibians, and wild rice, before application of the pesticide.

Uncertainty on how chemicals like ProcellaCOR impact manoomin has tribal leaders concerned about its application in Ceded Territory lakes. (COR photo)

(see The forever chemicals, page 10)

Annual trip to DC raises awareness, maintains strong relationships

Each spring congressmembers build budget requests and determine how to distribute funding to tribal nations and commissions. A delegation from GLIFWC joined tribal leaders from across Indian Country to speak directly with US House on Appropriations subcommittee members in mid-March about tribal successes, needs, and staff challenges related to enforcement officers.

The Appropriations Subcommittee on Interior, Environment, and Related Agencies is made up of 11 Representatives from across the country and includes Minnesota's 4th District Congresswoman, Betty McCollum. While the weather made for challenging travel conditions, GLIFWC persisted and met with the US Forest Service, Bureau of Indian Affairs, Senators Tammy Baldwin of Wisconsin and Amy Klobuchar of Minnesota.

During a special visit to the National Archives Museum, tribal leaders viewed the 1837 "White Pine Treaty" and the 1842 Treaty also known as the "Copper Treaty" which was the 242nd Treaty ratified by Congress. In April, GLIFWC was pleased to learn that the subcommittee responded with funding to address, in part, the pay gap for tribal law enforcement wardens.

—J Van Sickle

Jane Fitzgerald, Senior Archivist, shows Kelly Applegate, Mille Lacs Band Natural Resources Commissioner and 20-year VITF representative, the 1837 and the 1842 Treaties ratified by Congress. (JVS photo)

Executive Administrator Jason Schlender testifies next to Columbia River Inter-Tribal Fish Commission's Executive Director Aja DeCoteau. (JVS photo)

Healing Circle Run

GAAWIIN GIDINIGAAZISIIN ANISHINAABE GIDAAW

art by Elexia Saari

PLEASE REACH OUT WITH ANY QUESTIONS

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July 11–17, 2026

SCAN FOR ROUTE/SCHEDULE

Great Lakes Indian Fish & Wildlife Commission

The forever chemicals

(continued from page 9)

The Red Cliff Treaty Natural Resources Department has found it difficult to determine whether herbicides or pesticides utilized by federal and state agencies contained PFAS. PFAS, or per-and polyfluoroalkyl substances, are often referred to as "forever chemicals," and refer to thousands of synthetic chemicals that persist in the environment long-term. PFAS are not always disclosed by chemical companies that may produce herbicides or pesticides, often referring to the ingradiants as "proprietary." Tribes like Red Cliff have utilized third party labs to initiate testing of these substances in order to provide recommendations on herbicide and pesticide application.

Indigenous leadership to guide wild rice council

On-reservation manoomin bed (B Paulsen photo)

DNR Tina Davis

Wisconsin Department of Natural Resources Administrative & Policy Manager Tina Davis, a citizen of North Fork Rancheria of Mono Indians of California, will facilitate the new Manoomin Stewardship Council that includes members from all 11 federally recognized tribes along with staff from GLIFWC and the State Departments of Agriculture and Administration. On October 13, 2025, Wisconsin Governor Tony Evers signed Executive Order #277 at the Lac Courte Oreilles Ojibwe School near Hayward, Wisconsin. The order directed, in part, to create a Wild Rice Stewardship Council to "help promote the protection of wild rice in Wisconsin and ensure its presence for future generations." Originally, the stewardship council was an idea that came out of the Climate Change Task Force headed by then-Lt. Governor Mandela Barnes.

After nearly two decades with the US Environmental Protection Agency, Davis joined the DNR's Environmental Management Division in January 2026. "The new Council will aim to advance public education, develop and recommend legislation and policy, and brainstorm research projects and partnerships," said Davis. She expects the Stewardship Council to be long-term and meet twice a year.

Also joining the Stewardship Council will be GLIFWC's Biological Services Division, Wildlife Section Leader, Miles Falck, who oversees the manoomin program. "This council can really be an important opportunity to amplify our goals in community education around encouraging natural shorelines, PFAS designations, Areas of Special Natural Resources Interest (ASNRI) protection for wild rice waters, and wake boats," said Falck.

While there is currently a wild rice committee, their work is different but can dovetail with the new stewardship council. The Joint State/Tribal Wild Rice Management Committee was formed following the LCO v. Voigt Decision that carries responsibilities to share data and tribal rice chiefs help develop recommendations for the protection and conservation of wild rice more specific to Ceded Territory and plaintiff tribes, explained Falck.

To read the full executive order please visit *evers.wi.gov/pages/newsroom/executive-orders.aspx*

—J Van Sickle

Miinan-Giba'iganiminzh-Aaniibiish-waaboo
Sweet Fern & Blueberry Tea

1. Akawe (firstly), we need to make Miinan-ziinzibaakwad.

2. Eko-niizhing (secondly), let's make Giba'iganiminzh-Aaniibiish-waaboo.

Miinan-Zhiiwaagamizigan (Blueberry Maple Syrup)

Ingredients:

Miinan (blueberries)—1 ½ cup (either frozen or fresh)

Zhiiwaagamizigan (Maple syrup)—½ cup

Zhiiwitaagan (salt)—a pinch. (optional)

Instructions:

1. Combine Miinan and Zhiiwaagamizigan in a small saucepan over medium high heat.
2. Add a pinch of your favorite salt and bring mixture to a low boil.
3. Reduce heat to a simmer. Stir occasionally and mash blueberries when they soften. Remove from heat once the blueberries are well incorporated into the syrup.
4. At this point you will have a thicker, chunkier syrup that can be used. If you prefer a smoother syrup (this may be more enjoyable in tea) let your syrup cool too room temperature, then blend and strain.
5. Cool and store in the fridge or use right away!

Giba'iganiminzh-Aaniibiish-waaboo (Sweet Fern Tea)

Ingredients:

Giba'iganiminzh-Aaniibiish (Sweet Fern Leaf) – 1-2 teaspoons for a cup of tea. Or 8-12 tablespoons for a 64 oz. batch.

Nibi (water) – 8-12 oz. for a cup of tea. Or 64 oz. for a batch.

Instructions:

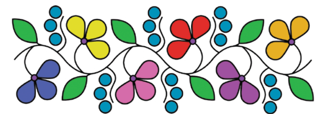
1. Bring Nibi to a boil. Pull Nibi from heat. For a cup of tea, add Giba'iganiminzh-Aaniibiish (in a reusable teabag or tea ball), to your cup of hot water, let steep for 3-4 minutes. For batched tea, steep for 5-7 minutes.
2. Add a healthy dollop of your Miinan-Zhiiwaagamizigan to your cup of tea to your taste. Or about ¼ cup Miinan-Zhiiwaagamizigan to your 64 oz. tea batch.
3. Minikwen! Drink up! A batched tea can be brought to room temperature, then kept in your fridge to enjoy later as an iced tea!

Recipe by Esiban Parent

Perhaps no other season is as stuffed full of miijim possibilities in the Ojibwe Ceded Territory as summertime. Fresh local crops—cultivated and wild—are abundant. Gigoohn are a cast away, or stacked in the freezer, iced fillet packs next to paper-wrapped backstraps. Stored away in the pantry, last year's manoomin (and the year before, and the year before that!) is a shelf stable champion and ready for any occasion.

For your consideration, we're pleased to feature a niibin drink that is both flavorful and mashkiki, a medicine. Returning contributor GLIFWC's Esiban Parent shares a one-two blend of common plants to make a singular specialty aniibiishaboo. After beginning his GLIFWC career in the manoomin wiidookaage position, Parent recently moved to (traditional ecological knowledge) TEK outreach specialist, putting him in place to potentially gather additional Ceded Territory-based recipe treasures. Parent's focus centers on manoomin or wild rice, TEK and knowledge related to climate change.

Additionally, Zach Wilson appraises a newcomer from southern waters that causes trouble in upper Midwest aquatic wildlife communities—the rusty crayfish. Paired with homegrown garden plants like corn, potatoes, and onions, the resulting soup-stew hybrid has all the potential to be a family favorite for northlanders. **—CO Rasmussen**



Miinan (Blueberry) harvesters have long lined their gathering makaks (baskets) with Giba'iganiminzh (Sweet Fern). In fact, Giba'iganiminzh directly translates to 'it covers Blueberries,' and serves the purpose of keeping harvested Miinan fresh and bug-free.

As Miinan and Giba'iganiminzh work together during harvest, they can also work together to make a tasty tea that has many health benefits. Giba'iganiminzh is particularly beneficial for the digestive system.

Here is an easy recipe for this refreshing Niibin-minikwewin (Summer beverage). **—E. Parent**

Rusty crayfish boil: turning trouble into a treat

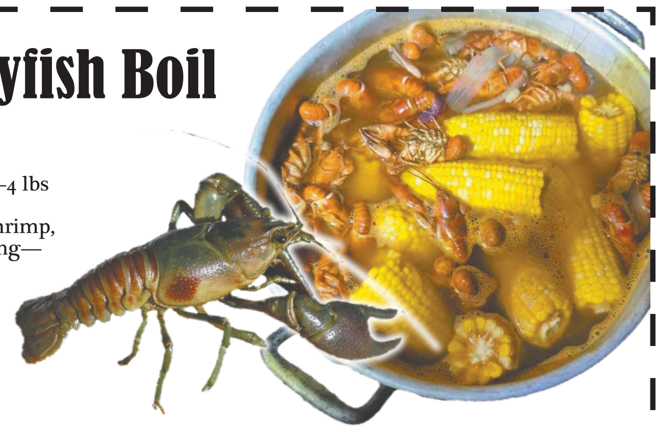
By Zach Wilson, GLIFWC Forest Ecologist

Many Northwoods kids who grew up spending summer nights near the water share a common memory: catching crayfish with headlights and dip nets. For me and my friends, returning to camp with a bucket full of wriggling crayfish was always a highlight. My father would ask, "What the heck are you boys going to do with those?" Our enthusiastic response: "We're going to eat them!"

Of course, back then our cooking skills were limited, and tossing crayfish straight into boiling water didn't exactly produce gourmet results. For some, that childhood curiosity never faded. These days, we've turned those memories into an annual event, catching and cooking up crayfish with friends. The difference now is that our knowledge, methods, and recipes have come a long way.

This time around, we're not going after indigenous crayfish; they've got other challenges. Our target is the rusty crayfish (*Faxonius rusticus*)—a non-native species that's causing problems across northern lakes and rivers. Native to the Ohio River Basin, rusty crayfish were likely introduced to the Northwoods by anglers dumping leftover bait. They're large, aggressive, and can grow up to 5 inches long (not including claws). Because of their size and appetite, rusties outcompete native crayfish for food and shelter, and damage fish habitat by consuming aquatic vegetation essential for survival. In some lakes, they've completely stripped vegetation, creating an almost "moonscape" effect. Recently, our GLIFWC manoomin team has also raised **(see Rusty crayfish boil, page 23)**

Rusty Crayfish Boil



Ingredients:

Fresh Rusty Crayfish—4 lbs

Zatarain's Crawfish, Shrimp, and Crab Boil Seasoning—3 tablespoons

Red Potatoes

Onions

Corn on the Cob

Preparation—Store your catch:

Place the live crayfish in a cooler with a little water. They're surprisingly sensitive to temperature changes, so after you get home, rinse them thoroughly using a garden hose to remove debris.

Drain the water several times and store the crayfish on ice (not in water). They'll stay fresher and keep longer this way. If you're not cooking immediately, let them sit overnight on ice.

Instructions:

Equipment:
A large stock pot or turkey fryer with a propane burner works great. I also like to use an inserted strainer basket for easy removal when the meal is done. Another option would be a large hand strainer.

Boil water:
Fill the pot about halfway with water and bring it to a rolling boil.

Season the boil:
Add Zatarain's Crawfish, Shrimp, and Crab Boil Seasoning—about 3 tablespoons per gallon of water for every 4 pounds of crayfish.

Add vegetables:
Add red potatoes first; cook for about 6 minutes.
Add four onions, peeled and chopped. Add corn on the cob (shucked and halved); cook for another 6 minutes.

Add the crayfish:
Stir them in and cook for about 5 minutes, until they turn bright red and begin to float.

Serve:
Pour the contents of the pot, minus the water, over a large tray or pan filled with ice to stop the cooking.

Enjoy:
Serve with melted garlic butter for dipping, and enjoy your Northwoods feast of crayfish, potatoes, onions, and corn.

