

# Mazina'igan

A Chronicle of the Lake Superior Ojibwe

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Winter 2019/2020

## Copper mining on the Keweenaw: an environmental reckoning

### Tour brings clarity for stakeholders, feds

By Charlie Otto Rasmussen, Editor

for more on Buffalo Reef, see pp. 12-13

Gay, Mich.—Along the eastern Keweenaw Peninsula, a rolling gray sandscape rises above a four-mile stretch of Lake Superior shoreline. Apart from widely scattered specks of green, it is a dead zone that extends far into the water,



Evelyn Ravindran talked to EPA's Chris Korleski about the importance of water and healthy resources to Ojibwe people during a tour of Keweenaw stamp sand waste. Ravindran is director of the Keweenaw Bay Indian Community Natural Resources Department. (CO Rasmussen photo)

covering the lakebed, creeping into the premiere spawning grounds of Buffalo Reef.

"You can look at photographs, you can look at really accurate maps, but without standing here, without being on top of those piles, I wouldn't have a feeling for the magnitude here," said Chris Korleski, US Environmental Protection Agency, on August 14.

Korleski, director of EPA's Great Lakes National Program Office, toured the century-old former copper processing site—and affected downshore areas—with representatives from US Army Corps of Engineers, Michigan Technological University, Keweenaw Bay Indian Community (KBIC), Michigan Department of Natural Resources, GLIFWC, and project contractor Petersen Companies. Mill operators dumped a staggering 794 billion pounds of pulverized rock waste known as stamp sands into Lake Superior for more than 30 years. Once separated from native rock by mechanical stamping, copper ore could be refined in smelters and fashioned into end products like wiring, roofing and plumbing.

Through a coordinated effort from project stakeholders, work is now underway to reign-in stamp sands at Traverse Bay, including Grand Traverse Harbor, a designated Harbor of Refuge that became inundated with mining waste just in the last decade from wind and lake currents. In addition to a \$3 million contribution from the state of Michigan, the EPA (see Stamp sands, page 7)

## Bumper crop accelerates paper birch, black ash miinikaan collections

By Climate Change Program Staff

For the first time since the Climate Change Program began in 2015, baapaagimaak (black ash) in northern Wisconsin produced a bumper crop of miinikaanan (seeds).

Baapaagimaak is known to produce a large amount of miinikaanan only every five to eight (or more) years. For the past four years, staff have found a handful of baapaagimaakoog scattered throughout the area with a small amount of miinikaanan only visible with binoculars and a trained eye.

This year, the long narrow miinikaanan with papery wings formed large clusters easily visible baapaagimaakoog along roadsides even when driving by at 55 miles an hour.

The emerald ash borer, a non-local insect that originated in Asia, is a major threat to this culturally important being. Climate change is also negatively impacting baapaagimaak; drying conditions are expected to alter the high-moisture areas in which baapaagimaak thrives with its shallow root system.

In an effort to help ensure baapaagimaak is available to future generations, GLIFWC climate change staff started a seed bank pilot project, first collecting miinikaanan in 2017. This year GLIFWC climate change staff were busy (see A bumper crop of miinikaanan, page 16)



Hannah Panci sorted wiigwaasaatig miinikaanan through soil sieves to prepare them for long-term storage. (COR photo)


## Register your waawaashkeshi

☒ Online: [glifwc.nagfa.net/online](http://glifwc.nagfa.net/online)

☒ Phone: 1-844-234-5439



☒ on-reservation registration station where hunters can submit deer for CWD testing

NAGFA ID \_\_\_\_\_  
 STAMP# \_\_\_\_\_  
 HARVEST REPORT# \_\_\_\_\_

carcass tags are available when leaving a deer unattended  
 See page 5 for more.

## Bandolier bags



Kid's Page



# Tribes ID keystone resources, model food codes on the horizon

By *Charlie Otto Rasmussen*  
Editor

Known affectionately as the Anishinaabe grocery store, the wilds of the Ceded Territory has provided food for native families across the centuries. In the plants and animals of the western Great Lakes region, Ojibwe people find healthy sustenance and a means of

cultural expression central to the native lifeway.

“My grandpa’s preference was for beaver and porcupine; the quills were used in crafts,” said Roger LaBine at a GLIFWC-sponsored community roundtable at Lac Vieux Desert Reservation. “Whenever my grandparents wanted to store something, like beaver, they would fully cook it first and then freeze what they didn’t need.”

The LaBines and other families employ time-tested practices for handling an extensive catalog of traditional foods, or miijim in Ojibwemowin, for home use and ceremonial occasions. But when it comes to serving this same cuisine to a wider consumer base—like tribal nutrition programs or community events—federal standards act as a roadblock, preventing staples like venison, rabbit, and whitefish from making it to the table.

At issue, tribal food service enterprises that accept federal funding must also adhere to federal regulations. In Ojibwe Country, harvest-to-table can be a matter of miles, and federal food processing regulations that do not consider foods harvested in the wild are problematic.

“The demand for traditional foods is strong in Ojibwe communities,” said LaTisha Coffin, project coordinator for GLIFWC. “But something as simple as donating deer meat to a tribal nutrition program can face a number of regulatory barriers.”

While some wild foods have been incorporated into federal nutrition pro-



*Waabooz (showshoe hare). (D. Robertson photo [CC BY-SA 3.0])*

grams, the process is uneven. To address gaps in food safety regulations, GLIFWC is developing a model food code for traditional foods that each member band could adopt and tailor to meet its unique needs. These codes will include science-backed guidelines for selected resources like ogaawag and manoomin. Ultimately, Coffin said, each Ojibwe nation will need to determine the right measure of oversight to encourage the safe flow of valued miijim for elders and children.

(see *Model food code*, page 17)



*At Lac Vieux Desert in August, GLIFWC project staff discuss natural resources and the how-tos of developing codes for wild foods important to Ojibwe people. (CO Rasmussen photo)*

Essential Ojibwemowin

*Miijim (me-jum)—food*

# Dock expansion, processing facility positions Red Cliff for bright fishing future

By *Charlie Otto Rasmussen*, Editor

**Red Cliff, Wis.**—While recent federal grant awards to 85 tribes steers significant financing toward much-needed housing in American Indian communities, one GLIFWC member band received funds to help strengthen a venerated profession—commercial fishing on the Great Lakes. The US Department of Housing and Urban Development (HUD) endowed \$543,000 to the Red Cliff Band to renovate and expand their commercial dock and access road.

“We’re now going to be able to better exercise our treaty rights, and in turn, help our commercial fishermen better take care of families in this community,” said Red Cliff Chairman Richard Peterson.

Financial support from HUD is funding the expansion of Red Cliff’s commercial dock on the Lake Superior shoreline at Buffalo Bay. HUD Midwest Regional Administrator Joseph Galvin and a host of dignitaries traveled to Red Cliff August 9 to formally announce the distribution of Indian Community Development Block Grant (ICDBG) funds. The ICDBG program was established more than 40 years ago to assist tribes and native Alaskan communities in local infrastructure projects.

The dock renovation is the first phase of a broader initiative to develop a fully realized fishing enterprise. Just uphill from the new dock, the tribe is planning construction of a new fish processing facility.

“When this is all finished, a processing plant will be located here and it will give the American people the knowledge and understanding of how hard this tribe works,” Galvin said. “You just give them the opportunity to better their lives and they will do it.”

A new dock and fish processing center improves Red Cliff Band’s position in a market with thin profit margins. Tribal members fishing Wisconsin’s Gichigami waters have historically sold their catch—including whitefish, herring, and lake trout—to area buyers at wholesale prices. Once the commercial fishing infrastructure is in place, individual commercial fishers should see better prices for their catch.

Chairman Peterson said tribal fisherman will have more opportunities to sell fish directly to markets, and economic opportunities will extend into the community

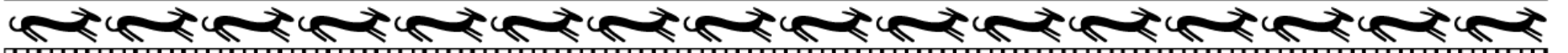


*On a bluebird day in August, tribal, state and federal officials gathered along the Lake Superior waterfront for an announcement on a commercial fishing dock expansion at Buffalo Bay. From right Frank Frassetto, Rural Development State director; HUD Midwest Regional Administrator Joseph Galvin; GLIFWC Executive Administrator Michael Isham; Red Cliff Band Chairman Richard Peterson; US Senator Tammy Baldwin; Chad Abel, Red Cliff Treaty Natural Resources administrator; and Red Cliff Band Vice-chairman Nathan Gordon. (CO Rasmussen photo)*

as a whole. The processing facility is expected to generate a number of value-added products including fresh and frozen fillets, smoked fish, and fish spreads. Fish waste is initially marked for composting and used as a fertilizer at the tribal farm.

Tribal planners anticipate the dock and processing plant to be operational later in 2020. Additional funding for Red Cliff’s commercial venture comes from a USDA-Rural Development Value Added Grant and “Keepseagle” Native American Agriculture Fast Track Fund.





# Ceded Territory news briefs

## PolyMet mine permits under scrutiny

Seeking clarification on how the US Army Corps of Engineers approved filling in over 900 acres of wetlands by mine developer PolyMet despite vocal concerns by tribes and the public, the Fond du Lac Band has acquired a vast collection of documents from the Corps. The move to review how regulators came to justify the extensive loss of sensitive wetlands comes on the heels of court decisions last September that put three additional PolyMet permits on hold until further information is provided by state and federal regulators.

Toronto-based PolyMet Mining is working to establish an open pit copper, nickel, and precious metals mine in the St. Louis River watershed around six miles south of Babbitt, Minn. The proposed mine carries a huge environmental risk. Metals at the mine site are embedded in rock that contains sulfide, which can produce sulfuric acid when exposed to air and water. —CO Rasmussen

## GLIFWC awarded 3-year language grant

GLIFWC received an Administration for Native Americans Language Preservation and Maintenance grant for the “Maajii-Ojibwemowag (They Begin to Speak Ojibwe)” project.

Over the course of the next three years, project staff will develop a 12 book series targeting tribal youth, ages birth to five years, with accompanying web activities (books will be available on [www.glifwc-inwe.com](http://www.glifwc-inwe.com)). The books and activities will feature simple Ojibwe words about traditional harvesting methods, which will allow young children to develop a language learning foundation for Ojibwemowin.

The project staff will work with tribal Head Starts and daycare providers to utilize the developed resources in their classrooms and facilities. The first set will be centered on the four-legged beings, like makwa and ma'ingan, and will be distributed in late Spring 2020. —L. Coffin

## Nelson Institute highlights environmental work

The Nelson Institute for Environmental Studies at the University of Wisconsin Madison began collaborating with present and former scholars to develop issue briefs, which summarize most recent endeavors and research that are being undertaken at UW Madison pertaining to environmental issues.

The latest edition of the Nelson Institute Issue Brief entitled “Deer: Hunting, Ecology and Chronic Wasting Disease (CWD),” hones in on multiple efforts to provide more data and information regarding popular deer hunting debates. Everything from the prevalence of CWD, to monitoring deer population density and the impacts on forests is covered in the most recent edition. Visit the Nelson Institute Webpage to check out this Brief and other environmental briefs here: <https://nelson.wisc.edu/news/issue-brief/index.php> —B. Jennings

## “Witness” remembers Milwaukee’s Indian Summer

*Editor’s note: Last March officials from the Indian Summer Festival (ISF) announced that the event “will not be held as it currently is known” in the future. GLIFWC outreach staff, particularly Jim St. Arnold, maintained a presence at Indian Summer for many of its 32 years. Rick Whaley, co-founder of Witness for Non-violence, a Chippewa treaty rights support movement formed in the late 1980s, reached out to Mazina’igan with some recollections of the long running event.*

Walt Bresette, shield of the north, would be at ISF with his Buffalo Bay Trading booth, “selling trinkets,” he’d say. But really, he was calling all allies to witness in northern Wisconsin for Chippewa cultural and sovereignty rights.

From the beginning, Nick Hocking’s WaSwaGoning village welcomed visitors to the ISF gatherings at the entrance plaza of the Summerfest grounds. Nick and Art Shegonee (Menominee/Potawatomi) would tell stories—environmental instructions—and lead dances for interested adults and rapt children. Cancer eventually took Nick in 2012 and those of us who spoke at his remembrance at ISF recalled the kind of man and influence he was.

Those music stages at Indian Summer Festival were always incredible. Joanne Shenandoah (1987, 2011) and Buffy Sainte-Marie (1992). The gorgeous harmonies of Ulali. The Inuit throat-singing sisters (2003) standing face to face, doing songs as intricate as my big-city daughters doing hand-clapping songs with each other. One of the Inuit sisters’ songs was of parents changing diapers and looking for lost mittens. —R. Whaley

## Executive Order mints climate change task force

Madison, Wis.—Wisconsin Gov. Tony Evers signed an Executive Order October 17, creating the Governor’s Task Force on Climate Change. GLIFWC Public Information Office Director Bizhikiins Dylan Jennings was among the 33 Wisconsin residents named by the governor to the task force. Jennings is also a Bad River Band of Lake Superior Chippewa Indians member.

The task force will advise and assist the governor in developing a strategy to mitigate and adapt to the effects of climate change. The task force is charged with compiling their recommendations to deal with climate change in a report due by August 2020.

# GLIFWC, Partners Receive 2019 CALA Tribal Climate Adaptation Menu recognized nationally

By Paula Maday, Staff Writer

St. Paul, Minn.—Creators of *Dibaginjigaadeg Anishinaabe Ezhitwaad: A Tribal Climate Adaptation Menu* were awarded a 2019 Climate Adaptation Leadership Award (CALA) at the Association of Fish & Wildlife Agencies (AFWA) annual meeting on September 23.

The team of creators includes 19 people from various tribes, governments, academic institutions and intertribal organizations across the Ceded Territory. From GLIFWC, climate change section staff including Rob Croll, Melonee Montano, and Hannah Panci, as well as former staff Emily Nelis and Kim Stone, worked on the document.