Recipe by Zach Wilson

find online PDFs of Gimino-Miijiminaan recipes at glifwc.org/education-outreach/mazinaigan/language-and-food

Mineral exploration, mining interest in Ceded Territory on the rise

By John Coleman, Environmental Section Leader

As higher metals prices and government initiatives to promote domestic strategic minerals production continue—particularly those used in high tech and the military—GLIFWC environmental specialists are observing an increase in mining and mineral exploration in the region. Even with the added interest, several projects seem to be stalled due to a shortfall in private funding. Both the current and last administration have prioritized locating "critical" minerals as exploration and mining companies utilize federal grants to locate deposits of copper, nickel, and other key resources. GLIFWC staff are currently tracking mining and exploration projects in the 1836, 1842, 1837, and 1854 Ojibwe Ceded Territories. There's a lot happening out there.

Collecting water samples in the Bad River watershed to establish baseline water quality in a potential mining watershed. (C. Hester photo)

NEW RELEASE

Explore Metallic Mining in the Ojibwe Ceded Territory

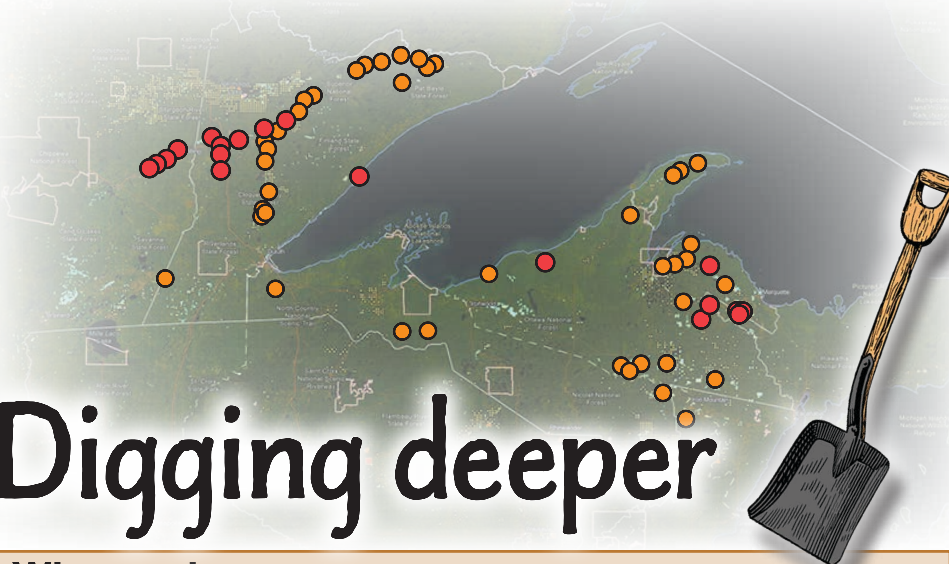
Take a digital deep dive into mining projects in Upper Michigan, Wisconsin, and Minnesota. Find color maps, photographs, monitoring data, and research reports at *storymaps.arcgis.com/stories/b8934f7ed52c4fce84d67fe305c9fc13*

Three-state summary

Iron mining continues to be the dominant mining activity in Minnesota with expansion of several mine pits and tailings basins in the eastern Iron Range. The Polymet copper mine, re-branded as NewRange, continues to be on hold. A new mine plan is expected in mid-2026. Speculation has been that the major change will be in tailings disposal, but we wait to see what the company proposes. Talon Metals continues to collect data on their deposit near Tamarack and is working toward a mine plan through the state scoping process. United Taconite (UTAC) is constructing a third tailings basin near the St. Louis River over the objections of tribal staff because of past and expected future impacts to manoomin.

The only minerals exploration activity in Wisconsin is spearheaded by Green Light Wisconsin (GLW) as it studies the Bend Deposit in Taylor County. GLW drilled six exploration holes last summer and in late February began drilling 18 more holes to characterize the deposit. GLW is also in the process of applying to the US Forest Service and the Bureau of Land Management (BLM) to drill another 28 holes later in the year at the Bend site.

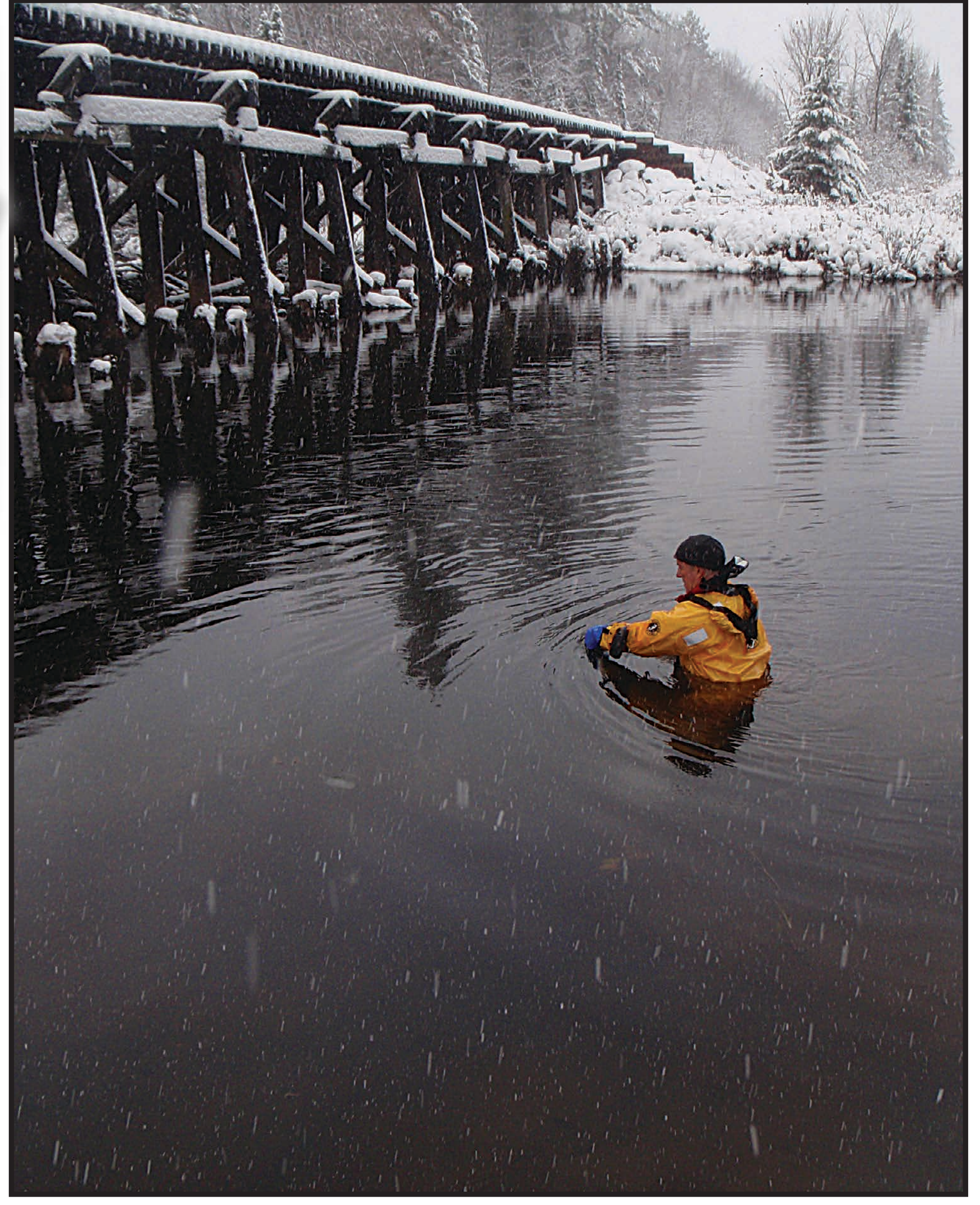
Talon Metals bought the Eagle Mine and associated Humboldt Mill in Michigan's Upper Peninsula. A plan to backfill mine waste tailings into Eagle is now on hold. Previously, Talon Metals had acquired large mineral lease holdings in the western Upper Peninsula and has been drilling near the Keweenaw Bay Indian Community (KBIC). The company is interested in using the Humboldt Mill to process ores from any new deposits it develops in the U.P. and may ship ore to Humboldt from its Tamarack project in Minnesota. Along the Lake Superior shoreline, the Copperwood project appears stalled for now. Finally, White Pine Mine operators continue to collect baseline environmental data and drill bore holes to characterize expansion to the northeast.



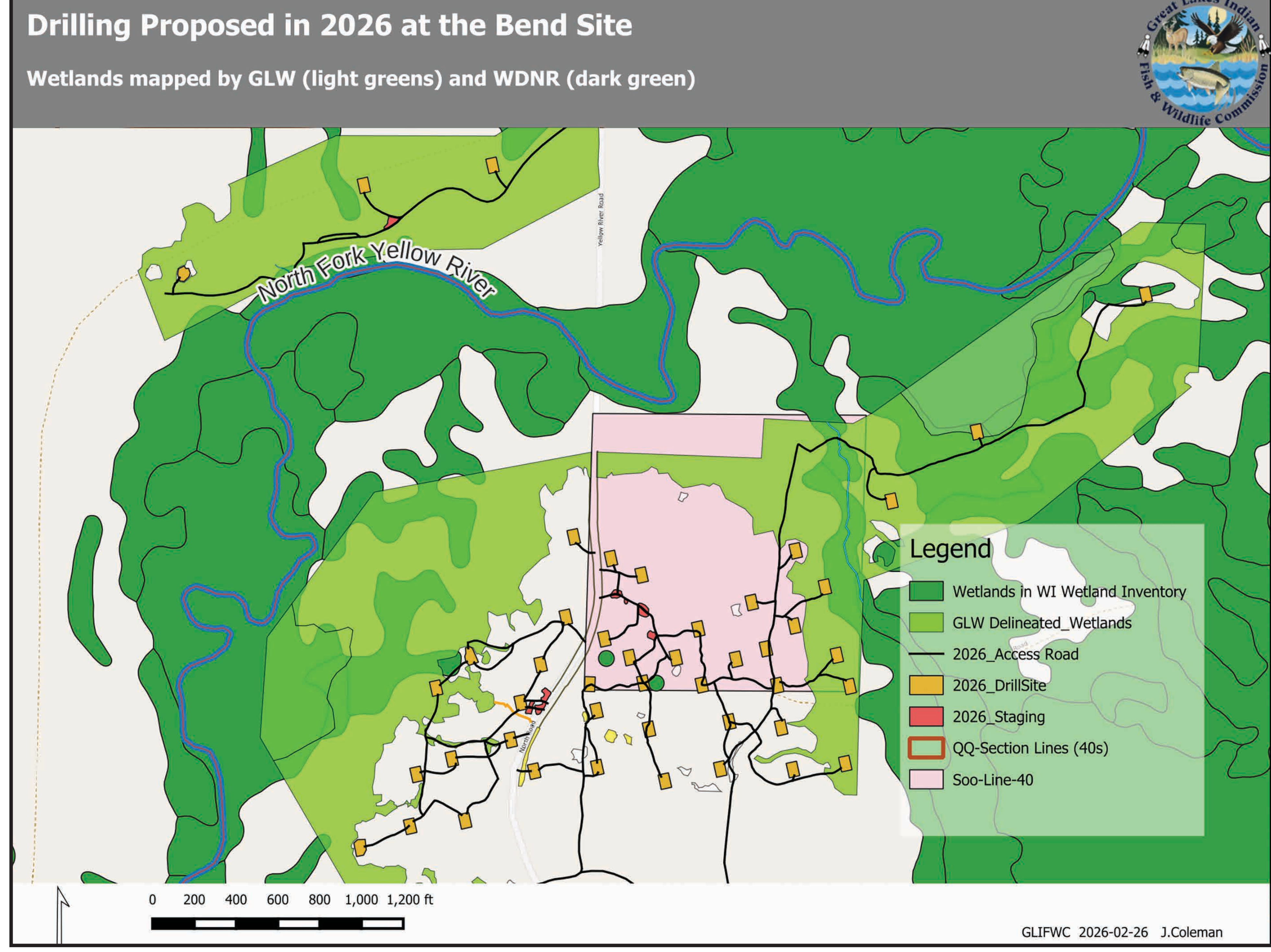
Wisconsin

Green Light Wisconsin, Bend Deposit Exploration: After acquiring mineral rights from Aquila Resources in 2021 Green Light Wisconsin (GLW) has pursued exploration permits for the Bend site on the Yellow River in Taylor County. This site is on Forest Service property within the Chequamegon-Nicolet National Forest. In 2025 GLW drilled six exploration holes in the Soo-Line Parcel and in February 2026 began drilling 18 more holes in that 40-acre parcel. The Forest Service, Bureau of Land Management (BLM) and the State of Wisconsin are reviewing applications for additional exploration in the form of 28 more borings into federally owned minerals. Despite tribal requests, neither the state nor the federal agencies have specified that drilling at the site must be done in winter and frozen ground conditions. However, according to the state, if drilling occurs in wetlands, it must be done when the ground is frozen or under a detailed wetland fill permit. The state has required several permits related to water use and stormwater runoff but has so far not reviewed or issued a wetland fill permit. Review of application materials for the 28 borings into federally owned minerals is expected to continue into at least late spring. GLIFWC staff will work with the BLM and Forest Service to ensure adequate stipulation so that water and forest beings are protected.

Green Light Wisconsin Reef, Lobo and other deposit exploration: Also acquired from Aquila Resources, these deposits are on private property in Marathon and Oneida counties. GLW has not applied for drilling permits at these sites in either 2024-25 or so far in 2026.



Collecting water samples in the potential mining area of the Presque Isle River watershed. (E. Chiriboga photo)



Exploration drilling proposed for 2026 by Green Light Wisconsin. Drilling is focused on better defining the Bend deposit that was initially identified by drilling in 1985. (J. Coleman map)

Michigan

Talon Eagle Mine: In 2025, Talon Metals bought the Eagle Mine and Humboldt Mill from Lundin Mining. This mine has operated on the Yellow Dog Plains since 2014. Originally scheduled to end in 2019, mining plans are now expected until 2029. Talon/Lundin engineers began refining tailings for use as paste backfill in the underground mine after ore is removed. When there is little risk to groundwater, GLIFWC staff are supportive of backfilling mines with tailings because then it is unlikely to leak into the broader environment or be released by tailings dam failures. The backfill plan was approved by the state in May of 2025, but the tailings waste backfill plan is on hold.

Talon Humboldt Mill: Eagle Mine ore is processed near the Upper Peninsula town of Humboldt where spent tailings are discharged into an old iron mine pit full of water. The pit lake overflows and water is treated before being discharged to the Middle Branch of the Escanaba River. GLIFWC has monitored waters downstream of the mill since 2011. In 2023, GLIFWC cooperated with the US Geological Service to install water quality monitors upstream and downstream of the mill on the Escanaba River. Having water chemistry monitoring in both locations will enable GLIFWC and partner agencies to determine the impact of tailings discharge on water chemistry.

The Humboldt Mill was bought in 2025 by Talon Metals for processing ore that comes from any new deposits they find in the Upper Peninsula. Talon is also evaluating whether it would be economical to ship ore from the proposed Tamarack Mine in Minnesota to the Humboldt Mill.

Talon Metals exploration: In 2024 Talon Metals applied to the State of Michigan to lease 23,288 acres of state-owned minerals in the western Upper Peninsula. Talon has also acquired rights for exploration on approximately 400,000 acres of land owned by UPX Minerals (Sweetwater Royalties). Those private mineral parcels are in an area south and east of the Keweenaw Bay Indian Community (KBIC). Talon first began exploratory drilling in 2023 and continues in 2026. Some of the most intensive drilling is just east of KBIC at the Boulderdash and Roland Lake sites.

Tilden Iron Mine: This long-running iron mine continues to capture and pipe selenium-contaminated water to a pit for storage where it has yet to be treated. Some selenium-contaminated flows from waste rock piles remain uncaptured. The tailings basin discharge to surrounding natural waters has reduced concentrations of selenium relative to several years ago because of treatment and dilution. However, some seeps from the tailings basin and waste rock stockpiles and groundwater contamination remain unaddressed. Michigan EGLE permitted Tilden's waste rock expansion last year, but comments by GLIFWC and others appear to have greatly reduced the wetland and stream impacts that were originally planned. The mine is planning on using the old Empire Tailings Basin for Tilden tailings once the existing basins are at capacity. All the tailings dams have flaws according to GLIFWC tailings dam analysis. In 2026 Tilden will need to get its water discharge permit renewed by the state. Staff will comment during that process based on our previous sampling, visits to the mine and review of draft permitting documents.

Copperwood: Owned by Highland Copper, this deposit was described and permitted in the 20-teens. Just west of the Porcupine Mountains Wilderness State Park near the shore of Lake Superior and Black River Harbor, tribal staff have monitored and commented on this project for years. In 2024, in what appeared to be an effort to convince potential investors that the project is viable, the company rerouted Gypsy Creek, which was necessary for future construction of a tailings basin. In 2025, the Michigan legislature again failed to approve a requested $50 million state grant. Highland Copper, the project owner, has stated that it will be submitting updated mining plans to the state in 2026. Press releases by the company suggest it is trying to reduce its environmental footprint by proposing to backfill the mine and dewater the tailings. Highland Copper sold its interest in the White Pine mine to Kinterra, generating $30 million, which should fund its Copperwood operations for the next year.

White Pine Mine North: In 2023 Highland Copper and Kinterra Copper partnered to create the White Pine North project to exploit the mineral deposit northeast of the historical White Pine Mine. In 2025 Highland Copper sold its 34% interest in the mine to Kinterra for $30 million, suggesting possible lessening of interest in U.P. hardrock mining. The project is on the shores of Lake Superior immediately east of the Porcupine Mountains Wilderness State Park. In 2024 and 2025, the owners conducted environmental monitoring to establish baseline conditions and continued to drill exploration holes to characterize the mineral deposit. In 2024 the company gave tribal staff updates concerning the project. In early 2026 the company presented information to tribal staff on its environmental monitoring program and is expected to send the state a mining plan mid year.

Back-40 Mine: With the loss of its wetland permits due to court rulings in 2021, Aquila Resources sold the mine project to Gold Resources. That company claimed to have redesigned the mine for lesser impacts and hoped to file a mine permit application in 2022. While there was a Scoping Environmental Impact Assessment meeting in 2022 with the Michigan EGLE and EGLE released a final Scoping Environmental Impact Assessment in 2023, there have been no further developments on this project. It appears that the owner of the project, Colorado Springs-based Gold Resource, had a financial meltdown in mid-2023. It is currently focusing on its gold and silver mine in Mexico called Don David.

Minnesota

(see Ceded Territory mining interest, page 15)

Finding balance in the Gichigami giigoonh community

Atlantic sea lampreys catalyst for interagency cooperation

By Ben Michaels, Great Lakes Fishery Section Leader

Spring in the Great Lakes basin signals a season of renewal, bringing migratory birds, blooming wildflowers, and warmer weather. Unfortunately, this season also marks the arrival of spawning sea lamprey as they ascend the tributaries of the Great Lakes, spurring lamprey assessment crews into action.

As a non-native invasive species, the sea lamprey has been a bit of a troublemaker in the Great Lakes Region. While native to the Atlantic Ocean, they gained access to the Great Lakes via man-made canals, firmly establishing themselves throughout all five lakes by the 1940s. Their arrival triggered a catastrophic collapse of fish stocks, particularly namegos (lake trout), leading to massive ecological and economic damage.

Atlantic sea lamprey with established populations in the Great Lakes feed on fish like namegos with a suction-cup-like mouth filled with sharp teeth.

The sea lamprey is a specialized parasite. Equipped with a suction-cup mouth and rows of rasping teeth, it attaches to host fish, such as namegos, to pierce their flesh and feed on body fluids. A single lamprey can kill up to 40 pounds of giigoonh (fish) over its lifetime. Compounding the threat is their remarkably high reproductive potential. A single female can lay over 60,000 to 100,000 eggs in one spawning season. Without active management, these numbers can increase rapidly, especially since lamprey face almost no natural predators in the Great Lakes.

Facing the sea lamprey as a major threat to the Great Lakes, the United States and Canada signed the 1954 Convention on Great Lakes Fisheries, which led to the formation of the Great Lakes Fishery Commission (GLFC) in 1955. The Commission's primary mandate was to develop and coordinate lamprey control strategies to restore decimated native fish populations and to facilitate fisheries management efforts among various agencies within the Great Lakes region. Today, sea lamprey management is a large-scale collaborative effort led by the GLFC and implemented by the U.S. Fish and Wildlife Service Sea Lamprey Control Program (SLCP), and Fisheries and Oceans Canada (DFO), working in partnership with various state and tribal agencies. Their strategy includes the use of lampricides, which are chemicals designed to selectively target and eliminate larval lamprey; in-stream barriers, which are physical structures that block adult lamprey from reaching their spawning grounds; and trapping, which involves the removal of adult lamprey from river systems. While the combination of these methods has been highly effective, each one has its own set of pros and cons, presenting an ongoing need for biologists and fisheries managers to continue researching innovative ways to improve and supplement existing control tools.

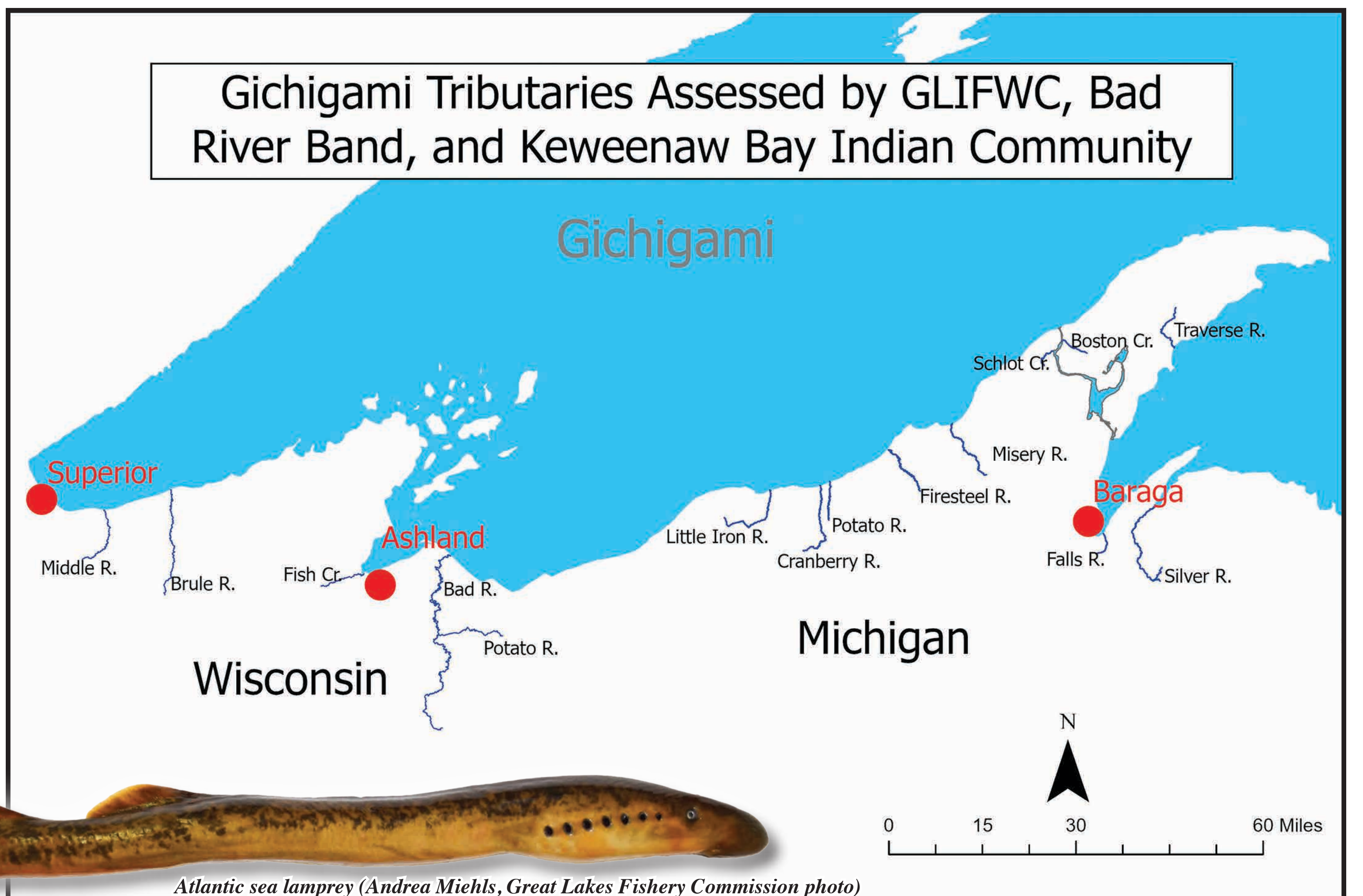
These control measures have successfully protected Great Lakes fisheries, a multi billion-dollar economic asset, while supporting tribal commercial and subsistence fisheries that are essential to indigenous sovereignty and food security. By suppressing lamprey populations to a fraction of their 1950s levels, native fish species have been given the opportunity to rebound. Despite this progress, lamprey numbers remain above target levels in most of the Great Lakes. The disruption of lampricide treatments during the COVID-19 pandemic highlighted the necessity of consistent control efforts. Reports from 2025 indicate that while populations are generally declining, Gichigami's (Lake Superior) population index remains above target levels (Barber & Van Kempen, 2025), partly due to lingering effects from the treatment disruptions earlier in the decade.