The Climate Adaptation Leadership Award recognizes outstanding efforts to increase the resilience of America’s valuable living natural resources and the many people, businesses, and communities that depend on them. Established in 2016, only seven recipients across seven categories are chosen each year by the CALA Steering Committee, which includes representatives from the AFWA as (see *Tribal Climate Adaptation*, page 15)



*Tribal Climate Adaptation Menu creators receive the Climate Adaptation Leadership Award in St. Paul on September 23. (Association of Fish & Wildlife Agencies photo)*

# GLIFWC, partners survey juvenile ogaa on 84 Lakes

When autumn gets underway, about the time the leaves change, small ogaa (walleye) move into near-shore habitats at night to feed on invertebrates and small fish. During this time, GLIFWC survey crews conduct electrofishing surveys to gauge the strength of the ogaa year-classes on each lake. Electrofishing boats use electrical current to temporarily stun fish so that survey crews can net them, place them in a recovery tank, collect length information, and release them. Crews target ogaa under 12 inches, specifically young of the year and one-year-olds.

Biologists use the information gathered here to evaluate year-class strength and long-term trends in natural reproduction. These surveys also provide the first look at the future of the adult populations. Natural reproduction varies widely by year even on lakes with large adult ogaa populations, but if fall surveys show a number of years with poor or low reproduction, biologists have advanced warning that populations may be on the decline.

While most of the surveys focus on lakes with natural reproduction, some fall surveys are also used to assess the contribution of stocked fish to the year-class. Stocked fish can be marked with oxytetracycline (OTC), and fish can be examined for marks to determine the percentage of stocked fish in the year-class.

This fall, crews from GLIFWC, Bad River, Mole Lake, and St. Croix tribes surveyed 84 lakes, including nine surveyed in cooperation with Wisconsin Department of Natural Resources, along with Mille Lacs Lake surveyed in cooperation with the Fond du Lac Band. All lakes surveyed were in the 1837 and 1842 Ceded Territories, including 78 lakes in Wisconsin, six in Michigan, and Mille Lacs Lake in Minnesota. Lakes ranged in size from 73-acre Mole Lake to 132,516-acre Mille Lacs Lake. Final results will be published in the annual Fish Population Assessment report available at [www.data.glifwc.org/reports](http://www.data.glifwc.org/reports). —A. Ray



*E. White photo*





# Uneven manoomin year delivers mixed results

## Call for survey returns

By Peter David, GLIFWC Wildlife Biologist

After more than 30 years watching manoomin harvest seasons circle by, one might think I would have seen most every kind of season by now. Good ones, great ones, average ones, failures—and even seasons where the abundance seemed to rise and fall across the landscape like waves on a windy wild rice lake. But this year seemed to bring some new twists.

There were plenty of disappointments to be sure. Vilas and Oneida counties in Wisconsin were overall lousy again, as much of this region has been plagued by seven consecutive years of above average precipitation. That is basically unheard of over the last 150 years or so, and it makes resource managers concerned whether it will prove to be a rare random streak, or if it reflects a fundamental changing of the region's climate. Lake Superior is also hovering around record high levels, negatively impacting rice beds in the Kakagon Sloughs and elsewhere along its shore. Polk County, Wisconsin had a particularly grim year, with almost no bright spots to counter the downward trend.



COR photo

Strangely, however, there were also a number of places that seemed to have an unusually good crop. From Hiles Millpond in Forest County westward across Wisconsin to the Gordon Flowage, scattered beds just stood out as being stellar. In Minnesota, the same sort of dichotomy seemed to be playing out according to the reports that popped up in my email and phone messages. Things were pretty bleak in Carlton County, for example, while just to the west, Aitken County held some lakes that looked like hay fields from the air.

The season also seemed to run later than typical, and a few spots seemed even to have two peaks in the harvesting season, as if there had been two waves of germination in the spring. Some ricers that didn't hang up the sticks too early found some surprisingly good late-season picking as a result.

It appears that pickers are now routinely using the abundance information GLIFWC posts each fall, helping them spend their precious picking time on places where the manoomin is able to share with us. Of course, word of mouth can help this way too; my wife Lisa and I had one of our better harvest years, thanks in large part to a dear friend who alerted us to some excellent picking after we thought we might be done for the year.

(see Harvest survey, page 11)

**Some ricers that didn't hang up the sticks too early found surprisingly good late-season picking.**

### MAZINA'IGAN STAFF: (Pronounced Muh zin ah' igun)

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- Dylan Jennings ..... PIO Director
- Paula Maday ..... Writer/Photographer



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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 address given above. For more information see GLIFWC's website: [www.glifwc.org](http://www.glifwc.org) and our Facebook page.



The Copperwood Mine Project is located adjacent to the Porcupine Mountains Wilderness State Park, on the shore of Lake Superior.

# Copperwood mine in holding pattern along Gichigami south shore

By Paula Maday, Staff Writer

Highland Copper Company Inc. announced receipt of the mining, air and dam safety permits needed from the Michigan Department of Environmental Quality (MDEQ) on January 18, 2019, for its Copperwood project located in Upper Michigan. Adjacent to the Porcupine Mountains Wilderness State Park ("Porkies"), the proposed Copperwood mine cuts into the 1842 Treaty territory about 70 miles west of the L'Anse reservation and 45 miles southwest of the Ontonagon reservation. The underground copper and silver mine aims to operate for an 11-year period.

A requested amendment to the original mining permit granted in 2012 was also approved by MDEQ in January, allowing Highland Copper to begin construction of the mine, provided certain permit conditions were met. So what's the current status of the Copperwood Project nine+ months later?

Ongoing permitting issues have this project at a standstill. According to GLIFWC Environmental Specialist Esteban Chiriboga, Copperwood is proposing to use water pumped directly out of Lake Superior in their mining process. In order to do this, they would need to build a water intake in the lakebed and a pipeline would transport water to the mine site. However, before an intake can be built, Copperwood needs a permit under Section 10 of the Rivers and Harbors Act from the Army Corps of Engineers. This permit is required when building a structure in any navigable water of the United States.

The Army Corps is still trying to define the scope of the environmental analysis that is required to support their Section 10 permit decision. GLIFWC believes that the National Environmental Policy Act requires the Corps to review the entire project because the water intake is an integral part of the mine plan. They and several member tribes have been meeting with the Corps to provide input and express concerns related to the mine. These concerns include:

- ◆ Extensive impacts to surface water. The mine's tailings facility would cover 16,557 linear feet of streams and 57.84 acres of wetland. A portion of the middle branch of Gypsy Creek would be relocated around the tailings facility.
- ◆ Stream erosion. Treated water discharged into Namebinag Creek would alter the hydrology of the stream, possibly leading to erosion and degraded habitat.
- ◆ Fisheries impacts. Impacts to the tribal fishery from the water intake in Lake Superior and associated pipeline have not been characterized or addressed.
- ◆ Archeological concerns. The National Historic Preservation Act is not followed by state permitting process. Portions of the site remain un-surveyed.
- ◆ Treaty obligations and trust responsibilities. The state process does not acknowledge that Copperwood falls within the 1842 Ceded Territory. It also fails to describe the treaty obligations or trust responsibility owed by federal government to tribes in evaluating permit decisions.
- ◆ Unstable tailings disposal. Wet tailings are unstable over the long term and the proximity to Lake Superior increases the risk of this facility.

In comment letters sent to the Army Corps, GLIFWC expressed additional concerns related to the discharge of water contacting tailings dams; mine water discharge to surface; surface subsidence; transportation routes; and perpetual water treatment. Chiriboga also says that the Least Environmentally Damaging Practi- (see Copperwood mine, page 11)

## On the cover

Biboon view from Moquah, Wisconsin near sunset. (K. Plucinski photo)





# Another CWD-positive deer in Wisconsin's Oneida County raises more concerns

## GLIFWC regs designed to limit human-assisted disease movement

By Travis Bartnick, GLIFWC Wildlife Biologist

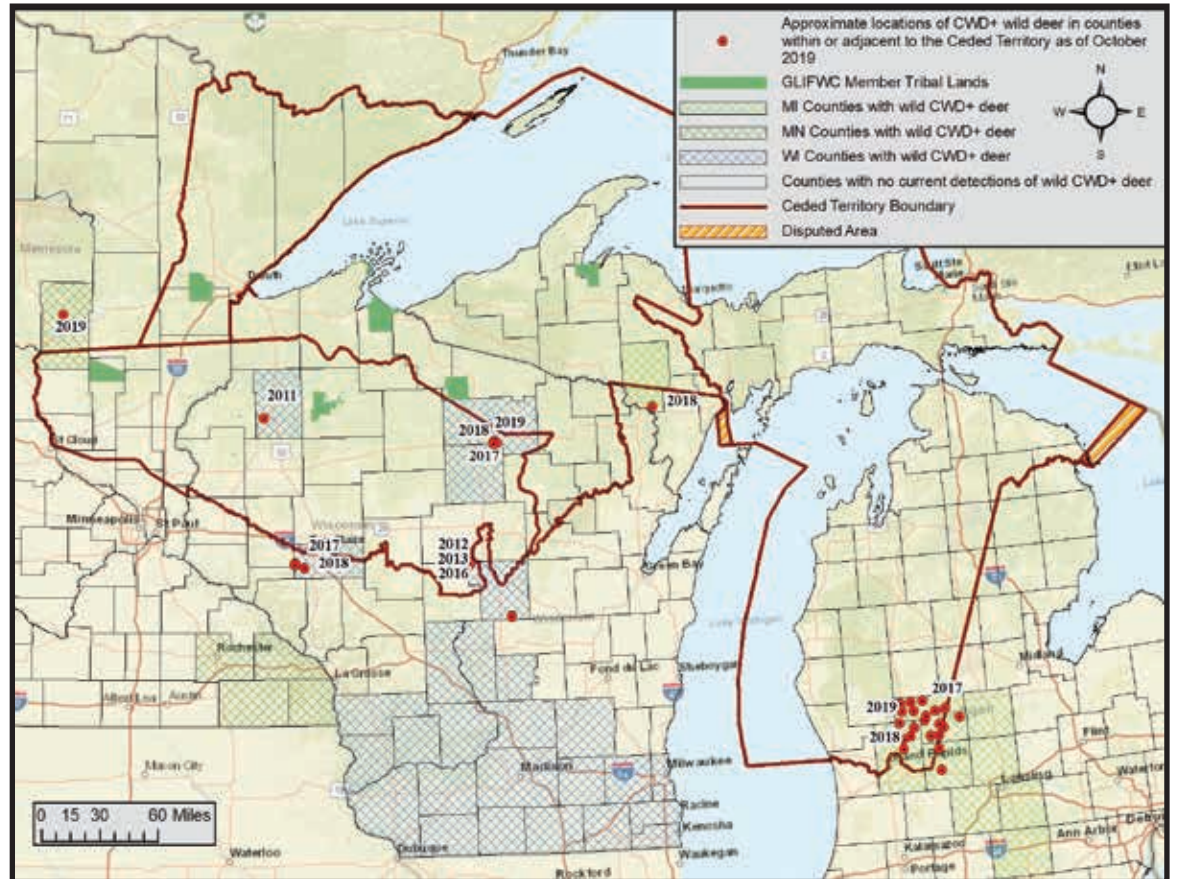
A wild chronic wasting disease (CWD)-positive deer was detected within the Ceded Territory in Wisconsin's Oneida County in early October 2019. This is the fourth CWD-positive deer found within or near Crescent Township, about six miles southwest of Rhinelander since late 2017.

Given the relatively low number of deer sampled in the area, this newest detection is concerning when considering that this is an area frequently used by tribal members who exercise their treaty rights to harvest deer in the Ceded Territory. After the second wild CWD-positive deer was detected in this area in 2018, the Voigt Intertribal Task Force approved the establishment of a tribal CWD management area, which included regulations designed to decrease the potential spread of infected deer.

These regulations include mandatory remote registration, restrictions on certain parts of a deer that can be transported outside of the management area, and mandatory carcass disposal within the area.

These restrictions are aimed at raising awareness of the disease, reducing the chance of a hunter bringing back an infected deer or deer carcass parts to their community, and reducing the risk of spreading the disease further across the landscape where the disease has not yet been detected.

Despite the persistent spread of CWD throughout the western Great Lakes region in recent years, chronic wasting disease has not been detected throughout a large portion of the Ceded Territories (see map). Taking action through the implementation of effective means of limiting any potential human-assisted causes of spreading CWD are critical to help keep those areas free of the disease.



Despite the persistent spread of CWD throughout the western Great Lakes region in recent years, chronic wasting disease has not been detected throughout a large portion of the Ceded Territories. (T. Bartnick map)

### Additional detections as of October 28

In addition to the Oneida County CWD-positive deer, three deer have tested positive in Wisconsin's central farmland zone, and 108 deer have tested positive in the southern farmland zone. Minnesota has confirmed one additional CWD-positive deer in far southeastern portion of the state. No additional CWD-infected deer have been confirmed in the north central portion of the state where a CWD-positive deer was found in Crow Wing County earlier this year. Michigan has confirmed 15 additional wild CWD-positive deer so far this year.

All of the detections have been located in the central and south central portions of the lower peninsula. Aside from the single CWD-positive deer confirmed in Michigan's Dickinson County in the fall of 2018, no additional CWD-positive deer have been detected in Michigan's upper peninsula.

You can find more information about CWD on the GLIFWC CWD website: <https://data.glifwc.org/cwd/>

### Minnesota confirms first detection of EHD in wild deer herd

Epizootic hemorrhagic disease (EHD) is a viral disease that can infect several species of ruminants, including white-tailed deer. EHD is spread by a small biting insect known as a midge (commonly called no-see-ums). Common symptoms of EHD can include a high fever, lack of appetite, and dehydration. These symptoms often lead the deer to water sources, where they are often found after they die from the disease.

EHD can reduce local deer herds, but generally does not have a significant impact on the overall deer population. The disease occurs seasonally, with most outbreaks occurring during the late summer and early fall. The disease typically does not persist longer than a week or two after the first hard frost of the year. Unlike chronic wasting disease, EHD cannot be transmitted from deer-to-deer, and the disease does not remain on the landscape. There is no evidence that the disease can infect humans.

Although the disease has been confirmed in several Midwestern states, 2019 was the first year EHD was found in wild white-tailed deer in Minnesota. EHD was first confirmed in Wisconsin in 2002 and was detected in several southwestern Wisconsin counties in 2019. The State of Michigan also has a history with the disease, dating back as far as an outbreak that killed several hundred deer in 1955. In 2012, the state confirmed that as many as 12,000 deer succumbed to the disease, mostly in the lower peninsula. So far, the disease has not been detected in the 1837 or 1842 Ceded Territories.

## 2019-20 season registration & tagging procedures

Hunters and trappers are reminded to register their harvest in a timely manner this fall.