Tribal leadership on the western South Shore

The Great Lakes Indian Fish and Wildlife Commission (GLIFWC) and its member tribes have taken a big role in assessment efforts in Wisconsin and Michigan. Through partnerships with the USFWS, the Keweenaw Bay Indian Community Natural Resources Department (KBIC-NRD), and the Bad River Band Natural Resources Department (BRNRD), tribal agencies are leading important work. This includes conducting population assessments via trapping on rivers in Wisconsin and Michigan's Upper Peninsula to generate data for prioritizing control measures. By trapping both adults during spawning and juveniles during their fall downstream migration, tribes are working to prevent lamprey from reaching Gichigami and parasitizing native fish.

Additionally, GLIFWC, KBIC, and BRNRD in collaboration with the U.S. Geological Survey (USGS), are currently exploring alternative trapping methods. These include the use of trammel nets in the Bad River to assess capture feasibility and the implementation of an electrical weir on Michigan's Cranberry River to deter upstream migration and divert lamprey into holding nets. Through these partnerships, the effort to protect the Great Lakes ecosystem continues, ensuring that these waters remain healthy and productive for generations to come.

References:
Barber, J., & Van Kempen, T. (2025). Sea lamprey control in the Great Lakes 2025: Annual report to the Great Lakes Fishery Commission. U.S. Fish and Wildlife Service; Fisheries and Oceans Canada. Available Online: glfc.org/pubs/slcp/annual_reports/ANNUAL_REPORT_2025.pdf



Atlantic sea lamprey (Andrea Miehls, Great Lakes Fishery Commission photo)

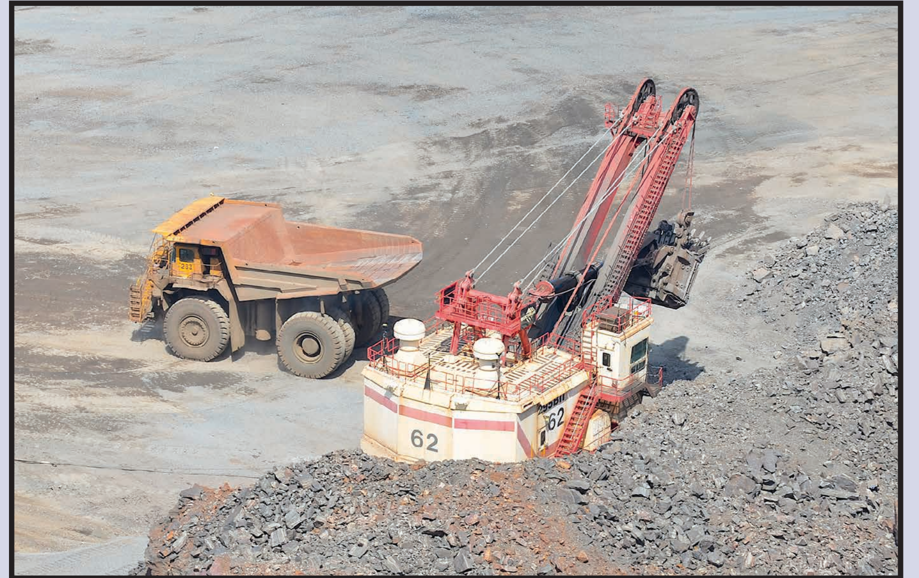
Ceded Territory mining interest

Minnesota

Talon Metals Tamarack Deposit: Talon Metals submitted mine proposal materials in 2024 and 2025 to the State of Minnesota. The final Scoping Decision document from the state came out in February of 2026 and is under review by tribal environmental staff and others. Talon continues to drill exploration holes near the town of Tamarack in east-central Minnesota to characterize the nickel, copper, and other metals in the bedrock. There are two mineral deposit areas about a mile apart, Tamarack North and Tamarack South. While the south deposit is in the 1854 Treaty Ceded Territory, the north deposit is in the 1855 Treaty area and seven miles upstream from Big Sandy Lake, the site of the Mikwendaagoziwag Memorial. Part of what is driving this development is Talon's agreement with Tesla to supply 75,000 metric tonnes of nickel concentrate. Talon's proposal is new for the mining industry in that almost all mining facilities would be enclosed in buildings where precipitation and dust could be controlled. Talon has proposed to ship its ore to a North Dakota facility for processing but recently bought the Humboldt Mill in Michigan and is evaluating the economics of shipping the Tamarack ore there.

U.S. Steel Minntac Iron Mine: The Minntac mine tailings basins have discharged wastewater into the Sand and Dark Rivers since mining began in 1967. That discharge has killed off extensive manoomin in the adjacent Twin Lakes and on the Sand and Dark Rivers. The high mineral content of the wastewater, particularly sulfate, has eliminated wild rice, despite reseeding attempts. The Minnesota Pollution Control Agency (MPCA) issued a water discharge permit for the tailings basins in 2018 with goals for water quality but so far U.S. Steel has not met water quality standards. The MPCA is currently revising the basin discharge permit to conform with the Supreme Court's ruling on the Maui case, which specified that a discharge to a holding pond that then leaks to a water of the U.S. needs a water discharge permit. Final details on how the Maui decision will be implemented at the site are under development by the MPCA. Final development of an implementation plan has been stalled by political opposition to enforcement of the wild rice water quality standard. Staff continue to monitor water quality at the site and in the Sand River (*thingspeak.mathworks.com/apps/matlab_visualizations/469583?width=auto&height=auto*). In 2023 GLIFWC cooperated with the USGS to install a stream gauge in the Sand River just downstream of Minntac's discharge. That gauge tracks flow, temperature and mineral content of the river. (*waterdata.usgs.gov/nwis/uv?cb_00010=on&cb_00065=on&cb_00095=on&format=gif_default&site_no=05128400&legacy=1&period=90*).

Collecting water samples in the potential mining area of the Upper Saint Louis River watershed. (E. Chiriboga photo)



Upper Michigan and Minnesota support large open-pit iron ore mines. (CO Rasmussen photo)

United Taconite Fairlane Plant: United Taconite (UTAC) continues to expand its tailings basins near Fairlane, 10 miles south of Virginia, Minnesota. The tailings basin expansion was designed in the 1970's and will be constructed to leak water to surrounding wetlands and waterways in order to maintain structural stability. Therefore, polluted tailings basin water will flow into nearby manoomin waters. Staff have been working with Fond du Lac to monitor water downstream of the existing basin. UTAC applied for an exception from the wild rice water sulfate standard of 10 mg/L for one of the lakes downgradient of the existing basin because sulfate levels from its existing tailings basin exceed state water standards. That application was rejected by the state. Staff are investigating the availability of water quality data for the other lakes that surround the existing tailings basin and have asked UTAC for their data. However, that data either does not exist or UTAC is unwilling to release it. Staff plan to access the manoomin lakes and gather samples in 2026. Tribal staff have strenuously objected to construction of the expanded tailings basin, but the state refuses to halt the construction and wants to address the water quality issue in coming years. Unfortunately, at that point the basin will be constructed and highly mineralized effluent will be difficult to control.

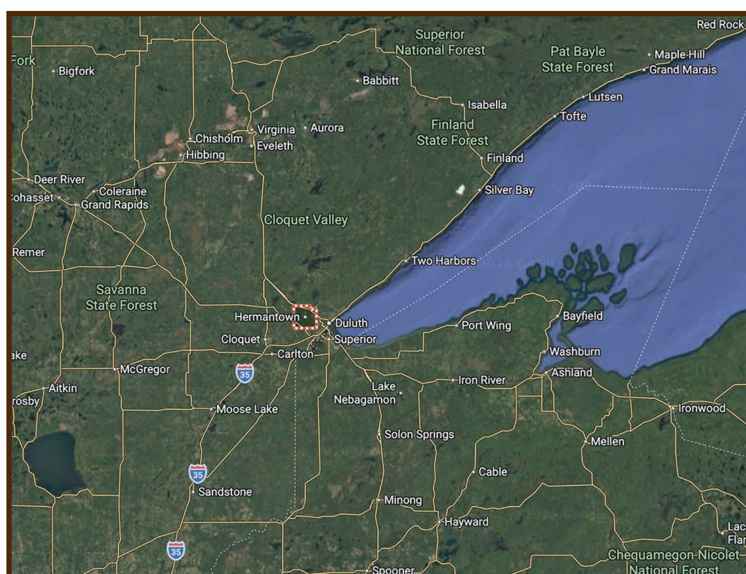
Cleveland-Cliffs Northshore Mine and Silver Bay Tailings Basin: The company's proposed tailings basin expansion at Milepost 7 near Silver Bay was permitted by state and federal agencies. Details are available at: *dnr.state.mn.us/input/environmentalreview/mile-post-7-tailings-basin-project.html*. The state decided that no Environmental Impact Statement was needed for the expansion, but a court reversed that decision in 2025. Therefore, there will be an EIS developed for the project in the next year or two. The expanded tailings basin is needed because the mine pit, which is south of Babbitt, is being expanded and deepened. That pit currently discharges polluted mine pit water to Birch Lake.

Polymet & Teck Merger: NewRange Copper Nickel was formed by the merger of Polymet Mining and Teck Resources. This places an approximately 12-mile-long deposit under single ownership. That deposit is just south of Cleveland-Cliffs' Northshore iron mine pit and underlies the 100 Mile Swamp. It has been proposed as a very large open pit mine. Tribal staff have been reviewing and commenting on the Polymet portion of that deposit, called Northmet, for almost 20 years. Currently, permitting for mining of the Northmet deposit is held up by multiple court cases on wetland and water quality permits and a state proceeding related to tailings disposal. GLIFWC staff continue to be involved in assisting the Fond du Lac Band in characterizing risks to tribal resources from this project. Recently there has been very little activity on this project and the state has delayed review of the Permit to Mine for NewRange (Polymet) until it receives additional information from the applicant. The company has suggested it will submit updated mining plans in 2026.

Data center proposal lands in 1854 Ceded Territory

Developers and the City of Hermantown, Minn have struck a deal to site a "hyperscale" data processing structure covering up to 1.8 million square feet in the highlands above Lake Superior. Located about a dozen miles north of the Fond du Lac Band Ojibwe Reservation, the project has generated considerable pushback from area residents concerned about water usage, pollution, noise, and energy consumption.

Largely concentrated near large urban areas, data centers are massive buildings that occupy a substantial footprint on the landscape. The sprawling structures, which require vast amounts of water, support cloud computing and artificial intelligence processing.



Just southeast of Duluth, Minn. the City of Hermantown is approximately 10 miles from Gichigami (Google Maps photo)

Tensions have escalated since reports in October revealed a number of St. Louis County Commissioners signed a non-disclosure agreement for the then-unnamed Fortune 500 company dubbed, "Project Loon."

On April 29, 2026, the local nonprofit group, Stop the Hermantown Data Center filed a complaint against the city alleging officials violated state laws and public processes when they altered the city's long term comprehensive planning document to accommodate the project in October of 2025.