- ❁ Deer, bear, cranes, and turkeys can be registered in-person at a tribal registration station or remotely using GLIFWC's phone registration (844)-234-5439 or online at: [glifwc.nagfa.net/online/](http://glifwc.nagfa.net/online/).
- ❁ For instructions on how to register by the phone or online visit: [data.glifwc.org/regulations](http://data.glifwc.org/regulations) and select the link under "Online Registration."
- ❁ When registering by phone you must remain on the line until you are given you registration number in order for it to be complete
- ❁ To prevent the spread of chronic wasting disease (CWD), deer harvested in the tribal CWD management area are required to be registered remotely.
- ❁ Metal carcass tags are no longer required for deer, bear, or turkey. However, if a carcass is left unattended in the field, a tag with the hunter's NAGFA ID and appropriate stamp# (located on the hunter's license) should be affixed to the carcass.
- ❁ Carcass tags and in-person registration are required for elk, otter, bobcat, fisher, and marten.
- ❁ CITES tags are required for otter and bobcat if the pelts will be sold.
- ❁ A summary of tagging and registration requirements, along with other regulations, can be found at: <https://data.glifwc.org/regulations/>. Individual tribes may have different tagging requirements for deer and bear.

## Early season deer & bear registrations down from 2018

Off-reservation harvest registrations for the early dagawaagin (fall) hunting season are running below average for Ojibwe waawaashkeshi (deer) hunters and down for makwa (bear) hunters in the 1842 and 1837 Ceded Territories compared to 2018 registration numbers. Early season weather started out with warm temperatures along with many windy, rainy days throughout the latter half of September and into October.

From the start of the season, September 3 through November 12, 2019, Ojibwe off-reservation hunters registered 325 deer and 28 black bears. At the same time last year, tribal members had registered 491 deer and 36 black bears. This is the third year tribal hunters have had the option of registering their deer remotely, via phone, and the first year that online registration has been available for hunters pursuing deer off-reservation within the Ceded Territories.

Of the 325 deer that were registered as of November 12, 2019, just over half (163 deer) were registered using the new phone registration system, and 75 deer were registered using the new online registration system. The remaining 87 deer were registered in person at tribal registration stations. The peak of the off-reservation tribal deer harvest typically falls over the second, third, and fourth weeks of November.

—T. Bartnick



# Meet the warden—Holly Berkstresser

## A warden and a woman on a mission

By Paula Maday, Staff Writer

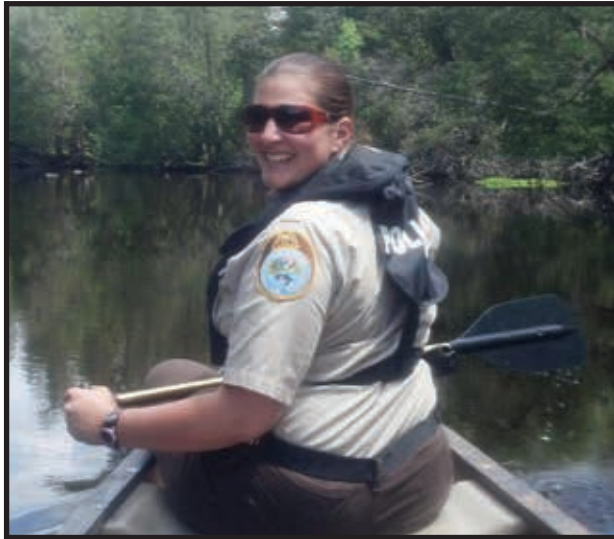
Since the age of 13, Holly Berkstresser has traveled the backwoods of Appalachia every summer. But these are no leisurely hiking trips. Amidst the remote mountainous regions of Virginia and West Virginia, Berkstresser can be found doing construction, building, and repairing homes for those in need.

“A lot of the homes we work on are actually homesteads, hundreds of years old,” she said. “On one home we worked on, the frame was literally built out of tree trunks.”

Berkstresser was introduced to this mission work through the church that she grew up in. Since then, she has also traveled to Belize to build an orphanage, and to Pine Ridge, South Dakota, to build bunk beds for children. Her time in Pine Ridge proved very influential, as it unearthed a passion for working with tribal people, and prompted Berkstresser to change her degree of study. Originally a history major, Berkstresser’s love for the outdoors—coupled with her desire to work with tribal communities—led her to pursue a degree in Environmental Conservation with a minor in Native American Studies at Northern Michigan University (NMU).

During her senior year, Berkstresser worked for the Center for Native American Studies, where she helped plan summer camps for tribal youth. GLIFWC and NMU worked together for one of these camps, and it was then that Berkstresser learned about GLIFWC and met many of the wardens for the first time.

In 2012, Berkstresser successfully applied for a position as a GLIFWC Conservation Officer. On the job, she goes above and beyond GLIFWC’s mission to assist member tribes in exercising their treaty rights. She also organizes officers to send to law enforcement funerals, participates on the policy committee, helps at youth camps for children of fallen officers, and works at GLIFWC’s own Camp Onji-Akiing. She also helps with programs like Fishing has no Boundaries, Sawyer County Outdoor Projects and Education (SCOPE), the Sandy Lake Memorial, Canoomin safety, hunter’s safety, garlic mustard eradication, and more.



From her childhood days in Rockford, Michigan, to her professional days patrolling the Ceded Territory, Holly Berkstresser has always loved exploring and caring for the outdoors. (L. Tuori photo)

These days, however, Berkstresser is focused on a more personal mission. In December 2018, at the age of 32, she was diagnosed with breast cancer. Given her young age and the early stage of the disease, her medical team advised aggressive treatment including chemotherapy and radiation. She finished her last radiation treatment in September 2019.

“At 32 years old, you never expect cancer. I found my own cancer. I found a lump in my breast. And so I tell everybody, at least know yourself and your own body, and what’s normal and what’s not. And if something’s not right, get it checked out.”

Berkstresser stayed on the job throughout her treatment, patrolling her assigned territories near the St. Croix Band in Wisconsin and the Mille Lacs Band in Minnesota. And the reaction she got, was both expected and unexpected.

“When you used to have a head of hair and then you’re walking around bald, people notice!” Berkstresser chuckled. “It was actually really incredible though because I ran into so many people during

spearing season, and every time I would be at the landing, they would be asking me how I was doing and letting me know they were thinking about me. It was really touching.”

Strong community and family support are part of what Berkstresser says got her through her treatment. “I have an incredible support system both at home and at work. I remember when I found out the news; chief warden Adam McGeshick was one of the first people I called. And I remember him telling me, ‘We will figure this out together. If you need time off, take the time you need and if you want to work, we’ll work that out too.’ Work was one of the biggest things that got me out of bed in the morning. I love my job, and it kept me going.”

Berkstresser is scheduled to have a follow up appointment in December 2019 to have scans and bloodwork done. She will then have follow up appointments every three months for five years. After five years of clear results, she will be considered cancer free.



Berkstresser received this pink breast cancer support shirt from a tribal police department in Rhode Island after a fellow female officer saw her on Facebook. (Submitted photo)

# Hunter safety grads ready for deer season



P. Kebec photo

From classroom to shooting range, aspiring hunters prepared for deer season with GLIFWC and tribal wardens last October. The five-day hunter safety education course involved classroom exercises, a good bit of homework, written test, and as a capstone, a trip to the tribal shooting range where students practiced safe use of both guns and tree stands.

Instructor and GLIFWC Warden Jim Stone said a total of 19 students, which included three adults, from the Chequamegon Bay area graduated from the course on October 12.

Joining GLIFWC wardens, tribal officers from the Red Cliff Band shared teaching duties and related personal experiences of hunting afield. A pair of Bad River wardens were also in attendance as part of a hunter education instructor certification program which ran concurrently with the hunter safety class.

For Ojibwe tribal members born January 1, 1977 or later, the successful completion of an approved hunter safety course is required to hunt off-reservation in Wisconsin. The requirement for treaty hunting in the Minnesota Ceded Territory is similar with a benchmark birthdate of January 1, 1980 or later.

Hunter education courses successfully completed with other tribes, states or a province of Canada are also acceptable, in addition to Armed Forces basic training.

Treaty hunters under 14 years old must be accompanied by a parent, guardian or other adult tribal member designated by a parent or guardian. Youth and adults who have not completed a hunter education course may participate in mentored hunting with a licensed hunter who has completed hunter safety or is exempted.

For more information see [www.glifwc.org/Regulations/Hunting37and42\\_82514.pdf](http://www.glifwc.org/Regulations/Hunting37and42_82514.pdf). Good luck, hunters!

—CO Rasmussen



J. Stone photo



# Elk hunters experience ceremony, success in northern Wisconsin Michigan hunt continues in December

By Charlie Otto Rasmussen  
Editor

Clam Lake, Wis.—After the drum songs, the opwaaganag passed in a circle, the prayers, the feast cooked over open flame, Ojibwe hunters dispersed from the elk camp situated on the high ground east of Chippewa Lake. As the day's intermittent rains tapered off, the winds eased and the sun dipped toward a horizon cut by a jagged line of spruce treetops. The second modern-era omashkooz season was underway in the Wisconsin Ceded Territory.

"This is a ceremonial hunt," said Conrad St. John, hunting with fellow St. Croix Band member Will LaPointe. "We go for the first bull that presents itself."

Joining St. Croix on the intertribal endeavor September 13, hunters from Red Cliff Band and Lac Courte Oreilles Band were in attendance. Representatives from Lac du Flambeau, Lac Vieux Desert, Bad River and GLIFWC also circulated through the camp in the Chequamegon-Nicolet National Forest, helping start the harvest season in a good way.

As in the inaugural elk season one year earlier, Ojibwe treaty tribes and state-licensed hunters evenly shared 10 bull-only tags in 2019. While wildlife managers have helped establish omashkooz in several areas of Wisconsin, these early hunts are restricted to the core Clam Lake herd which contain a surplus of bull elk.

Twilight wasn't far off when LaPointe and St. John steered down a gravel road west of the tiny village of Clam Lake. The season-opening ceremony and feast had wrapped up around 40 minutes earlier. With bellies full and eyes sharp, they spotted a distant cluster of elk. St. John put the truck in park and they picked their way through an expanse of managed forest that blended mature pine timber with close-cropped undergrowth. The herd came into focus, revealing nearly 20 cows and a lone bull. The St Croix hunters had found their animal, which turned out to be an exceptional 6x6 omashkooz.

## Stamp sands

(continued from page 1)

pledged \$3.7 million to dredge stamp sands last August, but additional funding is required to save Buffalo Reef as a productive spawning ground for lake whitefish and lake trout.

"When you think about the billions-of-dollars-worth of resources that have been removed from this region, the costs of cleanup are a bargain," said GLIFWC Executive Administrator Michael J Isham touring the site with Korleski.

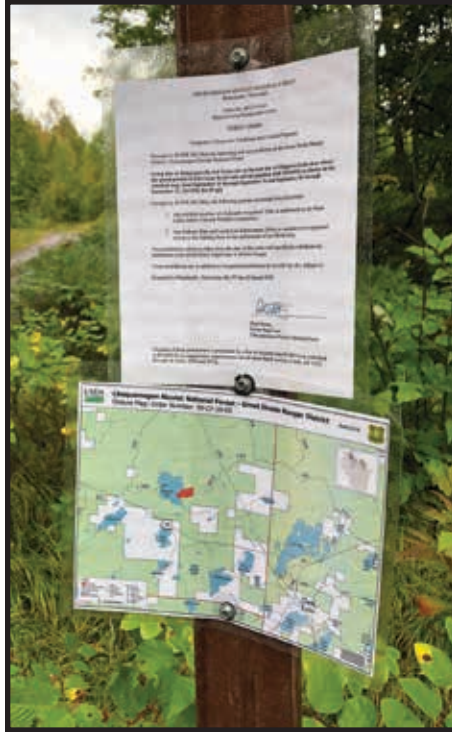
In the half-century following treaty negotiations with the Great Lakes Ojibwe, the United States oversaw a massive extraction of natural resources from the Ceded Territories of Michigan, Wisconsin and Minnesota. Timber mills shipped billions of board feet of pine lumber southward to build homes across Middle America. From the Keweenaw Peninsula, corporations mined and smelted copper ore sending, by the ton, railcars of the essential metal to wire-up American cities to transmit newly-harnessed electric power. That legacy threatens not only the future of the Lake Superior fishery, but a dense catalog of aquatic biodiversity intertwined with Ojibwe culture and lifeways.

"It goes further than Lake Superior," said Evelyn Ravindran, KBIC Natural Resources Department director. "The connections and relationships we have with this water goes right into the wetlands on our shores and into our very way of life."

Ravindran went on to explain that in Ojibwe culture, the lands, waters, and all the beings contained within belong not to the people of today, but those who will live on Turtle Island in the future. We are only stewards, she said, the Keweenaw belongs to our children's children.

"Even though this project may take many, many years, we're committed to continuing it because we are looking to the future," she said.

Engineers said the current work to collect and sequester the most pressing stamp sands may provide a 50-year fix at Buffalo Reef, but the sheer volume of mining waste is so large that it will take several generations to ultimately restore the area.



Chequamegon-Nicolet National Forest Supervisor Paul Strong issued a limited closure order for the east side Chippewa Lake where Ojibwe hunters and their families set up the ceremonial elk camp. (CO Rasmussen photo)



An intertribal group played drum songs before and after a feast that marked the beginning of the ceremonial elk hunt. (CO Rasmussen photo)

By the end of the following afternoon, Ojibwe hunters had tagged three bulls, including a mature elk harvested by Tanner Bressette of Red Cliff. His father Mark, a longtime GLIFWC conservation warden, would walk on only a week later and the bull would feed many at his funeral services.

Some 300 miles waa-banong, to the east, across Lake Michigan into the 1836 Treaty-ceded territory, Bay Mills Indian Community hunter Rikki Timmer took a bull elk from public lands in Lower Michigan on September 29. During the late season in mid-December, Bay Mills hunters will return to the elk woods with three cow-only permits. While Wisconsin wildlife officials are managing hunts to grow the elk herd, Michigan authorities are working to curb herd growth by harvesting females—a strategy to reduce the volume of agricultural damage on farms that encircle the core elk zone in the Pigeon River Country State Forest.

Back in Wisconsin, Ojibwe hunters finished up elk season with a spike bull harvested on November 9. During the same weekend, state-licensed hunters wrapped their season with bull #5 as well.



St. Croix Band's Will LaPointe with a Wisconsin Ceded Territory omashkooz he harvested September 13. Prior to hunting, GLIFWC biologists and conservation officers conducted an orientation with LaPointe and other treaty hunters on safety, regulations, and behavioral differences between elk and white-tailed deer. Successful hunters also collaborated with GLIFWC Biologist Travis Bartnick to collect biological samples from elk for health testing. (C. St. John photo)

## Keeping up with ducks, geese & swans

With a mid-November sheen of ice taking hold, the 35th annual Chequamegon Bay waterfowl survey wrapped up along the Gichigami south shore. The survey chronicles the movement of diver and dabbling ducks, along with geese and swans, from mid-September until freeze-up. A mix of both local waterfowl and migrants make up the annual count.

GLIFWC Wildlife Biologist Peter David (pictured) has participated in the survey since 1986. (A. Wrobel photo)







# Phragmites on the wane

## Hard work by GLIFWC and partners pays off

By Steve Garske, GLIFWC Invasive Species Coordinator

Any way you look at it, phragmites—known as common or giant reed (*Phragmites australis*)—is an impressive plant. This tall, rhizomatous grass is native to all continents except Antarctica. It typically inhabits marshes, wet meadows, floodplains, and lakeshores. Depending on the genetically distinct subspecies, the shoots can reach more than 15 feet tall. Phragmites can spread by seed, by pieces of rhizomes (underground stems) or runners (aboveground stems), or even by cut shoots that reroot to eventually form new stands.

For centuries the common North American type of phragmites or aaboojigan in Ojibwemowin (*P. australis* subspecies *americana*) coexisted with lots of other plants and animals as one member of diverse ecological communities. Then around the late 1700s or early 1800s a European type (*P. australis* subsp. *australis*) arrived in North America. It type was most likely carried in soil used as ship ballast, before the invention of industrial water pumps.

As it spread out from the east coast, it invaded natural wetlands, pushing out native phragmites and other wetland plants, replacing them with nearly pure stands of non-native phragmites. By the 1970s it had made its way to the upper Great Lakes region. This European type tends to be taller and more robust than the native type, with large, dense flower heads, tan or pinkish-tan stems, and gray-green leaves, versus the relatively sparse heads, reddish lower stems, and medium green leaves of native phragmites. Of the hundreds of non-native plants that have made their way here from overseas, non-native phragmites is one of the most aggressive and ecologically destructive.



Native phragmites on the shore of Lake Laura, Vilas County, Wisconsin. (S. Garske photo)



Dense non-native phragmites stand along the Minnesota side of the St. Louis River. (S. Garske photo)

Once established, non-native phragmites spreads rapidly, forming dense stands that almost completely exclude other plants. These dense stands alter wetland hydrology and reduce habitat for wildlife. Along with natural habitats, it also colonizes roadsides, ditches, agricultural fields, and industrial sites. Year after year the rot-resistant stalks build up on the ground, greatly increasing the potential for fire. Non-native phragmites is also capable of growing in as much as 4-5 feet of water, making it a serious threat to manoomin (wild rice).

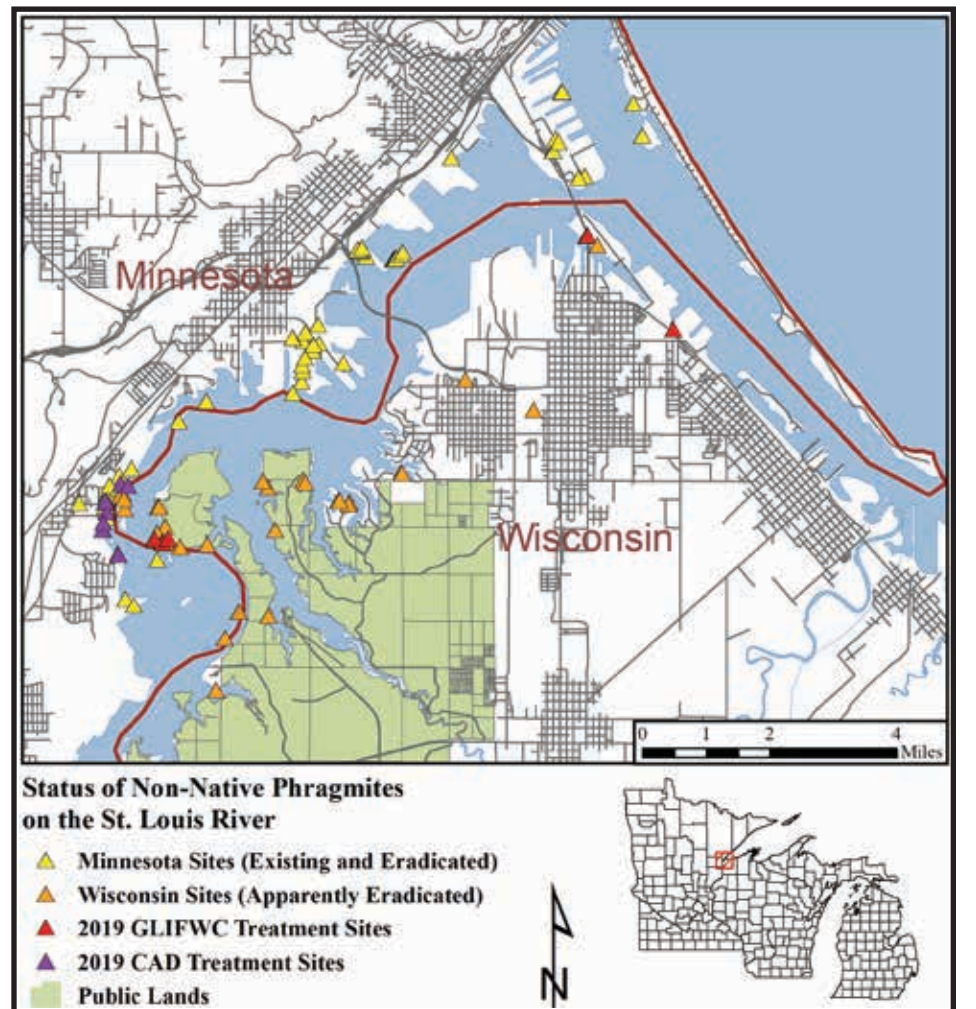
While non-native phragmites is now rampant in parts of southern and eastern Wisconsin, it is still uncommon in Upper Michigan, northern Wisconsin, and

northeast Minnesota. Since 2016 GLIFWC and its partners have been working to reduce and eliminate non-native phragmites from northern Wisconsin, including the St. Louis River system on the border of Wisconsin and Minnesota.

These efforts are paying off—in 2019 live shoots were found at only four of the more than 20 sites on the Wisconsin side of the river occupied by phragmites only a few years ago. Community Action Duluth (CAD) and other partners on the Minnesota side of the St. Louis River estuary are continuing their efforts to control phragmites, including several fairly large populations.



Community Action Duluth control crew members Ron Gurno and Eban Phillips treat a patch of non-native phragmites in northeast Minnesota on July 23. Note the tall dead flower stalks from the previous year. (S. Garske photo)



Non-native phragmites sites in and near the St. Louis River estuary. The brown triangles represent non-native phragmites sites on the Wisconsin side, that have likely been eradicated. The yellow triangles show sites on the Minnesota side, some of which still have live phragmites. Red and purple triangles indicate where live shoots were found in 2019, and treated by GLIFWC and Community Action Duluth (CAD) respectively. CAD treated a number of other Minnesota sites in 2019 as well.

In early October, the Wisconsin Department of Natural Resources hosted the Fall 2019 Aquatic Invasive Species Partnership Meeting at the Northern Great Lakes Visitor Center near Ashland. The conference provided a great opportunity to get caught up on what groups and individuals around the state are doing to address the aquatic invasive species problem. GLIFWC's invasive species staff provided an update on GLIFWC's invasive species program, including phragmites control work along the St. Louis River and in other parts of northern Wisconsin.

The good news is that non-native phragmites has almost been eliminated from the Wisconsin side of the St. Louis River estuary. With all these individuals and groups working together to bring non-native phragmites and other aquatic invasive species problem under control, more success stories are surely just around the corner.

**Of the hundreds of non-native plants that have made their way here from overseas, non-native phragmites is one of the most aggressive and ecologically destructive.**





# Weweni gidaa-doodawaanaanig ingiw manidoo-dewe'iganag omaa eyaajig

## Respecting our ceremonial drums

*Gaa-anishinaabemod: Lee Obizaan Staples*  
*Gaa-anishinaabewibii'ang: Chato Ombishkebines Gonzalez*

Mii iw azhigwa ani-oditamang da-ni-baakoshimindwaa da-ni-aabajich-igaazowaad ingiw Manidoo-dewe'iganag eyaajig omaa ishkoniganing. We are approaching that time when the ceremonial drums that are here on the reservation will be uncovered and used.

Ashi-bezhig ingiw Manidoo-dewe'iganag gigii-miinigoowizimin. Nisiwag iwidi Minisinaakwaang. Niizhiwag imaa Aazhoomog, miinawaa ingodwaachiwag ingiw Manidoo-dewe'iganag imaa Neyaashing.

We were given eleven drums. Three of them are in East Lake (District 2). Two of them are in Aazhoomog (District 3), and there are six of them in Neyaashing (District 1).

Azhigwa Maadagin zod a'aw Binaakwe-giizis, mii iw endaso-naano-giizhigak miinawaa ishkwaa-anokiigiizhigak da-ni-aabajichigaazowaad ingiw Manidoo-dewe'iganag biinish a'aw Manidoo-giizisoons.

At the beginning of October every Friday and Saturday the drums will be utilized right up until the month of December.

Ishke dash endaso-dagwaagig miinawaa endaso-zaagibagaag ani-aabajichigaazowaad bebezhi ingiw Manidoo-dewe'iganag. Ishke dash nebowa imaa asemaan miinawaa wiisiniwin naa-go gaye iniw waaboyaanan biinish gaye meshkoodoniganan odininamawaawaan inow Manidoo ingiw Anishinaabeg. Ishke dash mii imaa wenjikaamagadinig ani-naadamaagoowizid a'aw Anishinaabe omaa ishkoniganing biinish gaye omaa wenjiijig miinawaa-go gaye ingiw biiwideg.

Every fall and every spring the drums will be used one by one. Anishinaabe will offer a lot of tobacco, food, blankets, and also money to the Manidoo. It is

from there that the Anishinaabe living on and off the reservation get their help from, and also those from a distance attending the ceremonial dance.

Ishke dash mii iw gaa-onji-miinigoowiziyang ingiw Manidoo-dewe'iganag da-ondinaged a'aw Anishinaabe da-naadamaagoowizid oniigaaniiming. Gidaa-aangwaamizimin weweni da-ni-ganawenimindwaa ingiw Manidoo-dewe'iganag maamawichigewin imaa da-ni-ayaamagak azhigwa bebezhi ani-baakoshimindwaa. gida-giige'aanaanig ingiw Anishinaabeg niigaan waa-ni-ayaajig.

That is why we were given these ceremonial drums, as a source of help available for Anishinaabe in their future. We should work hard at taking good care of these drums that we work together when each of these drums are uncovered for use. By doing that we will benefit those Anishinaabe that will exist in the future.

Azhigwa ani-baakoshimind a'aw Manidoo-dewe'igan ani-aabajichigaazod, mii imaa ishpiming endanaajimindwaa ingiw Manidoo ayaawaad, mii imaa wenjitawaawaad miinawaa wenjiniketawaawaad naadamawaawaad inow Anishinaaben. Booch imaa maamawichigewin da-ni-ayaamagak. Giishpin imaa maanaadak ayaamagak mii-go ge-izhi-naangitaawaapan ingiw Manidoo.

When these drums are opened for use, our old Anishinaabe said that those Manidoo are present above the drums. It is from there they listen to their Anishinaabe and extend their hands down to help them. As a result it is important that we work together during these dances. If negativity is present, those Manidoo will just up and leave.

Ishke mii iw wenji-inindwaa ingiw debendaagozijig eginzojig, "Gego maji-inaaken waadabamajig ingiw debendaagozijig omaa dewe'iganing". Ishke bebezhi ingiw eginzojig imaa Manidoo-dewe'iganing onaabibiitawaawaan inow Manidoo. Mii inow ge-maji-inaawaajin maji-dazhimaawaad inow waadabamaawaajin imaa.

(see Respecting our ceremonial drums, page 17)

# Sharing information, acknowledging excellence at Great Lakes NAFWS

Reserve, Wis.—Natural resource professionals from tribes and federal agencies gathered at the Lac Courte Oreilles Reservation for the 2019 NAFWS Great Lakes Regional Conference September 23-25. The annual event sponsored by the Native American Fish & Wildlife Society is hosted by a different tribal nation each year, providing a forum for law enforcement training, research updates, and networking opportunities.

Bucking a downward trend in attendance in recent years, the 2019 regional conference included more than 130 registered participants. GLIFWC Climate Change Program Coordinator Robert Croll addressed NAFWS board of directors during the lunch session September 24 with updates on ongoing projects including Ojibwe Ceded Territory phenology, fisheries studies, and perhaps most sobering, the Commission's resource vulnerability assessment.

"For tribes, climate change presents an existential threat to culture," Croll said. "Relationships with non-human relatives are being transformed, and in some cases, negated."

NAFWS's Great Lakes region is comprised of 35 tribes. —CO Rasmussen



Great Lakes Region conservation officers held their annual Qualification/Competition Shoot at Lac Courte Oreilles during the recent NAFWS gathering. The team, all tribal conservation wardens, will be heading to the national 2020 NAFWS competition shoot this spring in Florida.

Four of the seven-member NAFWS Great Lakes Team (pictured from left) consists of wardens from GLIFWC Bands: Ryan Gauthier, Lac du Flambeau; Henry Bearheart, LCO/first alternate; Brad Cameron, Bay Mills; and Don Carrick, Bay Mills. Additional team members not pictured include: Harvey Kosowski, Oneida; Tim Mallory, Little Travers Band of Odawa Indians; and Terry Metoxen, Menominee/second alternate.



Red Lake Tribe's Herman and Marion Lussier took home the rare and prestigious Outstanding Service Award presented by NAFWS officials at an awards ceremony. The couple has been involved in a range of natural resources work and annually preside over the walleye meal served at NAFWS conferences. Red Lake Biologist Pat Brown quipped that among all of Herman's duties at Red Lake Natural Resources Department, his most skilled role may be as Fish Fry Technician over the past thirty years. The Lussiers appear with a blanket gifted by NAFWS at the end of the ceremony.