The council's most recent action delayed the proposed agreements that include a tax incentive in the tens of millions of dollars to entice Google to build, whose parent company is reportedly worth nearly 5 trillion dollars. **—COR**

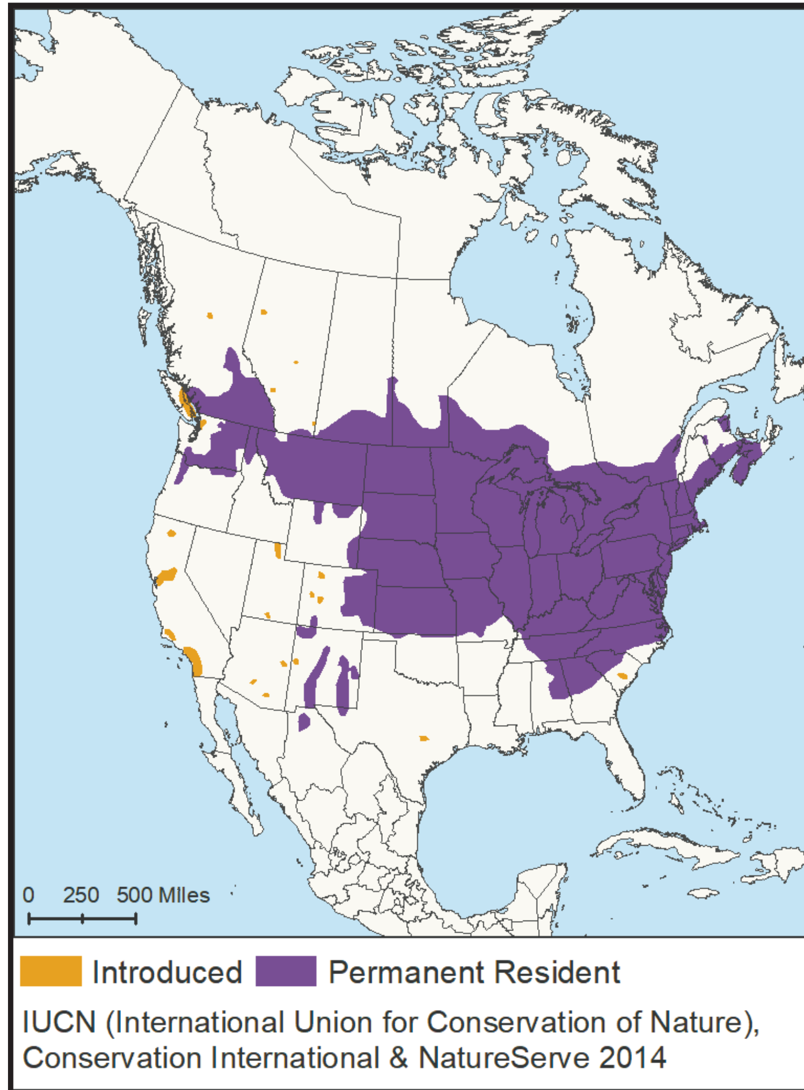
Miskwaadesi—Painted Turtle Profile

While some climate impacts may benefit miskwaadesiwag (painted turtles), like warmer winters and longer, hotter summers, they are very sensitive to many actions humans take in the face of a changing climate. As more people move into the Ceded Territories to enjoy lovely summers and escape hotter climates elsewhere, more infrastructure is built to support those humans.

Miskwaadesiwag—who need shallow, slow-moving water, muddy lake bottoms to hibernate in, and sandy shores to lay their eggs—face habitat fragmentation and destruction, physical barriers, and competition with people for prime shoreline access. Roads are especially difficult for painted turtles to navigate as they can change water flow, block or divert pathways from hibernation habitats to egg-laying areas, and be treacherous for slow crawlers trying to dodge big, fast vehicles.

This spring and summer, remember to slow down and keep an eye out for our relative miskwaadesi! **—I Alexander**

Eastern painted turtle



Range map of miskwaadesi

Miskwaadesi lives in shallow water habitats with slow-moving water, such as ponds, lakes, marshes, and creeks. It uses sites that have soft or muddy bottoms, basking sites, and dense aquatic vegetation. Miskwaadesi eats aquatic vegetation, insects, crustaceans, and fish. During the day, it can often be seen basking on logs or rocks for warmth. In the winter, miskwaadesi hibernates in the mucky bottom. Eggs are laid on land in soft sandy soil in the spring.

Miskwaadesi, like other turtles, has low reproductive success due to high levels of egg predation, but females live long lives (there are reports of one individual surviving to 55 years) and produce large clutches (4-10 eggs). The western painted turtle is the more abundant of the two subspecies found in the Ceded Territories, although the midland painted turtle is also found in the region. Habitat loss and road crossings are the two biggest threats to miskwaadesi.

Miskwaadesi wasn't spoken of in interviews as much as other beings, but it was mentioned as a culturally significant being to the Ojibwe people. Miskwaadesi was a major food source for the Ojibwe for many years but is rarely eaten today. Today, the shell is commonly used for rattles and shields for both ceremonial and craft purposes. There are numerous stories involving turtles, one of which is of great importance to the Ojibwe people and tells of the creation story in which earth was placed on the back of a turtle to create Turtle Island, also known as North America. The Ojibwe follow a lunar calendar system which references thirteen moons on the turtle's back.

Summary of climate threats

Miskwaadesi was in the 50th percentile relative to other crawlers and in the 43rd percentile relative to other beings in the vulnerability assessment. Miskwaadesi may be vulnerable to climate change in many ways, including natural and anthropogenic barriers, limited dispersal, increased disturbances, and an increase in pathogens and predators. Temperature directly affects the sex of miskwaadesi offspring; warmer temperatures mean more females will hatch from nests. In the Ceded Territories, this may have a positive effect on the miskwaadesi population.

Some stories featuring miskwaadesi tell of how makwa (bear) came to have a back with a hump in it. Miskwaadesi fed what was said to be miinan (blueberries) to makwa. Makwa then asked where the miinan were and miskwaadesi told him that they were up over the hill. Makwa realized they weren't really miinan and wrestled with miskwaadesi and killed him. Eventually miskwaadesi came back to life and wrestled with makwa, breaking makwa's back and killing him. It is said from that moment on, all makwag have humps on their backs.

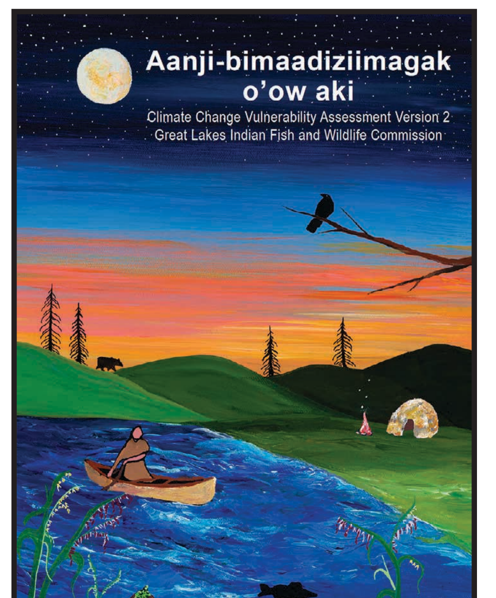
Western painted turtle

Factors that increase the vulnerability of miskwaadesi to climate change:

- **N/SI** Natural barriers: Lake Superior is a barrier to the north of the Ceded Territories that would limit miskwaadesi northward movement.
- **SI** Anthropogenic barriers: Roads and railroads are barriers to miskwaadesi movement. Many individuals are killed by vehicles when attempting to cross roads (often to lay eggs in the spring), and females tend to move farther than males and are therefore more prone to road mortality. Farm equipment can be harmful to miskwaadesi attempting to cross agricultural fields.
- **SI** Dispersal: Although miskwaadesi is capable of dispersal, it is a slow disperser. It also hides when threatened by vehicles and other potential threats, slowing down dispersal. Some literature questions the ability of miskwaadesi to disperse to its preferred habitat as the climate changes.
- **N/SI** Disturbance regime: Extreme precipitation events can wash out or erode miskwaadesi nests or prevent them from drying, which can reduce hatching rates.
- **SI** Pathogens or natural enemies: Unknown and known fungal and/or bacterial pathogens such as herpesvirus and ranavirus could proliferate in warming climates. These viruses can increase stress, compromise immune systems, and potentially lead to range-wide or isolated declines in population.

Legend

Code	Category	Description
GI	Greatly Increase	This factor greatly increases vulnerability
I/GI	Increase/Greatly Increase	This factor may increase or greatly increase vulnerability
I	Increase	This factor increases vulnerability
SI/I	Somewhat Increase/Increase	This factor may somewhat increase or increase vulnerability
SI	Somewhat Increase	This factor somewhat increases vulnerability
N/SI	Neutral/Somewhat Increase	This factor may not increase or may somewhat increase vulnerability



Learn more about Miskwaadesi and other vulnerable beings in *Aanji-bimaadiziimagak o'ow aki, GLIFWC Climate Change Vulnerability Assessment Version 2*

Activity heats up across the summer land, water, and sky

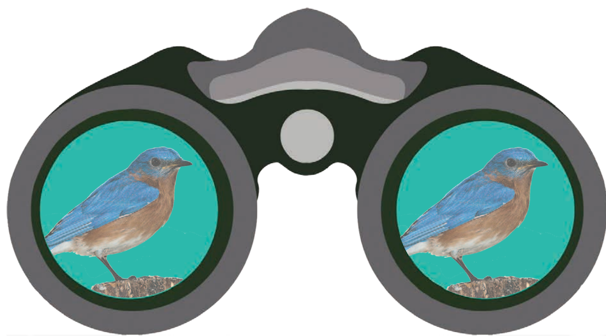
It's niibin, and so many things are happening in the outdoors. We want your help recording seasonal changes in the Ceded Territories!

Did you notice in ziigwan when you saw the first opichi (robin), or when the bagwaji'zhigaagawanzhiig (leeks) popped up from under the snow? In niibin, you may notice when you see miskwaadesiwag (painted turtles) laying eggs, see the first ripe miin (blueberry), or experience the temperature going up to 100 degrees.

GLIFWC Climate Change staff are interested in those seasonal observations from across the Ceded Territories of Minnesota, Wisconsin, and Michigan! Phenology is the timing of these seasonal events; observations from all of you can help us track those changes. To submit observations, fill out and mail the flyer printed in this issue of the Maz or submit observations at glifwc.org/phenology.calendar. Teachers, encourage your classrooms to get outside and record observations!

Get awarded for your keen eye. Prizes for each category will be awarded and mailed in January of next year.

Happy niibin, and happy observing!



2026 phenology competition

Submit your observations to win prizes!

Submissions due December 31st, 2026

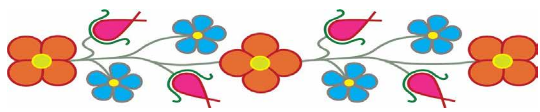
This year the GLIFWC Climate Change Phenology Team is hosting another competition! Submit your observations for the opportunity to win prizes! Prize options include a notebook, shirt, reusable canvas bag, and/or a sticker set.

The prize categories are:

- Most Observations from a **Youth** Observer (must submit for all 4 seasons—find the winter-spring submission form in Biboon 2025-26)
- Most Observations from an **Adult** Observer (must submit for all 4 seasons—find the winter-spring submission form in Biboon 2025-26)
- Most Interesting or Unique Observation (one winner per season).

The GLIFWC Climate Change Team will judge the entries and winners and their observations will be featured in a future Mazina'igan article!

What are you observing in the Ceded Territories?
Ozhibii'an ezhiwebak noopiming.



PLACE STAMP HERE

Tape and stamp this form and return to GLIFWC by December 31, 2026. Make sure to include the information below:

Name:______________________________

Address:____________________________

____

Tribal affiliation (if any):______________

____

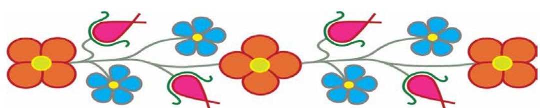
Phone number or email:________________

Are you a:

☐ Youth observer
☐ Adult observer

To submit observations via our online submission form, go to:

www.glifwc.org/phenology.calendar

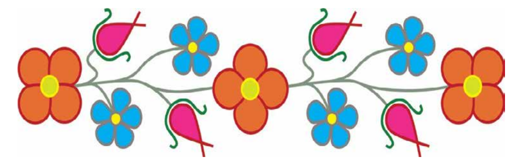


Please print return address clearly:

GLIFWC — Climate Change
72682 Maple Street
P.O. Box 9
Odanah, WI 54861

Aaniin ezhiwebak Anishinaabe-akiing?

Please Help GLIFWC Observe Seasonal Events in the Ceded Territories



GLIFWC is trying to understand how environmental changes could be affecting treaty resources.

Help us study phenological and seasonal changes by writing down your observations on this form. Keep it on your bulletin board or refrigerator. Share your knowledge by mailing it back to GLIFWC by December 31, 2026.

Of Ojibwemowin, traditional skills, and a culturally literate workforce

By Dawn White, Biwaanbanokwe, Treaty Resource Specialist

Boozhoo! While science and technology are a big part of GLIFWC staff time in the office and afield, incorporating indigenous knowledge into the workplace is also very important. To effectively stand for and protect Ojibwe lifeways, to best safeguard the beings (treaty resources) that are essential for member tribes as they exercise their reserved rights, GLIFWC staff need to understand Ojibwe culture. Our late and beloved Biological Services Division (BSD) Director Jonathan Gilbert frequently spoke of this.

Taking direction from the Voigt Intertribal Task Force and GLIFWC's Strategic Plan—and through a lens of shared leadership—Gilbert and BSD staff conceived Gekinoo'amaadiiwigamig, "the place where we teach each other" to support knowledge sharing, recognizing the best teacher is experience-through-participation. Gekinoo'amaadiiwigamig lessons range from harvesting zhigaagawanzh to elementary Ojibwemowin and are always available online through a staff portal.

As any humble elder will advise, Ojibwemowin (the Ojibwe language) is the heart of understanding Ojibwe culture and values. Those who seek to understand the lifeway should first know the language. BSD and other GLIFWC staff recently had the good fortune to begin a new weekly Ojibwemowin class led by Migizi Sullivan. The lessons began in late January with Migizi sharing traditional asemaa. Migizi says we need to not just read the words in our minds but use our voices to sound out the words, listening to ourselves and exercising our voices to building muscle memory is key: "you cannot learn a language without hearing it spoken," he said. By week two, Migizi had 15 staff singing the Vowel Song, and even the new-to-Ojibwe learners sounding out words confidently.

By week eight and nine we were singing the Sugar Bush Song, and our forthcoming goal is to comfortably introduce ourselves in the Ojibwe custom and understand and practice a simple prayer in the event we need to speak for the food or the asemaa. Migizi reminds us not to get too caught up in some of the vowel dropping details, the main point is to use the correct conjugations with the corresponding verb type.

Staff have commented on how Migizi's sharing of colorful stories from the elders he has studied under, and built relationships with, has helped us remember words, how to let the sounds make their way out and to laugh (the best medicine to relax nervous systems). And even though we may not understand the fluent language spoken, he encourages us to not be afraid or nervous (as is often the case) but be grateful when we hear Ojibwe language spoken so fluently.

The new classes this year are a ramped-up continuation of Michael Waaseghizig Price's lessons **(see Ojibwemowin, page 21)**

An original resource reserved in 19th Century treaties with the United States, the Ininaatig provides many benefits to Ojibwe people: food, shelter, medicine and more. Sugar maple roots—represented by GLIFWC member tribes—firmly secure tribal sovereignty within Ojibwe homelands where Anishinaabe bimaadiziwin binds communities together. (M. Swanson graphic)

What are you observing in the Ceded Territories? Ozhibii'an ezhiwebak noopiming.

Please record the date, location, and species (if applicable) for each observation. Return to GLIFWC by December 31, 2026. Miigwech!

Niibin / Summer — Date/Location

Dates/amounts of heavy rain events (>1" in 24 hrs) ____________

First monarch butterfly ____________

First firefly ____________

Deer seen with summer coat ____________

First birch bark harvested ____________

Flowers on berry plants (species) ____________

Berries ripe (species) ____________

Loons nesting ____________

Loon chicks ____________

Wild rice in floating leaf stage ____________

First wild rice ripe ____________

First wild rice harvested ____________

Other niibin observations: ____________

Dagwaagin / Fall — Date/Location

First grouse harvested ____________

First duck harvested ____________

Last ducks on the lake/river ____________

Last loons on lake ____________

Bucks in rut ____________

First polished deer antlers ____________

Deer have winter (gray) coat ____________

First deer harvested ____________

First princess pine harvested ____________

First apples harvested ____________

First cranberries harvested ____________

First leaves changing color (species) ____________

Peak fall color ____________

First leaves falling (specify tree species) ____________

Nighthawks migrating ____________

First fire in the woodstove ____________

Sandhill cranes flying south ____________

First frost ____________

First day temperature stays below freezing (32°F) ____________

First snowfall ____________

First snow that sticks ____________

Lake frozen solid (specify lake) ____________

Other dagwaagin observations: ____________

Ojibwemotaadiwag Anishinaabewakiing.
They speak Ojibwe to each other in Indian Country.

"Aaniin, Boozhoo! Aaniin ezhi-ayaayeg? Gaye niin, nindashwii. Ashwiiwag na? Gii-ziigwan. Idash noongom niibin. Aandi waa-izhaayan omaa? Aandi waa-izhaawaad imaa? Niminwendam, niibing omaa Akiing. Mawinzo nimaamaa. Mawinzodaa! Niwii-pagiz zaaga'iganing! Bagizodaa! Gego gashkaasoken! Anishinaabemodaa! Ojibwemodaa! Anishinaabekaa! Aaniin ezhi-ayaayeg? Mii'iw."

"Greetings, Hello! How are you all? Also me, I am prepared/ready. Are they prepared/ready? It was spring. And now it is summer. Where will-go you here? Where will-go they there? I am happy as it is summer here on Earth. S/he picks berries, my mom. Let's all pick berries! I want to go swimming at the lake. Let's all go swimming! Don't get sunburn! Let's all speak Anishinaabeg language! Let's all speak Ojibwe language! There's a lot of people. How are you all? That's all."

Bezhig—1

OJIBWEMOWIN (Ojibwe Language)

Double vowel system of writing Ojibwemowin.
—Long vowels: AA, E, II, OO
W<u>aa</u>booz—as in f<u>a</u>ther
Miigw<u>e</u>ch—as in j<u>a</u>y
Aan<u>ii</u>n—as in s<u>ee</u>n
M<u>oo</u>z—as in m<u>oo</u>n

—Short Vowels: A, I, O
D<u>a</u>sh—as in <u>a</u>bout
<u>I</u>ngiw—as in t<u>i</u>n
Niizh<u>o</u>—as in <u>o</u>nly

—A glottal stop is a voiceless hesitation as in A'aw.

—Respectfully enlist an elder for help in pronunciation and dialect differences.

Gabeshi. S/he camps.
Gabeshiwin—Campsite
Ziigwang: Iskigamizigan. When it's spring: Sugar camp.
Niminwendam gabeshiyaang. I am happy/glad when we camp.
Niibing, ginada-gikendaan.—As it is summer, seek to know/learn how.
Ziigwang/Niibing maniwiigwaasewag. —Spring/summer they gather birch bark.
Eya'! Gidandawawinz. Nimawinz.—Yes! You look for berries to pick. I pick berries.
Ezigaa(g)—Wood tick(s). Odezigaami a'aw animosh.—S/he has woodticks, that dog.
Zagime(g). Zagimedaa. Zazagimekaamagad! —Mosquito(s). There are many. TOO many!

Niizh—2

Circle the 10 underlined Ojibwe words in the letter maze. (Translations below)

A. Nimbimose gitigaaning. Ningitigaadaanan <u>miinikaanan</u>.
B. <u>Mandaamin</u>, mashkodesiminag idash <u>ogosimaan</u>.
C. Nimbiigwakamigibidoon <u>akiing</u>. Ningitigaadaan.
D. Niizho-nishiimeyag <u>idash</u> <u>niin</u> ningitigaadaamin <u>omaa</u> dash <u>imaa</u>.
E. <u>Ninaadoobii</u>. Nibi daga. Eya'!
F. Apegish waa-gimiwang noongom.
G. Wah! Okogiwag.
H. Wah! <u>Gimiwan</u>!
Mii'iw!

I K O O Z
N D M I G W
I D A S H O I
N Y A S E M S G
A ' W I H A D I J
A J M O I N A M M E
D E Z O T D ' I G A S
O P I H K A A W N K A A
O E B A D A Z A A I M N
B W A O G M H N B I I J
I M I I N I K A A N A N
I Y G M T N S W E G O M

Niswi—3

IKIDOWIN ODAMINOWIN (word play)

DOWN:
1. That, -animate
2. Dog
4. I wish/hope
5. On earth
6. There
8. Where

ACROSS:
3. Let's all pick berries!
7. S/he camps.
9. Question marker

Online Resources
ojibwe.lib.umn.edu
ojibwe.net
glifwc.org
glifwc-inwe.com

Niiwin—4

Eya'! Giigooyikedaa!—Yes! Let's all go fishing!
Gabeshidaa!—Let's all go caming!
Noongom.—Today.

⇨Biidoon i'iw jiimaan idash abwiin! Biidoon i'iw babagiwayaanegamig gaye! Nindayaan waasigani-bimide-gizhaa-biibikizigan. Iidog ina nindabwe? Eya, naadinisen! Gaye ozagaakwaajimeg Idash mooseg. Mii'iw! Howah!

Bring it that canoe+paddles! Bring it that tent also! I've a propane stove. Maybe I cook over a fire? Yes, go get firewood! Also leeches & worms. That's it! Wow!

Ojibwemodaa! -Let's all speak Ojibwe!

Asaawe(g)
Ogaa(wag)
Bapakine(g)
Omakakii(g)
Aandeg(wag)

1. ________________ gwaashkwaniwag.
2. ____________ ninzegi'igog!
3. Inashke! Nimbakazhaawe noongom, ____________.
4. Waabamag imaa____________, waasikozi.
5. Nindede ______________. Gaye i'iw jiimaan.
6. Gabe-niibin, apegish menoseyeg gabeshiwinaning.

©2026 Shelly Ceglar

Translations:

<u>Niizh—2</u> **A.** I walk to the garden. I plant them seeds. **B.** Corn, beans, and squash. **C.** I break up the earth/plow. I plant it. **D.** My two sisters and I we plant them here and there. **E.** I get the water. Water please. Yes! **F.** I hope it will rain now. **G.** Wow! They grow in a bunch. **H.** Wow, it is raining!
<u>Niswi—3</u> **Down:** 1. A'aw 2. Animosh 4. Apegish 5. Akiing 6. Imaa 8. Aandi **Across:** 3. Mawinzodaa! 7. Gabeshi 9. Ina
<u>Niiwin—4</u> 1. <u>Frogs</u>, they jump. (<u>Omakakiig</u>) 2. <u>Grasshoppers</u> they scare me! (<u>Bapakineg</u>). 3. Look! I am cleaning fish here, <u>perch</u>. (<u>Asaawe</u>) 4. When I see him/her there, <u>crow</u>, s/he is shiny. (<u>Aandeg</u>) 5. My dad, he likes them <u>walleyes</u>. Also that boat. (<u>Ogaawag</u>). 6. All summer, I hope you all have good luck/happenings at the campsites.

There are various Ojibwe dialects; check for correct usage in your area. The grammar patterns may help a beginner voice inanimate and animate nouns and verbs correctly, as well as create questions and negate statements. Note that the English translation will lose its natural flow as in any world language translation. This may be reproduced for classroom use only. All other uses by author's written permission. Some spellings and translations from <u>The Concise Dictionary of Minnesota Ojibwe</u> by John D. Nichols and Earl Nyholm.
All inquiries can be made to **MAZINA'IGAN**, P.O. Box 9, Odanah, WI 54861 *pio@glifwc.org*.

Wiigwaasi-jiimaan?

Mitigo-jiimaan?

BIIWAABIKO-JIIMAAN?

DID YOU KNOW??

The oldest jiimaan ever found in the Great Lakes region is a 3000-year-old, 14.5-foot-long dug-out canoe pulled out of Lake Mendota in 2022.

It was found only a year after another 1000-year-old dugout was discovered in almost the same spot.

Both ancient mitigo-jiimaanan were found near an underwater shelf, where the lake suddenly becomes very deep.

One theory is that this may have been an ancient "marina" of sorts, where gete-anishinaabeg from all across the region canoed to and gathered with other tribes.

What kind of jiimaan do you paddle around in?