Warren Chris Swartz Jr. received the Glen T. Miller Tribal Leadership Award at a ceremony September 25 at the Native American Fish & Wildlife Society's Great Lakes regional conference. Swartz, longtime chairman of Keweenaw Bay Indian Community, was recognized for work on the local, state, and national level to promote environmental protection and tribal sovereignty.

Said Swartz: "I worry about the world we will leave our children, our grandchildren." Decision-makers at all levels of government must be held accountable for how well they manage natural resources for sustainability, he added.

GLIFWC Executive Administrator Michael J. Isham (pictured right) nominated Swartz for the award and made the presentation at the Lac Courte Oreilles Band's Sevenwinds Convention Center in northwest Wisconsin.

(CO Rasmussen photos)





# Mooningwanekaaning: A place to gather, a place to remember

## Tribes, state & other agencies commemorate the Treaty of 1854

By Paula Maday & Bizhikiins Jennings, Staff Writers

**Madeline Island, Wis**—Under a quilt of cloud cover, tribal citizens from nations near and far journeyed to Mooninwanekaaning (Madeline Island) September 29 for events to commemorate the signing of the Treaty of 1854. At the head of the multi-day schedule, was Anishinaabe Family Day, featuring an array of activities from wild rice processing to a social powwow.

As visitors began arriving, a group of youth took to the field to play lacrosse—the Creator's Game. Damon Panek led the efforts, first imparting important knowledge and history about the game. He explained how Ojibwe ancestors used to play with leather balls stuffed with deer hair and medicines. They also sometimes played with a wooden ball that had a hole in it so players could hear it whistle when it flew past their heads. One of the most important things to remember about lacrosse, he said, is that it is a healing game.

"It heals us in ways that we don't even know. Sometimes we feel that and sometimes we don't even know it's happening. That's how powerful the game is," said Panek.

Players stood in a circle, introducing themselves one by one. Each player voiced whom he or she was playing for that day. Some were playing for a sick friend. Some were playing for their grandmothers. Some were playing for the world.

Hereditary Chief Bob Buffalo was the last to introduce himself. "We are strong by our youth. We are strong by our women. We are strong by our elders. Remember those words," he said. As the group closed in tighter, raising their sticks to the sky, the sun pressed against the clouds at the seams, a smile from the ancestors, as they watched an ancient game return to ancient ground.

### Eat, play, dance

Across the yard, internationally recognized and self-proclaimed "grillologists" Mad Dog & Merrill were on hand, filming an episode of the TV series *Mad Dog & Merrill Midwest Grill 'n*. This particular episode focused on traditional Native American staples of fish and elk. After some cooking, elders were able to sample the Lake Superior fish chowder and elk chili that was prepared on the show. The episode can be viewed in its entirety at: <https://youtu.be/MBMmtlqcnQA>.

Speaking of traditional foods, our friends and relatives from Mole Lake pulled into camp with a thresher and other manoomin processing equipment in tow. Their demonstration on how to get wild rice ready to eat was a wonderful addition to the event.

In the afternoon, as visitors finished perusing vendor booths and playing moccasin games, the social powwow got underway. Dancers young and old kept beat with the drum for hours, many generations and many nations placing their feet upon the earth together. As they moved, the heartbeat of Mooningwanekaaning grew louder and louder, waking in joy to the Ojibwe's return to Madeline Island.



The Creator's Game—lacrosse—parted the clouds during Anishinaabe Family Day on Madeline Island September 29. (P. Maday photo)

#### Treaty of 1854

The Treaty of 1854 ceded Ojibwe land on the northern and western shores of Lake Superior to the United States government. It also established a number of reservations. In exchange, the Ojibwe were promised twenty years of payments and supplies, as well as the continued right to hunt, fish, and gather in the Ceded Territory. The treaty was signed at La Pointe, Madeline Island on September 30, 1854 by 85 Ojibwe leaders.

### Treaty Day—September 30

A rainy day accompanied by fierce winds and turbulent waters did not deter Anishinaabeg from gathering on the official day of commemoration for the 1854 Treaty. In a rapid change of events, Monday's gathering was moved to the Legendary Waters Casino convention center in Red Cliff. Hundreds of people flooded into the room, including multiple class groups from local schools.

"We brought youth here all the way from Lac Courte Oreilles to show them how important it is for us to recognize these incredible milestones as Ojibwe," said Lac Courte Oreilles Moccasin Pathway Program Coordinator Nichole Smith. (see *Commemorating the Treaty of 1854*, page 19)

# Ojibwe bandolier bags on exhibit at UMD

By Paula Maday, Staff Writer

**Duluth, Minn.**—Gashkibidaaganag: A Selection of bandolier bags are now on exhibit at the Tweed Museum on the University of Minnesota-Duluth campus. The exhibition features bandolier bags from the collections of the Tweed and the Duluth Children's Museum. Located in the Nelson Display Case on the upper level of the museum, the exhibit is available for viewing through summer 2020.

Associate Curator Dr. Karissa White Isaacs, Lac Courte Oreilles (LCO), says she can trace her inspiration for the exhibit all the way back to 20 years or so ago, when she saw a historic photo of a Bandolier bag hanging in the casino.

"I remember seeing that photo and thinking, 'What are these bags?' I didn't really remember seeing them in LCO growing up in the 80s and early 90s, and I didn't recall seeing anyone wear them at Wisconsin powwows (not that they didn't). Perhaps I just didn't notice them then. And when I started to look into it, I started seeing them and seeing people making and wearing them, and I was like, 'Wait a minute, they were



One of the 15 bandolier bags on display at the Tweed Museum on the University of Minnesota-Duluth campus by Melvin Losh, Leech Lake Ojibwe. (P. Maday photo)

here at LCO historically'. So I wanted to learn more about them and give people information about what they are with this exhibit."

The exhibit features 15 bandolier bags from a range of locations and dates. Some are vibrant and brightly hued, with tight stitching, while others bear the proud marks of worn leather and faded beads—bags that have been well worn and well loved.

This love is one of the main things Isaacs hopes visitors will take away from the exhibit. "I hope people learn what bandolier bags were actually used for, which is peace and friendship," she said. "They were given for reasons that were heartfelt, and made with a lot of love and effort and skill."

The composition and style of bandolier bags have changed slightly over time, but not by much. Many early bags had pockets, while later bags may have a non-functional slit or no pocket at all. Additionally, Isaacs says older bags were often fully beaded, whereas some newer bags tend to give up full beading in favor of intricate detail, smaller size, or a mix of materials in addition to beads. This is likely due to the time and effort it takes to complete a fully beaded bag.

Both old and new bags maintain the signature boxy shape and thick strap that is worn cross body. A suite of historic photos exhibited along with the bags show how they were worn across time.

If you hit the powwow trail today, you're likely to see many artistic renditions of the bandolier bag adorning dancers' regalia. It is a living cultural tradition that continues to grow and change.

Isaacs says, "It is my understanding that bandolier bags are not sacred but they're definitely special. They're special to people who wore them and special today to those who still do. I feel that they will continue on in a good way. There are woodland dance specials for a reason. People are dancing with them proudly."

To learn more about Ojibwe bandolier bags, visit the exhibit or check out *A Bag Worth a Pony: The Art of the Ojibwe Bandolier Bag* by Marcia G. Anderson. This comprehensive book features over 200 pages of information including one part dedicated to the history, uses, structure, design and motifs of bandolier bags, and a second part dedicated to the stories of gashkibidaaganag associated with Minnesota's seven reservations.





# Mille Lacs Lake research includes odoonibii, ogaa

## Expansion of the telemetry project

In May and June, biologists from Mille Lacs Band, Fond du Lac, and GLIFWC worked together to implant additional acoustic transmitters into juvenile ogaa (walleye; n=35), adult ginoozhe (northern pike; n=20), and small, 5.6-10 inch, asaawe (yellow perch; n=20) in Mille Lacs Lake.

This study aims to understand habitat use of these three beings throughout the year. The findings from this research will help biologists understand how food web interactions with predators (ginoozhe) and prey (asaawe) may be influencing walleye movements in the lake.

In June, biologists focused on deploying additional receivers into rivers connected to Mille Lacs Lake. Adding these receivers will allow biologists to monitor movements of the aforementioned fish into the surrounding rivers.

This research will inform conservation and management strategies for fish habitat in the watershed.

—Dr. A. Shultz, D. Lord, and C. Klimah



GLIFWC intern, DeVonna Lord, deploys a receiver in the mouth of a river connected to Mille Lacs Lake. (A. Shultz photo)



Total length of an adult ginoozhe taken before an acoustic tag was implanted in its peritoneal cavity (space inside its belly). (C. Klimah photo)

## Harvest survey

(continued from page 4)

Many ricers living in Wisconsin will have already seen the annual harvest survey in your mailbox. We're very interested to receive your survey results, and ultimately learn how you ricers did across the state. So, if a survey does show up in your mailbox, please take a few minutes to fill it out and send it in, even if you didn't get the chance to rice this year.

The database of harvesting information builds each year, and will be a legacy to leave to the manoomin stewards that will be here long after we are gone. It can be one small way to give back to a more-than-human being that has done so much for us all.

## Copperwood mine

(continued from page 4)

A feasibility study completed by G Mining Services Inc. in 2018 slated mining to begin at Copperwood in 2021. However, mining cannot begin until the Act 10 permit is issued and there is currently no timetable for that permit decision. And with copper prices on a downward trend over the last year, the economic benefit of Copperwood may not be high enough to support the mine. GLIFWC will continue to monitor this project as it progresses.

## Tullibee to be included in telemetry study

This fall, Mille Lacs Band Biologists, Carl Klimah, and research technician for Mille Lacs Band and former intern at GLIFWC, Jalyn LaBine, will be implanting acoustic transmitters in odoonibii (tullibee; Image 1).

The tagging will occur during spawning in the fall when odoonibii move into shallow and cooler water. Odoonibii is thought to be an important prey item for larger predators in the ecosystem and likely serve as forage for adult ogaa (walleye) when other prey resources become limited, for example asaawe (yellow perch).

By tracking odoonibii movements throughout the year, we will gain insight into when and where this prey item is in close proximity to adult ogaa.

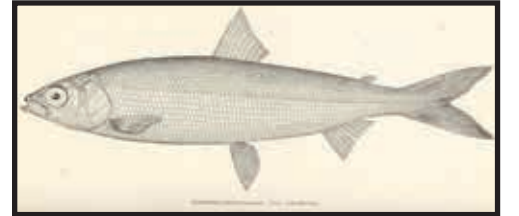


Image 1. Drawing of a odoonibii (tullibee/cisco). (Source: Freshwater and Marine Image Bank)

## Biologists create animations of ogaa movements

Biologists have also begun analyzing movement data of adult and juvenile ogaa (walleye) from summer 2018 to spring 2019. An animation of an adult ogaa movements during this time period was recently posted online ([www.facebook.com/pg/mlbndnr/posts/](http://www.facebook.com/pg/mlbndnr/posts/)) and shows limited movements in the lake for most of the year until ice off when it moved to a known spawning area (Image 1). More animations of adult and juvenile ogaa will be published in the coming months and will include multiple fish in the same animation.

For more information, please contact Mille Lacs Band Fisheries Biologist, [Carl.Klimah@millelacsband.com](mailto:Carl.Klimah@millelacsband.com) or GLIFWC Fisheries Biologist, [aaronshultz@glifwc.org](mailto:aaronshultz@glifwc.org). Direct link to the animation: [www.facebook.com/mlbndnr/posts/2280494882054167?comment\\_id=2282218198548502](http://www.facebook.com/mlbndnr/posts/2280494882054167?comment_id=2282218198548502) —Dr. A. Shultz



Screenshot of an animation that tracks an adult ogaa (walleye) near Isle from summer 2018 to spring 2019. Please visit Mille Lacs Band Department of Natural Resources Facebook Page to watch the animation. [www.facebook.com/mlbndnr/posts/2280494882054167?comment\\_id=2282218198548502](http://www.facebook.com/mlbndnr/posts/2280494882054167?comment_id=2282218198548502)



## HACCP Certification Course (Hazard Analysis and Critical Control Point)

Sponsored by GLIFWC,  
in partnership with MSU Sea Grant

This training is for fishermen, processors, regulatory personnel, and others to identify and evaluate food safety risks, learn seafood rules and regulations, and how to develop a HACCP plan for the safe handling and processing, including smoking and freezing, of seafood and seafood products, including treaty harvested fish, that will be sold commercially.

After completing the three-day course, participants will receive a HACCP Certification from the Association of Food and Drug Officials. **Participants must attend all three days to obtain the HACCP certificate.**

**Where:** Keweenaw Bay Ojibwa Casino and Resort  
16449 Michigan Ave. (M-38), Baraga, MI

**When:** December 10th, 11th, and 12th, 2019

**Registration:** Contact Owen Schwartz 715-685-2147 or [oschwartz@glifwc.org](mailto:oschwartz@glifwc.org)

**Hotel:** Contact Zoongee Leith-Mayotte at 715-685-2138 or [zleith@glifwc.org](mailto:zleith@glifwc.org)



# Work continues to protect Gichigami habitats from stamp sand incursions

By Esteban Chiriboga, Bill Mattes, Ben Michaels, & Jen Vanator, GLIFWC Staff

**Gay, Mich.**—GLIFWC staff continue to work in cooperation with other tribal, state, and federal agencies as well as academics at Michigan Technological University, on a permanent solution to erosion and littoral migration of stamp sands in the vicinity of Gay, Michigan. Leaching of trace metals (copper) from stamp sands has been well documented and research has shown that many areas of stamp sands are unable to support vegetation. Concentrations of metals in water with stamp sand substrates have been found above toxicity thresholds for many animal and plant species.

At Gay, stamp sand migration is threatening an important lake trout and whitefish spawning and nursery site. Buffalo Reef is a 2,200-acre shallow cobble spawning reef that provides significant lake trout and whitefish spawning habitat in the Michigan waters of Lake Superior. Stamp sands have already covered large areas of nearshore sands, which are known nursery habitat for whitefish.

Stamp sands are also encroaching on Grand Traverse harbor, a small craft harbor of refuge maintained by the US Army Corps of Engineers (Corps) that is located immediately southwest of Buffalo Reef. The harbor also serves as a primary commercial fishing harbor for tribal fishing boats exercising treaty-guaranteed fishing rights. In addition, the harbor is used by resource agencies conducting fish assessments, and recreational boaters (Map 1).