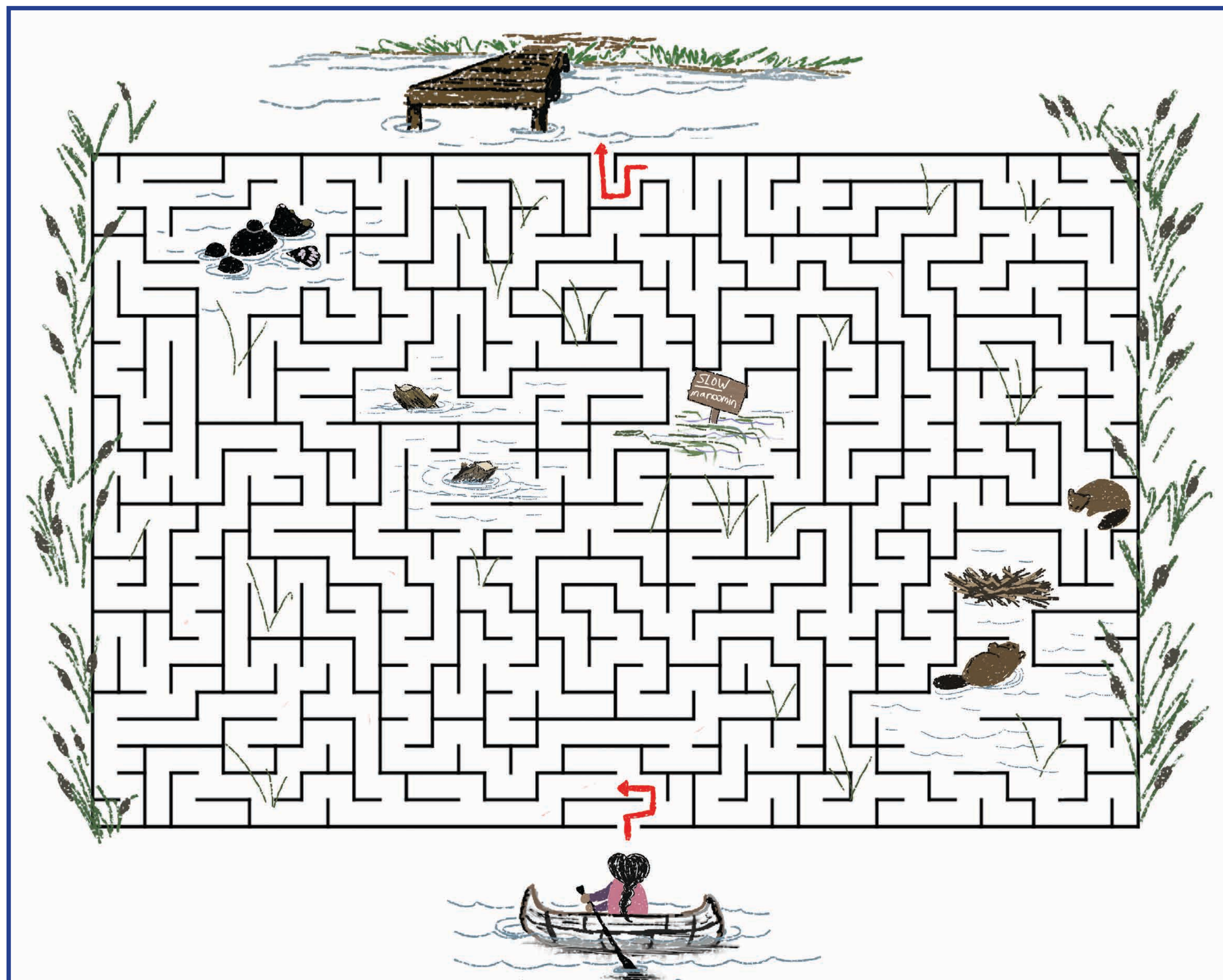
Lawrence Plucinski, Bad River THPO, (right) and Tamara Thomsen, Wisconsin Historical Society maritime archaeologist, clean the 3,000-year-old canoe beginning the preservation process.

Complete the maze!

Paddle your way through the river to reach your family's dock!

Avoid obstacles so you don't tip over or disturb anyone in the water.

See the solution on page 22!



Ojibwemowin

jiimaan(an)
—canoe(s)/boat(s)

abwi(in)
—paddle(s)

babaamishkaa
—s/he paddles around

Nitam nimbooz imaa jiimaaning awi-bagida'waayaang.
— I get in the front of the canoe when we set net.

Agaaming iwidi ningii'-onjikadaan bezhig nindabwi.
— I left one of my paddles across the lake.

Check out *ojibwe.lib.umn.edu* for more Ojibwemowin!

Non-local plants

(continued from page 7)

make the exposed skin of humans and animals hyper-sensitive to sunlight. This can result in mild to severe rashes, blistering, and skin discoloration that may last several months.

GLIFWC's control efforts are conducted with a goal of learning from and respecting these introduced non-local beings as we do our part to protect native ecosystems, treaty-protected resources, and biodiversity in the Ceded Territory. *—contact the author at (715) 682-6619 ext. 2166 or email tbartnick@glifwc.org for more information.*

View from Minn Hwy 65 Wayside at Sandy Lake

Great Lakes Indian Fish & Wildlife Commission

Mikwendaagoziwag

THE OJIBWE'S SANDY LAKE JOURNEY

This map shows the locations of some of the villages of the 19 Ojibwe Bands whose treaty annuities were paid at Sandy Lake in 1850. Today, these 19 Bands are succeeded by the 12 federally-recognized Bands whose present-day reservations also are shown. The Wisconsin and Upper Michigan Bands–who were required to come to Sandy Lake rather than go to La Pointe on Madeline Island for their treaty payments–traveled hundreds of miles. Some of the approximate distances and the likely canoe/foot routes involved were:

Red Cliff/La Pointe (Madeline Island) to Sandy Lake via Lake Superior, St. Louis River and Savanna Rivers/Savanna Portage 220 miles
Bad River to Sandy Lake via Lake Superior, St. Louis River and Savanna Rivers/Savanna Portage 250 miles
Lac du Flambeau to Sandy Lake via Chippewa River and route traveled from Lac Courte Oreilles 430 miles
Lac Courte Oreilles to Sandy Lake via Namekagon River, St. Croix River, Bois Brule River, Lake Superior, St. Louis River, and Savanna Rivers/Savanna Portage 260 miles
Lac Vieux Desert to Sandy Lake via Ontonagon River, Lake Superior, St. Louis River and Savanna Rivers/Savanna Portage 370 miles
Keweenaw Bay to Sandy Lake via Lake Superior, St. Louis River and Savanna Rivers/Savanna Portage 460 miles

ERECTED BY THE MINNESOTA HISTORICAL SOCIETY 2001

Wednesday July 29, 2026

- 9am Morning ceremony at the East Boat Landing
- 10:30am Canoe to the Recreational Area
- 12:00pm Ceremony & feast at the Memorial

They Are Remembered

Questions: jkrueger@glifwc.org
For map, directions, and additional information:
https://glifwc.org/about-us/calendar/mikwendaagoziwag-memorial

Roadless rule

(continued from page 5)

these impacts can be felt for generations. Subsistence systems are food systems that contribute to well-being and overall health.

Call for consultation & consensus

In a 2025 letter to the USFS acting director, GLIFWC noted the importance of initiating meaningful consultation with the tribes. To date, very minimal consultation or direct communication has happened with GLIFWC or its member tribes, which sidesteps the statutory and regulatory responsibilities that USFS has to consult with tribes.

GLIFWC Voigt Intertribal Task Force Chair and St. Croix Tribal Chair Conrad St. John has been vocal about the rule rescission. "As a harvester, it's important that we stand up for these critical environments. Our tribal communities do not have the luxury of moving, and these forested areas provide the sustenance that we need to continue our way of life."

Indeed, biodiversity could be negatively impacted with the construction of roads, deforestation, and logging initiatives. Many of these undeveloped USFS lands support old growth forest characteristics and mature forest ecosystems. Creating additional roads and infrastructure can bisect or fragment vital habitat and overall diminish habitat, especially in places that keystone species frequent, or areas that the Tribes, State, and collective partners have worked for decades to restore – much like the elk restoration initiative in the Chequamegon-Nicolet National Forest. Elk restoration work led to the reintroduction of 25 elk to the Chequamegon-Nicolet National Forest in 1995. Years of collaborative work and additional transplants have bolstered the population to nearly 400 elk which depend upon National Forest lands.

So, what can be done? First, the public should stay informed of the situation; folks should take inventory of USFS lands that could be impacted by this rule recission. Concerned community members can also contact your respective representatives and voice concerns. Community members can also submit comments to USFS about the proposed rule rescission.

Proposed road building in National Forests is a threat to sensitive habitats that are important for biodiversity, Indigenous gathering, and ceremonial harvesting. (CO Rasmussen photo)

Ziigwang miziseg

(continued from page 3)

would prevent flocks from taking hold. After Biboon 2013-14—an historically severe winter—it was clear that miziseg were hearty, highly adaptive, capable omnivores that could thrive in northern forests without the farm country benefits that help sustain southern flocks in Michigan, Wisconsin, and Minnesota.

The wild turkey spring season runs through May 25 in western Upper Michigan, to May 31 in the Minnesota 1837 Ceded Territory, while treaty hunters pursuing Wisconsin birds have until June 2. Tribal members need a 2026 small game license and spring turkey permit to hunt miziseg. All turkeys harvested must be registered. Turkey registration can be done online at *glifwc.nagfa.net/online/*, in the field by a GLIFWC or tribal warden, or in-person at a tribal registration station.

Registration must be completed by 5:00 pm on the 3rd working day after harvest. Successful hunters will need information from their small game license, county and unit of harvest, and sex and age of the turkey to register birds. See your local registration station for details or find information online at *glifwc.org* under the "Exercising Treaty Rights" tab. **—CO Rasmussen**

Ojibwemowin

(continued from page 18)

he began with staff in 2020. Prior to Waaseghizhig we had Wesley Ballinger facilitating a language table for us which some of us still utilize the materials he developed. One of our primary and original teachers, before I began at GLIFWC, was Dana Jackson. Dana worked to advance our efforts in building a language program that encouraged staff to learn, speak, and include Ojibwemowin in our work here at GLIFWC. Staff are grateful for the experience of different teaching styles over the years. We also appreciate the opportunity to experience in-person learning with such an experienced and well-versed instructor at the Odanah main office with Migizi.

Gibiminizha'imin!

facebook.com/GLIFWC

instagram.com/glifwc/

youtube.com/@glifwc

From supporting wild plants and fish to keeping the GLIFWC administrative gears moving forward, experienced staff earn widespread gratitude

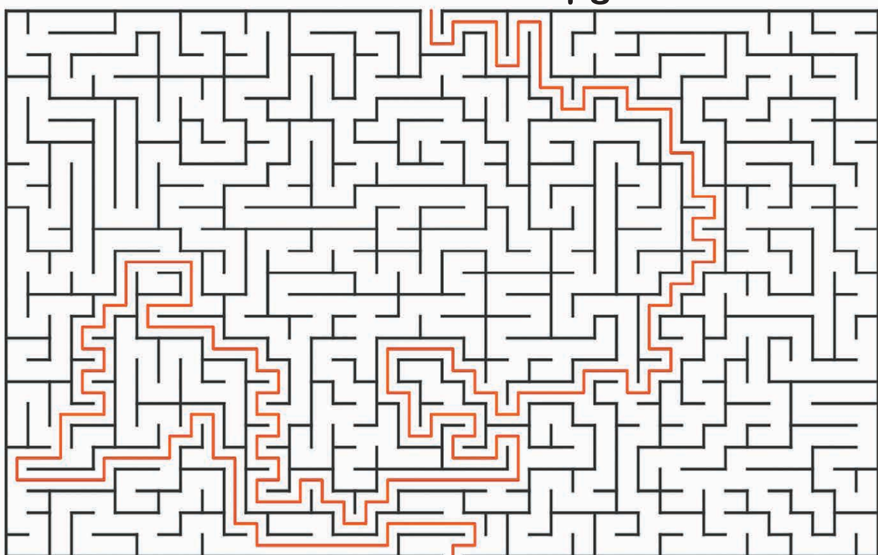
At the 2026 All Staff Day, a cross-section of GLIFWC employees including a public outreach specialist, PhD fishery biologists, a conservation warden and data manager were recognized on their five-year anniversaries at the Commission. PHOTO from left: Jenny Van Sickle (5 years), Aaron Shultz (10), Adam Ray (10), Steven Amsler (15), and Kia White (15).