## Alternatives analysis

An interagency group called the Buffalo Reef Task Force (BRTF) has formed to work on the complex issues surrounding the stamp sand problems in the Keweenaw Peninsula. This group, led by the Keweenaw Bay Indian Community (KBIC), the Michigan Department of Environment, Great Lakes and Energy (EGLE), and the Corps, was tasked with identifying and characterizing potential options to halt the spread of stamp sands into Grand Traverse Bay and permanently contain this material. The BRTF identified eleven potential remediation approaches, known as "alternatives," based on technical staff input as well as public input gathered at two public meetings held in Lake Linden, Michigan. After carefully considering all available information, the BRTF identified the three alternatives that met the goals of environmental protection and permitability. The alternatives are:

1. Dredge stamp sands from the beach and lake bottom areas with disposal in a newly constructed landfill nearby. The landfill would be built in upland areas to avoid wetland impacts.
2. Continue periodic maintenance dredging for stamp sands at the harbor and lake bottom areas and build a stone revetment around the largest remaining stamp sand pile.
3. Dredge stamp sands and transport them to the White Pine tailings basin for permanent disposal.

Each of these alternatives has positives and negatives as well as differences in overall cost, so continued analysis is required before a final decision is made. The next step is to begin a more detailed design and cost estimation process to better



Map 1. From the historic stamp mill site four miles down the Lake Superior shore, stamp sands cover both land and lakebed. (E. Chiriboga map) Inset: Buffalo Reef is located north of Keweenaw Bay Indian Community, Gikiwe'onan-miigwaan. (D. Unglaube map)



assess the viability of these three alternatives. The Corps will lead this effort with ongoing input from the BRTF.

## Ongoing protection efforts

The ongoing erosion of stamp sands from the main pile at Gay and its movement southward along the beach as well as into Lake Superior itself constitutes an escalating environmental problem for the region. It will take time to fully develop the permanent containment alternatives, so while that process moves forward, the agencies of the BRTF are working on some actions designed to protect Buffalo Reef and the harbor on a short-term basis. They are not meant to be permanent solutions; they are merely designed to buy time until the permanent solutions are fully characterized and implemented.

## Maintenance dredging

Beginning in the spring of 2019, a dredging company has been working at the Traverse River harbor clearing stamp sands from the channel, and from areas immediately adjacent to the Traverse River seawall. In addition, sections within the Corps right-of-way north of the channel have been cleared of stamp sands to prevent a re-filling of the channel during storms. The stamp sands that have been dredged from the harbor area were moved as a slurry through an approximately 4-mile pipeline to a containment area located on the main stamp sand pile near Gay. This area is far enough from the Lake Superior shoreline to provide protection from wind and waves and prevent the dredged material from being re-mobilized into the lake. At this time, the channel has been restored to its full navigational depth and dredging of the harbor area has been completed.

Dredging is also planned for an area of deep water located north of Buffalo Reef. This area, an ancient river channel often called the trough, has been acting as a trap for stamp sands moving off the main pile into the Lake. Dredging this trough to provide a new sand trap will protect the cobble spawning habitat that is under threat. Unfortunately, this dredging has been delayed until the Spring of 2020 because of equipment and personnel issues that the dredging contractor has been unable to overcome.

Last August, the director of the Environmental Protection Agency's Great Lakes National Program Office (GLNPO) Chris Korleski visited Grand Traverse Bay and toured the impacted areas on the beach and was able to view the impacted areas in the lake courtesy of the Michigan Tech research vessel. Korleski was accompanied by GLIFWC Executive Administrator Mic Isham and KBIC President



A barge at Grand Traverse Harbor dredged stamp sands from the bottom of the Traverse River last August, sending the mining waste through a 4-mile pipe to an upshore containment area. (CO Rasmussen photo)



Engineers converse atop a stamp sand ridge near Gay, Michigan. The smokestack to the decommissioned Mohawk stamp mill appears in the background. (CO Rasmussen photo)

Warren C. Swartz Jr. The objective of this visit was for GLNPO to gain first hand knowledge of the impacted areas and the challenges that must be overcome in order to fully restore the site and protect Buffalo Reef.

## Stamp sand cliff pull-back

The most rapid rate of stamp sand erosion into Lake Superior is at the main pile. A stamp sand cliff is completely exposed to wind and wave action. To reduce the rate of erosion, the State of Michigan is working with a private company to move or pull-back stamp sands away from the shoreline. Doing this will also eliminate the unstable cliff feature at the site. Work on this project is contingent on securing funding from the State of Michigan.

## Beneficial re-use and toxicity testing

Several county road commissions in the area are planning to use stamp sands as winter road grit instead of salt. Toxicity testing on stamp sands indicate that this material is suitable for road grit and the BRTF is working to move a large quantity of stamp sands off the beach to county storage locations.

Source of Value	Low USD/Year	High USD/Year
Landlocked Open Water	14,094	15,964
Deciduous Forest	229,853	684,563
Evergreen Forest	67,416	212,163
Mixed Forest	99,972	314,618
Shrub/Scrub	8,032	8,259
Grassland/Herbaceous	18,300	20,128
Pasture/Hay	946	2,039
Cultivated Crops	538	1,417
Woody Wetlands	111,142	159,610
Emergent Herbaceous Wetlands	10,008	21,618
Commercial Forest	45,989	45,989
Reef Habitat Value	4,550	4,550
Aesthetic Value	1,867	1,867
<b>Total Annual Value</b>	<b>\$612,708</b>	<b>\$1,492,785</b>

Table 1.

Estimate	Lake Trout	Whitefish
Average annual Tribal commercial harvest in round pounds within 50 miles of Buffalo Reef from 1986-2017	100,317	221,823
Average annual State commercial harvest in round pounds	-	104,108
Total average harvest within 50 miles, 1986-2017	100,317	325,931
Average annual harvest pounds lost due to Buffalo Reef Habitat destruction (29% lake trout, 42% whitefish)	29,092	136,891
Weight Ave. of monitored - lbs./fish sampled	2.99	2.70
Number of adults needed to replace those lost to habitat destruction	9,730	50,700
Projected survival rate stocked yearlings to adult age 7 years	0.01	0.01
Number of Yearlings required to replace adults	972,974	5,070,038
Hatchery Production Costs - Great Lakes Region - Size 6-7 inches	\$2.28	\$0.46
Annual Production Value of Buffalo Reef	\$2,218,381	\$2,332,217
<b>Total Annual Production Value of Reef</b>	<b>\$4,550,599</b>	

Table 2.

## Ecosystem service valuation

Stamp sands have been eroding off the main pile at Gay and moving into Lake Superior and along the shoreline for approximately 100 years. The process of restoring and permanently containing a long-term environmental problem of this magnitude will take a long time and have a large cost. At this time, the rough estimate of the cost of implementing one of the three preferred alternatives is in the hundreds of millions of dollars. In order to justify the cost, GLIFWC contracted with Earth Economics to develop an ecosystem service valuation (ESV) for the Keweenaw Peninsula region. Ecosystem services are benefits that society receives from nature that can be assigned a dollar value by economists. Drinkable water and flood control are examples of ecosystem services and can be valued as other traditional economic benefits like skilled workers or infrastructure. When ecosystem services are lost, the economic impact of that loss can be measured. For the study area ecosystem values we developed for a number of categories and the study indicates that the total ecosystem services value provided by the lands and waters in the study area are at least \$613 million to \$1.5 billion each year. The categories and values are summarized in Table 1.

For Buffalo Reef specifically, we assume its habitat value may be approximated by estimating the restocking costs for the lake trout and whitefish fisheries supported by the reef. This includes both the tribal and state commercial fisheries. Based on tribal and state harvest records, Buffalo Reef provides \$4,550,599 per year in ecosystem services for the commercial fishery (state and tribal). If Buffalo Reef were lost, this is the amount of money that would need to be spent per year in order to replace the fish that Buffalo Reef produces now at no cost. The breakdown of the fishery ESV analysis is provided in table 2. Over the next 100 years, Buffalo Reef will provide \$455 million dollars to the local economy through the commercial and recreational fishery. It is important to note that this value underestimates the actual contribution of Buffalo Reef. Furthermore, it is likely that Buffalo Reef supports other species of fish for which catch data are not available. The analysis makes clear that a monetary value cannot be placed on the treaty rights that are currently exercised in this area.

Based on these results, the BRTF can argue that the hundreds of millions of dollars required to protect the fishery and restore stamp sand affected habitats is a good long-term investment for the region. We hope that this will strengthen the effort to locate funds to implement one of the long-term containment alternatives. (see Buffalo Reef, page 20)



A watery slurry of mining waste and other materials dredged from Grand Traverse Harbor flows into a containment basin near the main body of stamp sands. (E. Chiriboga photo)





# Gashkibidaaganag: bandolier bag

Bandolier bags are a Native American accessory closely tied to the Anishinaabeg. The bags are large, heavily beaded pouches with a slit at the top, and a beaded strap worn diagonally over the shoulder, in cross body fashion. They can be made of cotton, wool, velvet or leather.

Bandolier bags are decorated with thousands of colorful glass seed beads. The Ojibwe began to use these beads after European traders brought them to Minnesota and the surrounding area during the Fur Trade in the 1600s. The beads are sometimes referred to as Manidoominens, or tiny spirit berries.

In the 1800s women started to bead Bandolier bags for special occasions. They often made them to complete ceremonial outfits worn by men. They were also given as gifts during intertribal gatherings. It is said that the bags were so valuable that they could be traded for a pony!

Bandolier bags can have floral or geometric designs. The floral design is typical of the Great Lakes Ojibwe. It first appeared around 1800 and by 1900 had become a very popular pattern in the region. Women used bark and later, paper patterns to complete their bags. They would trace leaves and other native plants to create the patterns to bead.

Today, there are primarily two techniques used to bead Bandolier bags: spot-stitching and loom-beading. Spot-stitching is when beads are strung onto one thread and then laid in place. The beads are tacked down with additional thread at certain spots. This method is often used to create curving floral forms. Loom-beading uses a wooden loom to weave bead designs that are more linear or geometric in pattern.

Ojibwe people of the Great Lakes region have been decorating clothing and objects with floral and geometric patterns for thousands of years. And the tradition continues! Some patterns that you see today may be hundreds of years old, while others are new. What type of design would you make on your Bandolier bag?

Thanks to the following resources for providing cultural and historical information for this page: *Gashkibidaaganag: Bandolier Bag Activity Guide for Children* by Alison Aune and Wendy Savage, Milwaukee Public Museum. —P. Maday



*This summer at Camp Onji-Akiing, campers learned about the history and cultural significance of Bandolier bags. With guidance from cultural educators Steve Perry, Mary Robinson, and Tiffany Leach, they sewed bandolier bags representative of the Seven Grandfather Teachings. Each clan worked on a central panel together, then sewed side patches individually. Upon completion, the clans talked about their designs and gifted each bag to an adult mentor they felt embodied that quality. The “Love” bag was presented to camp organizer Heather Bliss, and the “Respect” bag to Chief Warden Adam McGeshick. Particularly touching was the presentation of the “Courage” bag to warden Holly Berkstresser, who was battling breast cancer. (COR photo)*

## Design your own bandolier bag!

**What type of cloth will you use to make your bag?**

Cotton      Wool      Velvet      Leather

Other: \_\_\_\_\_

**What type of design will you have on your bag?**

Floral      Geometric      Other: \_\_\_\_\_

**What color beads will you use?**

Red      Orange      Yellow      White

Black      Blue      Green      Purple

Pink      Other: \_\_\_\_\_

**What is the best beading technique for the design you’ve chosen?**

Spot-stitching      Loom-weaving

**Who will your bandolier bag be for?**

Yourself      Family      Friend

Other: \_\_\_\_\_



*Campers were given the opportunity to color and decorate their own Bandolier bags this year. Aeisha Deragon, Bad River, models the bag that she colored. These bags are available for purchase from GLIFWC. (H. Naigus photo)*

## Order your own bandolier bag!

GLIFWC now has Bandolier bags available for purchase. Each bag is made from 100% cotton and features an Ojibwe woodland floral design on the front center panel. This design can be colored with markers or puffy paint, or even beaded! Blank space around the edges, on the back and strap allow you to be creative in making the bag your own! You can also add embellishments such as buttons or fringe to your liking. *Pro tip: Place a piece of museum board or foam board inside the bag while you color for more precise application.* GLIFWC’s bandolier bags are available as a set of five for \$12.50 plus postage. Order via the form on page 20, or by emailing [lynn@glifwc.org](mailto:lynn@glifwc.org).

**For more Native American inspired art ideas and projects, please visit: [www.d.umn.edu/tma/exhibitions/intersections/IntersectionsArtGuide.pdf](http://www.d.umn.edu/tma/exhibitions/intersections/IntersectionsArtGuide.pdf)**







# Tribal Climate Adaptation Menu

(continued from page 3)

well as other federal agencies including the US Fish and Wildlife Service, Bureau of Indian Affairs, US Forest Service, Natural Resources Conservation Service, and the National Oceanic and Atmospheric Administration.

In 2019, awards were given to:

- \* Tidal Marsh and Barrier Beach Restoration, Prime Hook National Wildlife Refuge (federal government recipient)
- \* Climate Change Adaptation and Mitigation Plan, Pennsylvania Department of Conservation and Natural Resources (state or local government recipient)
- \* *Dibaginjigaadeg Anishinaabe Ezhitwaad—A Tribal Climate Adaptation Menu*, The Tribal Adaptation Menu Team (tribal government or organization recipient)
- \* Brian Obermeyer & Chris Hise, Site Wind Right, The Nature Conservancy (nongovernmental recipient)
- \* Gunnison Basin Wet Meadow and Riparian Restoration Collaborative (broad partnership recipient)
- \* Jessica Halofsky, University of Washington and USDA Forest Service, Pacific Northwest Research Station (individual achievement recipient)
- \* Tracy Melvin, Michigan State University (student leadership recipient)

Award recipients were selected from among 20 nominations. For more information on the Climate Adaptation Leadership Award, please visit: [www.wildlifeadaptationstrategy.gov/award.php](http://www.wildlifeadaptationstrategy.gov/award.php).

*Dibaginjigaadeg Anishinaabe Ezhitwaad—A Tribal Climate Adaptation Menu* utilizes indigenous knowledge, culture, language and history to plan meaningful climate adaptation action. Developed as part of the Climate Change Response Framework, the Tribal Climate Adaptation Menu is designed to work with the Northern Institute of Applied Climate Science (NIACS) Adaptation Workbook, and as a stand-alone resource. An extensive collection of climate change adaptation actions for natural resource management, the menu is organized into tiers of general and more specific ideas. It also includes a Guiding Principles document, which provides detailed considerations for working with tribal communities.

“Everyone on the Tribal Adaptation Menu team is doing this work from the heart, so it’s a labor of love. We are a family,” GLIFWC Climate Change Program Coordinator Rob Croll said. “Being able to use the menu to help bridge the gap between tribes and partner agencies, and create climate adaptation plans that are rooted in indigenous ways but work in both worlds, is truly rewarding.”

To view the document in its entirety, please visit: <http://glifwc.org/ClimateChange/TribalAdaptationMenuV1.pdf>.

# 2020 phenology calendar

By Climate Change Program Staff



Phenology is the study of the timing of biological events throughout the year—when maple sap starts running, ruffed grouse begin drumming, or blueberries ripen. Paying attention to seasonal events for cues as to when to start or stop harvesting certain beings is how Ojibwe people have survived on the landscape since time immemorial.

This year’s phenology calendar is a compilation of observations from the beginning of the Climate Change Program in 2015. Our sources include GLIFWC staff calendars, our online phenology calendar, the phenology flyers in the Winter 2017/2018 and Spring 2018 Mazina’igan issues, the Cable National History Museum phenology calendar, the Bayfield Middle School Alternative Education

students’ Lake Superior Ojibwe Moon and Phenology Calendar, and data collected by GLIFWC biological services staff. These dates are estimates and will vary by year and by location in the Ceded Territories.

For example, while the calendar suggests maple sap will begin to flow on March 15, in 2016 it started to flow on February 21 in Mason, Wisconsin and in 2018, it started to flow on April 11 in Ishpeming, Michigan. You can help us by submitting your own observations of these phenological events and see your observations appear on future calendars! This is a great activity for families, teachers, or anyone that enjoys spending time outdoors.

Submit your observations by filling out and mailing in our winter/spring phenology flyer found on page 16, or using by our online submission form found here: <https://data.glifwc.org/phenology.calendar/>. (see **What are you observing in the Ceded Territories**, page 16)

PLACE  
STAMP  
HERE

Tape and stamp this form and return to GLIFWC by June 30, 2020. Make sure to include the information below:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Tribal affiliation (if any): \_\_\_\_\_

\_\_\_\_\_

Phone number or email: \_\_\_\_\_

To submit observations via our online submission form or for additional copies of this form, go to:


<https://data.glifwc.org/phenology.calendar/>

Please print return address :

\_\_\_\_\_


\_\_\_\_\_

\_\_\_\_\_




**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 June 30, 2020.



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





# A bumper crop of miinikaanan

(continued from page 1)

in the late summer/fall collecting miinikaanan on the Chequamegon Nicolet National Forest from baapaagimaakoog as well as from wiigwaasaatigoog (paper birch), to which climate change is also a threat.

The window of time for collecting miinikaanan is small—typically two to three weeks at most. Baapaagimaak miinikaanan were collected in mid-September, as soon as the wings of the miinikaanan faded from green to yellow or brown. Before staff collected miinikaanan from any tree they offered asemaa (tobacco) and asked the tree for permission to harvest. While some collectors cut down entire trees to collect miinikaanan, or shoot shotguns to knock them down from high branches, our goal is to collect miinikaanan with as little impact to the trees as possible. Since black ash is typically not very tall, we used a pole pruner with multiple segments to snip a few branches and hand-pick the miinikaanan.

Paper birch miinikaanan were collected in early to mid-August, when catkins (the structures that store the miinikaanan) just started to turn brown. These were collected using an arborist's slingshot, which is necessary as wiigwaasaatig produces miinikaanan in the upper reaches of the canopy—too tall for a pole pruner. The slingshot is used to send a rope up over a branch, then a "pocket chainsaw"—a small narrow saw—is attached to the rope and pulled up and over the branch. With a quick back-and-forth motion, the branch is cut and dropped onto the ground. We can then hand-pick for collection. Wiigwaasaatig typically produce a large crop of miinikaanan every other year.

Climate change staff collected seeds from 26 baapaagimaak and 32 wiigwaasaatig. Once the miinikaanan are collected, they need to be cleaned. For baapaagimaak, this means sorting through the



Rob Croll cut a branch from a wiigwaasaatig along a roadside in the Chequamegon Nicolet National Forest to collect miinikaanan (seeds) for long-term storage. (H. Panci photo)

**Before staff collected miinikaanan from any tree they offered asemaa (tobacco) and asked the tree for permission to harvest.**

miinikaanan to remove any with insect holes, spider webs, mold, or anything else that might add moisture to the sample. For wiigwaasaatig, the process is a bit more ambitious. Catkins are gently broken apart and screened through a series of soil sieves until just the miinikaanan remain (removing the stem and the bracts that hold the miinikaanan onto the catkin). The wings of the miinikaanan are rubbed off and the miinikaanan are run through a seed blower to remove empty miinikaanan (miinikaanan without any genetic material inside) which can make up a large proportion of a sample.

Once cleaned, the miinikaanan are packaged and shipped to the National Center for Genetic Resources Preservation in Fort Collins, Colorado, where they are stored indefinitely in a cold storage facility. They are stored at -18°C and with low humidity; in those conditions the miinikaanan can stay viable for decades. GLIFWC has a Material Transfer Agreement with the Center which ensures that GLIFWC and our member tribes retain ownership of the miinikaanan and must be contacted for any withdrawal requests.

Moving forward, GLIFWC is looking for partners to assist in the collection and storage of miinikaanan from baapaagimaak, wiigwaasaatig and other culturally important beings. If your tribe or organization currently collects miinikaanan, or would like resources on starting a miinikaanan storage program, please contact Rob Croll, Climate Change Program Coordinator, at [rcroll@glifwc.org](mailto:rcroll@glifwc.org).

(continued from page 15)

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

\*\*\*Please record the date, location, and species (if applicable) for each observation. Return to GLIFWC by June 30, 2020. Miigwech!

<u>Biboon / Winter</u>	<u>Date/Location</u>	<u>Ziigwan / Spring</u>	<u>Date/Location</u>
First white coat seen (snowshoe hare, ermine) _____		First flowers on trees _____	First dragonfly _____
First snowfall _____		First leaf buds bursting on trees _____	First rain _____
First snow that sticks _____		First new needle growth on trees _____	First thunderstorm _____
First temperature below zero _____		First maple sap flowing _____	First crusty snow _____
Ice storms/unusual storms _____		End of maple sap season _____	Last snow before summer _____
Lake freezes (specify lake) _____		First plants (species) _____	Last frost before summer _____
First walleye caught through the ice _____		First leeks harvested _____	First night above freezing (32°F) _____
First musky speared through ice _____		First wildflowers blooming (species) _____	Ice out (specify lake) _____
First eagles at nests _____		First fiddleheads harvested _____	First canoe (lake/river) _____
First snow fleas _____		First deer fawns _____	First mushrooms harvested _____
First ski / snowshoe _____		First bear _____	<u>Other ziigwan observations:</u>
First deer antlers dropped _____		First frogs calling (species) _____	_____
Last deer with antlers seen _____		First walleye speared (lake) _____	_____
First day above freezing (32°F) _____		Walleye spawning (lake) _____	_____
<u>Other biboon observations:</u>		First fish caught (species) _____	_____
_____		First fish spawning (species) _____	_____
_____		First suckers running (river) _____	_____
_____		First arrivals of birds (species) _____	_____
_____		_____	_____
_____		First woodcock mating call _____	_____
_____		First grouse drumming _____	_____
_____		First turtle laying eggs (species) _____	_____
_____		First tick _____	_____
_____		First mosquito _____	_____
_____		First hummingbird _____	_____





*The Wolf Awareness Week 2019 annual poster includes excerpts of Ojibwe ma'ingan management plans, plus a poignant essay by Peter David, GLIFWC wildlife biologist. Limited quantities of the poster are available from GLIFWC's main office, or order a copy at: <https://www.northland.edu/sustainability/soei/twa/wolf-awareness-poster>. An excerpt from the essay:*

"In the Ojibwe creation story, Original Man tells the Creator that he is suffering from a loneliness of spirit. The Creator addresses his need by providing Ma'ingan (wolf), as a companion and confidante to walk, talk and play with. He also assigns the pair the task of visiting all the Earth's places together, ensuring that a great bond would form between them. Indeed, they grew very close, and became like brothers. Thus, it must have been a shock when they returned to the Creator after completing their task, and being informed that going forward: "You must walk separate paths and go your different ways. But what shall happen to one of you, shall also happen to the other."\*

This unique relationship forms the basis of the Ojibwe's Treaty with Ma'ingan. Eons before the land cessation treaties, the Ojibwe formed treaties with the more-than-human beings of the world, which they depended upon for their own survival. Those beings, including the wolf, took pity on the feeble humans, and agreed to provide for them."

*\*This telling of the Creation Story based primarily upon the version in The Mishomis Book, by Edward Benton-Banai*

## Model food codes

(continued from page 2)

"In no way do we want to over-regulate or create a code that would overburden harvesters and providers," Coffin said.

### Customizing miijim regs

Following a methodical tour of Ojibwe homelands from Bay Mills to Mille Lacs, GLIFWC staff is moving into the final phase of an effort to help Ojibwe member bands establish food processing standards for traditional foods.

At community roundtables, tribal members pinpointed miijim emblematic of local culture and traditions. The Red Cliff Band, for example, chose Lake Superior whitefish; for Lac Vieux Desert, it was walleye. Wild rice and venison join giigoonh among the top picks. Now GLIFWC staff is plotting a return to all 11 reservations to engage with communities in a series of trainings, workshops, and discussions.

"We'll be conducting three more workshops in each community through next October," said Owen Schwartz, GLIFWC community dietitian. "The first will focus on the traditional food chosen by the community. The next two meetings will provide food harvesters, handlers, managers, and regulators with a deeper dive into food safety and codes." Led by Policy Analyst Philomena Kebec, project staff will all also address tribal councils to provide technical, legal, and policy assistance on tribal food system development.

For Schwartz's part, she'll be detailing template procedures that harvesters and processors can use to safely process traditional foods. A hunter and avid woodland forager, Schwartz combines traditional harvest know-how with expertise in food safety laws, including the suite of Hazard Analysis Critical Control Point (HAACP) regulations developed by the federal government. Drawing from HACCP instructor certification, she'll provide technical assistance to bring food like deer meat from Ceded Territory forests to the butcher shop and onto menus for community consumption.

Keep up-to-date with food code developments at [www.facebook.com/GLIFWC/](https://www.facebook.com/GLIFWC/) and *Mazina'igan*. For specific questions, contact Project Coordinator LaTisha Coffin at 715.685.2128.

## Respecting our ceremonial drums

(continued from page 9)

That is why drum members are told, "Do not say anything bad about the other drum members you sit with." Each drum member represents a Manidoo. If they were to say something bad about one another that negativity will be directed toward that Manidoo they represent in their position.

**Ishke ani-aabiji-ayaamagak imaa maanaadak miinawaa maawawich-igewin ayaamagasinok, mii-go da-ni-maajaapan a'aw Manidoo-dewe'igan. Ishke ingiw Anishinaabebaneg gaa-ikidowaad, mii-go iwidi Waabanong jüigi-gichigaming da-asigishinowaapan ingiw Manidoo-dewe'iganag giishpin weweni ganawenjigaazosigwaa.**

If there is always negativity at those dances and drum members are not working together that particular drum could eventually leave us. Our old people said that eventually our drums would collect on the east coast near the ocean if we do not take care of them.

**Ishke niswi ingiw Manidoo-dewe'iganag iko gaa-ayaajig, gaawiin geyaabi ayaasiwag. Ishke a'aw bezhig a'aw Manidoo-dewe'igan gii-chaagizo. Ishke dash gaa-izhichiged a'aw gaa-pimiwinaad inow Manidoo-dewe'iganan, gii-tazhibii imaa awedi bezhig inow Manidoo-dewe'iganan gii-abajichigaazonid. Mii imaa chi-enigok gii-paaga'akokwed imaa gii-wawenabid inow Manidoo-dewe'iganan gaa-aabajichigaazonid. Azhigwa dash gaa-ni-giiwed, mii imaa gii-chaagidenig endaad, mii dash imaa gii-angogaakizonid inow Manidoo-dewe'iganan gaa-kanawenimaajin.**

Three of our drums that once existed are no longer here. One of those drums burnt. The drum keeper of that particular drum had gone to a ceremonial dance while he was intoxicated. He was hitting the drum real hard while he was there. When he went home his house burnt and the drum he was taking care of burnt completely in that house fire.

**Ishke dash ingiwedig niizh Manidoo-dewe'iganag, mii ingiw gaa-aginzojig apane-go gii-kiikaandiwaad gii-maji-dazhindiwaad, gaawiin i'iw maamawichigewin imaa gii-ayaamagasiniin azhigwa gii-aayaabaji'aawaad inow Manidoo-dewe'iganan.**

Now those other two drums are no longer here. Those who belonged on those drums always argued, talked bad about one another, and did not work together as a group when they had their dances.

**Mii dash bezhig a'aw Manidoo-dewe'igan azhigwa gaa-kiizhi-aabaji'aawaad gaa-onaagoshininig, azhigwa dash gaa-gigizhebaawagadinig gii-pi-dagoshinowaad. Weniban da-abinid inow odewe'iganiwaan.**

This one particular drum after it had been used on a Friday evening, when they came the following morning the drum was gone and not sitting there.

**Awedi dash bezhig a'aw Manidoo-dewe'igan gaa-wani'ind. Mii a'aw gaa-niigaanizid gii-tibendamookaazod inow Manidoo-dewe'iganan. Gaawiin dash ganabaj ogii-gikendanzin. Mii eta-go awiya ganawendamaaged inow Manidoo-dewe'iganan, gaawiin odibenimaasiin.**

The other drum that is no longer here, the headman believed he owned the drum. Maybe he did not know that our teaching is that we do not own the drum that we only take care of it. It belongs to the Manidoog and the people. We do not own it.