Senior GLIFWC personnel were among those celebrated for decades of outstanding work on behalf of the Commission's 11 member tribes. PHOTO from left: Steve Garske (25), Jim Thannum (40), and Jenny Krueger Bear (30). Commensurate with the sum of half-decades served, GLIFWC administration distributed special miigwech gifts to each individual. (CO Rasmussen photos)

Niibin 2026 pow-wow schedule

- 33rd Annual Mille Lacs Band of Ojibwe Grand Celebration Pow-wow June 19-21, 2026, Hinckley, MN
- 43rd Annual Ode'imini-Giizis Strawberry Moon Pow-wow June 20-21, 2026, Mole Lake, WI
- St. Croix Casino Contest Pow-wow June 26-28, 2026, Turtle Lake, WI
- 35th Annual Honoring Our Veterans Pow-wow June 26-28, 2026, Bay Mills, MI
- 48th Annual Red Cliff Pow-wow July 3-5, 2026, Red Cliff, WI
- Bear River Annual Traditional Pow-wow July 10-12, Lac Du Flambeau, WI
- Fond Du Lac Veterans Pow-wow July 10-12, Sawyer, MN
- Honor the Earth Homecoming Celebration Pow-wow July 17-19, Lac Courte Oreilles, WI
- 46th Annual KBIC Maawanji'iding Pow-wow July 24-26, Baraga, MI
- 43rd Annual Traditional Getegitigaaning Pow-wow August 7-9, 2026, Lac Vieux Desert Reservation, Watersmeet, MI
- 45th Annual Bad River Manoomin Celebration Pow-wow August 14-16, 2026 Odanah, WI

Maze solution from pg 20



Great Lakes Indian Fish & Wildlife Commission
LAKE
CAMP
CAMP ONJI-AKIING
NATURAL RESOURCE SUMMER CAMP FOR YOUTH AGES 10-14 AND JUNIOR COUNSELORS 14-18
FISHING, CANOEING, ARCHERY, NATURE, ROPES COURSE, CRAFTS, GAMES, NEW FRIENDS AND FUN!!!!!
AUGUST 3 - 7, 2026
CAMP NESBIT, WATTON, MI
APPLICATIONS ON GLIFWC.ORG
COMPLETED APP DUE BY JULY 1, 2026
QUESTIONS:
JILL MILLER 715-292-9638
OR EMAIL:
ConservationOutreach@GLIFWC.org

Rusty crayfish boil

(continued from page 11)

concerns about the impacts rusty crayfish are having on manoomin beds, where their feeding activity may disrupt this culturally and ecologically vital plant.

Rusty crayfish have few natural controls. Even bass, which are typically large predators of crayfish, struggle to keep populations in check because of their tough shells and aggressive nature. A single female can carry up to 200 fertilized eggs under her tail, meaning it only takes one to start a new population. Once they're established, there is no effective way to eliminate or control populations.

Rusty crayfish are easy to identify by the distinctive red or rust-colored spots on the sides of their carapace, just behind the claws. These markings look as if someone with red paint on their thumb and index finger had picked up the crayfish right behind its pincers, leaving behind two rust-colored fingerprints. The markings are almost exclusively found on the rusty crayfish and not the indigenous crayfish, so there is very little chance of mistaking the two.

The adage, "if you can't beat them, eat them" is a method gaining some traction in the Ceded Territory. One of the best ways to deal with rusty crayfish is the same way we caught them as kids: at night, with a headlamp and dip net. If you know of a lake or river where they're present, this method works great, and it's a lot of fun.

A Rusty Crayfish Boil is more than just a good time; it's a way to connect with tradition, enjoy local waters, and help protect native ecosystems. By turning an invasive species, or non-local being into a meal, we can make a small but meaningful difference; one boil at a time.

Lastly, let's work together and prevent these non-local beings from spreading to other water bodies. Remember to follow the Aquatic Invasive Species Watercraft Inspection Guidelines: **Inspect, Remove, Drain, and Never Move all water, aquatic plants or animals from your watercraft.**

Sweet homecoming for Ojibwe educator, leader

After two seasons working as director of Madeline Island Museum, Mike Wiggins is heading back shoreside to engage tribal communities in harvesting and processing maple sap. Wiggins, a lifelong harvester, educator, and former chairman of the Bad River Band of Lake Superior Ojibwe earned his bachelor's degree in criminal justice from UW-Superior in 1992. A former GLIFWC conservation field warden, Wiggins is re-joining the organization as project specialist for the Anishinaabe-zhiiwaagamizigan (Maple syrup) Project funded through the Administration for Native Americans.

As project specialist he's working with tribal elders to develop a maple sap harvesting and processing curriculum, integrating the fundamentals of modern practices with traditional practices, as well as the use and maintenance of harvesting and processing equipment.

Wiggins is also teaming up with leaders of tribal community organizations including food sovereignty, natural resources and conservation departments, cultural programs, and youth programs to provide sap harvesting and processing training workshops for community members and beginner harvesters selected by tribal leadership through an application process. Additionally the on-reservation visits include ServSafe food safety training.

"GLIFWC is like family. I'm happy to be back," said Wiggins. **—GLIFWC Staff**

Ininaatig workshops in your neighborhood

Beginning this summer Project Specialist Mike Wiggins is taking the Anishinaabe-zhiiwaagamizigan (Maple Syrup) Project on the road, bringing sugarbush know-how to all of GLIFWC's 11 member tribe homelands. Workshops include food safety training and basic kits for maple syrup production, featuring tools for harvesting and testing zhiiwaagamizigan. Keep an eye on GLIFWC social media for the Traditional Maple Harvester Training Workshop event in your community or contact Wiggins at *mwiggins@glifwc.org*

Familiar face takes the reins as Intergovernmental Affairs Director

Beginning in April, James H. Schlender Jr. assumed the top spot in the GLIFWC Division of Intergovernmental Affairs as director. Schlender brings a wealth of experience and a deep commitment to the rights and sovereignty of Ojibwe tribes.

COR photo

Schlender is a veteran of the United States Marine Corps, an enrolled member of the Lac Courte Oreilles Band and has taught classes in Federal Indian Law, Tribal Government, and U.S. History at the Lac Courte Oreilles Ojibwe University. He also served as the Chief Judge for the Lac Courte Oreilles Tribal Court and Court Commissioner for Sawyer County, Wis.

Schlender earned his undergraduate degree in Political Science from UW-Madison before going on to graduate with his JD from the University of Wisconsin Law School in 2010.

With an extensive background as a tribal attorney for various Ojibwe tribes, Schlender has demonstrated dedication to advocating for tribal sovereignty. "Treaty rights and resource management are keys to the survival and success for tribal nations," he said.

His role as the DIA director focuses on legal challenges facing tribal nations, developing and maintaining relationships with state, federal, and local agencies, and advocating for sustainable management of natural resources for the treaty-protected hunting, fishing, and gathering rights of GLIFWC member tribes.

Schlender's dedication to preserving cultural revitalization of Ojibwe sovereignty is vital in protecting against the continual environmental and political challenges facing GLIFWC tribes.

Residing on the Lac Courte Oreilles reservation, he is deeply rooted in tribal communities. "I feel the strongest challenge for tribes is to ensure traditional harvest practices are preserved and adapted to the current conditions, while also ensuring that it remains sustainable for the future generations," he said.

—J Van Sickle

Walleye in our Hands

The Midwest **is defined by its deep-rooted walleye fishing traditions and shared love for our natural waterways, but many walleye populations are currently declining at a concerning rate due to environmental pressures and human impacts.**

Anglers, guides, and agencies must unite to champion practices that increase the survival of walleye released today so we can catch them tomorrow.

Here's how:

TERMINAL TACKLE

Heavily weighted jigs and Artificial baits reduce deep hooking and mortality

PRO TIP: Barbless hooks (or pinched barbs) reduce handling time and make hooks easier to remove

ENVIRONMENTAL CONDITIONS

Fishing during cooler (<68°) seasons and times of day helps reduce mortality

Target warmwater fish during the hottest months

Fishing at depths less than 25ft helps avoid *barotrauma* (bulging eyes, bloated abdomen) and increases survival

HANDLING

HANDLE WITH CARE

Minimize fight time by using appropriately sized rods and line — consult a local bait shop

Keep fish wet — minimizing *air exposure* increases survival

Use rubber landing nets to reduce injuries and handling time

do not place fingers in gills

use clean, wet hands

support body weight

Avoid lip gripping devices

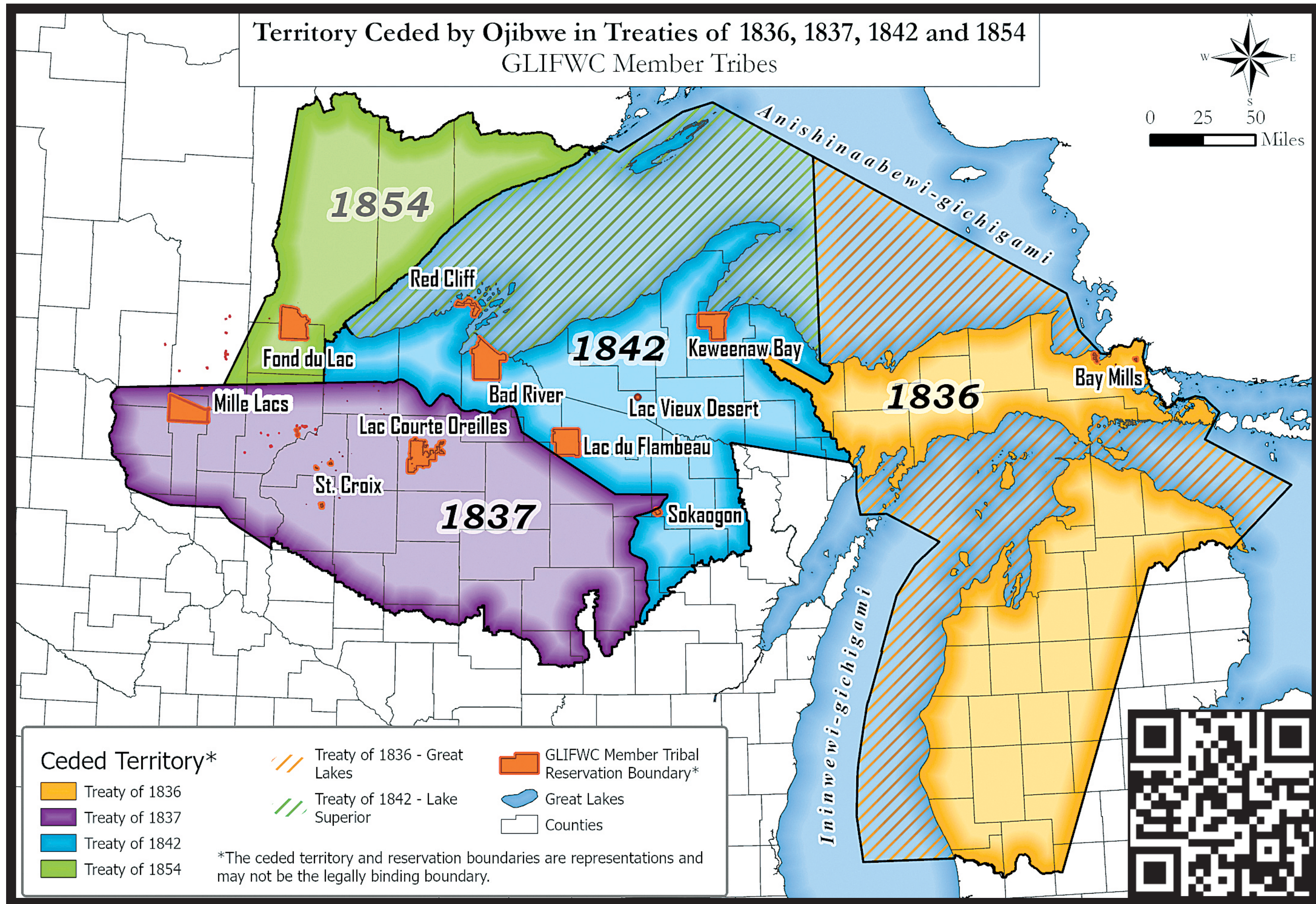
Cut the line and release fish immediately if deeply hooked

Illustrated by Bri Dostie

KEEP FISH WET · USGS · University of Illinois · Department of Natural Resources

RETURN ADDRESS:
GLIFWC
P.O. BOX 9
ODANAH, WI 54861

CHANGE SERVICE REQUESTED



Mikinaak and miskwaadesi are on the go in search of nesting sites and food—give 'em a brake!

Roads near rivers, lakes and wetland experience lots of turtle traffic.

Safety: signal properly and use your hazard lights if you pull off the highway to allow a turtle to cross.

CAUTION

Mazina'igan

A Chronicle of the Lake Superior Ojibwe

NIIBIN 2026

INSIDE:
Our fishing future
Mining corporations dig in
Off-rez opportunity awaits