**Ishke dash azhigwa gaa-ishkwa-ayaad a'aw naagaanizid gii-nando-damaage da-ningwa'igaazonid inow Manidoo-dewe'iganan. Mii dash a'aw ishkwaa jii gii-waabanjigaazod a'aw Manidoo-dewe'igan.**

When that old man died he asked that the drum be buried also. Upon his death the drum was no longer seen again.

**Ishke dash mii-go dibishkoo gaa-izhiwebizijig, gii-gagwaadiziwag apii gii-niimi'idiikwewaad. Gaawiin imaa maamawichigewin gii-ayaamagasiniin gii-maji-inendindiwig ingiw imaa gaa-tibendaagozijig.**

It was the same situation with this drum; the drum members had a difficult time. At each dance they had they did not work together, they only had negative thoughts about one another.

**Gaawiin omaa awiya nimaji-inaasiin. Mii eta-go waa-onji-wiindamaageyaan da-gikendang a'aw Anishinaabe. Gaawiin i'iw majayi'ii omaa da-ayaa-magasinoon ani-aabajichigaazowaad ingiw Manidoo-dewe'iganag. Mii-go gegapii ge-izhi-maajaawaapan.**

I am not saying anything bad about anybody. I am only telling this so our Anishinaabe know what can happen. When there is a lot of negativity in and around these drums when they are used, these drums could eventually just up and leave.

**Ishke gaye noongom ezhiwebak i'iwapii ani-aabajichigaazod a'aw Manidoo-dewe'igan, giwaabamaanaan a'aw abinoojiinh noongom gaawiin imaa bizaanabisiin. Mii imaa babaamibatood dibishkoo-go gaawiin odapiit-enimaasiin inow Manidoo-dewe'iganan ayaabajichigaazonijin.**

What is happening today when the drums are used we see that the kids are not sitting still at these ceremonies. They are running around as if they have no appreciation or respect for the drum that is being used.

**Ishke niin gaa-izhi-gikinoo'amaagooyaan giishpin imaa babaamibatooyaan megwaa imaa endazhi-niimi'idiikeng, bangishinaan indaa-wenda-wiisagishin. Mii gaye gaa-igooyaan, ingii-wiindamaagoo ingiw Manidoog imaa ishpingim ayaawaad megwaa baakishininid inow Manidoo-dewe'iganan. Ingii-igoo, "Odaa-wenda-minwendaanaawaa waabamikwaa ingiw Manidoog bizaan imaa nanaamadabiyaa."**

What I was taught when I was younger that if I were to run around while I was at these dances, if I were to fall I would really hurt myself. I was also told, that those Manidoog were above that drum while it was being used. I was told that, "The Manidoog would really enjoy seeing you sitting still."

**Ishke wenda-apiitendaagoziwig ingiw Manidoo-dewe'iganag, booch a'aw abinoojiinh da-wii-manaaji'aad inow Manidoo-dewe'iganan. Ishke nizigi'igon iko waabandamaan a'aw abinoojiinh ani-apiitenimaasig inow Manidoo-dewe'iganan imaa ebinijin. Mii dash iko omaa gagwejindizoyaan, "Aaniin danaa aapidek ge-ni-inaadizid a'aw abinoojiinh ani-apiitenimaasig ezhi-manidoowaadizid inow Manidoo-dewe'iganan imaa ebinijin?"**

Our ceremonial drums are really thought highly of, and that children are expected to treat them with respect. It scares me to see a child that has no respect for that ceremonial drum that is sitting there. I ask myself, "How will that child live his life in the future if he also has no respect for the sacredness of that ceremonial drum sitting there?"





# Ceded Territory SCIENCE

## Humbolt ore processing mill changing Escanaba River chemistry

By John Coleman, Environmental Section Leader

In 2014 Lundin Mining began extracting metal rich sulfide ore from its mine in the Yellow Dog Plains north of Marquette, Michigan. Lundin hauls the ore from its mine to a processing mill in Humboldt, Michigan. The Humboldt Mill, extracts zinc, copper and other metals which are then shipped to smelters. Waste from the processing, water and tailings, is dumped in an adjacent pit lake (Photo 1) that remains from historic iron mining. That pit lake has been overflowing for years into adjacent wetlands and streams. Because of the new disposal of tailing and waste water into the pit lake, the water must be treated by Lundin before it is allowed to leave the pit lake and enter the surrounding wetlands and streams.

In 2018 the State issued revised discharge permits so that Lundin could discharge waste water directly into the Escanaba River, thereby avoiding the stricter water quality standards that were in place under a 2015 permit for disposal into the surrounding wetlands. Limits in the permit for Total Dissolved Solids (TDS) changed from a monthly average of 500 mg/L when the discharge went to wetlands, to 2,200 mg/L for Lundin's discharge directly to the river. Monitoring in the river shows a substantial change in water quality in the river since that discharge began.

GLIFWC Environmental Section staff have monitored water quality in streams and wetlands near the Humboldt Mill since 2010 and in 2017 contracted with the USGS to continuously monitor water chemistry in the Escanaba River downstream of the mill. Although approximately 30 chemicals have been monitored in the river, because of the ease of collection, and as an indication of general water quality, Specific Conductance @ 25 °C (SpC) has been the focus of field measurements and continuous monitoring. TDS (a measure of dissolved minerals in the water) is the measure controlled by discharge permits in Michigan. However, SpC has a fairly stable relationship to TDS at a site and can be used as a surrogate. SpC readings



Photo 1. Wastewater treatment plant and flooded historical iron mining pit. Waste water from the ore processing plant at the south end of the pit lake (off left of photo) is discharged into the pit lake, treated by the wastewater treatment plant and discharged to wetlands or, more recently, directly to the Escanaba River (off right of the photo). C. Moran photo)

in uS/cm are typically approximately 1.5 times TDS readings in mg/L. Specifically in the Escanaba River near Humboldt, USGS measurements from 2016 to 2017 of both parameters show that SpC readings are 1.35 times TDS readings. Both SpC and TDS are measures of the amount of minerals dissolved in the water.

Although continuous monitoring of SpC began in late 2017, water grab samples were collected by the USGS in 2016 and 2017 at that same location. They averaged 131 uS/cm of SpC with a maximum of 184 uS/cm. These values are typical of surface waters that receive inputs from both precipitation and groundwater. Additional data collected by the USGS from as far back as 1961 at other, nearby, sites in the Escanaba River ranged from 34 to 134 uS/cm and averaged 76 uS/cm of SpC.

In an effort to determine how the discharge from the mill has affected water quality, we compared SpC readings taken before the TDS permit limit was raised from 500 mg/L to 2,200 mg/L with SpC readings collected after the increase. High precipitation, and thereby high river flow is associated with lower SpC (and TDS) because the precipitation input to the river is very low in dissolved minerals. To correct for the effect of river flow on SpC, we investigated the relationship between flow (cfs) and SpC (uS/cm) in the river.

Using the SpC data collected by the USGS from 1961 to November 2018, staff developed a statistical model of the historical relationship between the amount of water in the Escanaba river (flow) and the SpC of the water. The data used in the model was from before November 1, 2018, because that is when Lundin began discharging very high SpC waste water directly into the Escanaba River. The historical relationship between flow and SpC was strong, with high flows producing readings of low SpC (Figure 1) as one would expect. (see Humbolt ore, page 19)

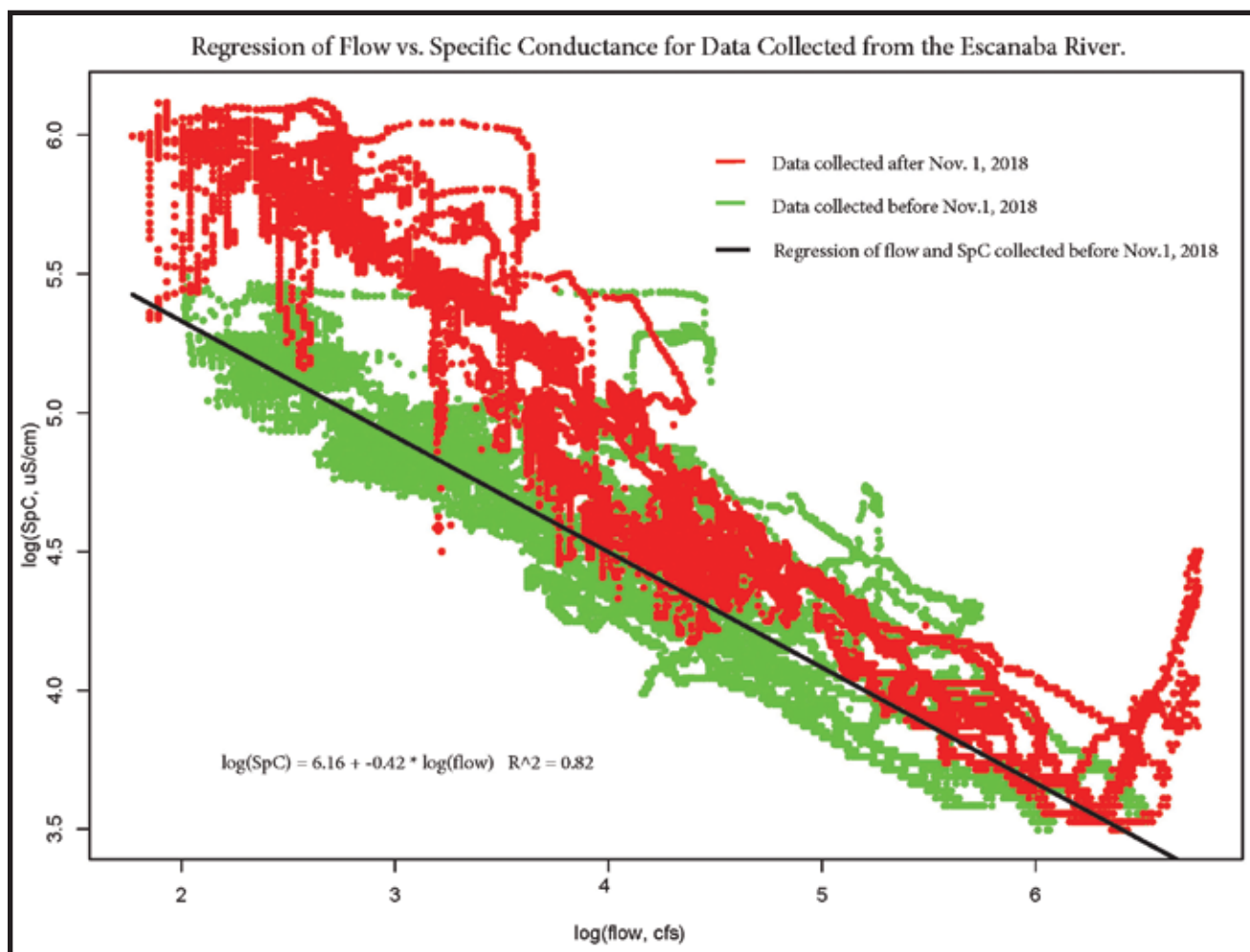


Figure 1. Plot of river flow (cfs) and specific conductance (uS/cm) collected near Hwy. 41 in the Escanaba River, downstream of discharge from the Humboldt Mill. Data was split into two sets, prior to direct discharge to the river, and after direct discharge began. Linear regression of log-transformed flow vs log-transformed SpC generated a model of SpC decreasing with increased flow in the river.





# Commemorating the Treaty of 1854

(continued from page 10)

Other youth in the crowd represented their communities as youth councils and drum groups. They were present to assist in the flow of the event and to take in the teachings and leadership.

“It’s a beautiful day to see all of our young people here and to know that our language and culture are kept alive,” remarked Bad River Tribal Chairman Mike Wiggins, Jr.

Tribal leaders from all around the State gathered around the table as the Chippewa Federation pipe was lit and asmaa (tobacco) was passed. The Chippewa Federation is a contingency of Ojibwe communities and leadership that meet multiple times throughout the year. The pipe travels to each community every year and leaders take turns sending up thoughts and prayers for their nations.

As the ceremonial items finished making their rounds, event organizers acknowledged an older gentleman, adorned in a ribbon shirt and magnificent eagle feather bonnet. Hereditary Chief Bob Buffalo turned to the crowd. “I want to welcome our youth, our women, our elders, and our leaders. Today is recognition of Treaty Day. It’s been 165 years marking the anniversary of the 1854 Treaty. I’m seeing a resurgence of the Ojibwe lifeway all across the region. We are gathering in numbers to show strength, to show love, and respect.”

As the kind, yet strong words filled the air, students and attendees fell into nearly absolute silence as speakers introduced themselves and shared a little about the gathering.

Before long, Lt. Governor Mandela Barnes arrived and the Great Lakes Inter-Tribal Council (GLITC) meeting was called to order. GLITC is an intertribal organization formed in the early 1960s to create unity amongst Wisconsin tribes. They help to



*Former St. Croix Tribal Chairman Lewis Taylor was honored by all present Wisconsin tribal leadership through a resolution at the Great Lakes Inter-Tribal Council and Chippewa Federation meeting during the gathering. Taylor was gifted with an eagle feather for his years of service to the people. (B. Jenning photo)*

implement programs and to gain traction with various forms of government and administration. Each tribal chairperson from the Wisconsin tribes presides on the GLITC Board.

GLITC Chairperson and President of the Stockbridge-Munsee Band of Mohican Indians, Shannon Holsey, eloquently opened the meeting. “An elder once told me that sovereignty isn’t just a word or a noun.

You are born into sovereignty. It’s who you are. We have been here since time immemorial. As we navigate this divisive climate, we always need to retain who we are.”

Tribal leaders stepped up to the stage one by one to sign a Memorandum of Understanding (MOU) with the State Department of Transportation. The MOU is the result of multiple years of collaboration and hard work.

Lt. Governor Mandela Barnes signed each agreement and posed for pictures with each tribal leader. “I want to first say it’s an honor to be invited here to the Treaty Day event. Government has the distinct duty to uphold treaties and the responsibilities that come along with them. Thank you to all of the tribal leaders and communities for all the work you do for the betterment of Wisconsin so that we can all be proud to call this place our home,” he said.

The crowd cheered and applauded Barnes’ kind and endearing words, while tribal leaders circled around former St. Croix Chairman Lewis Taylor. The tribes gifted Mr. Taylor with a bundle, gifts, and an eagle feather as the drum sang an honor song for the longstanding St. Croix representative.

In many ways, the Treaty Day gathering encompassed many mile markers across multiple generations. It was a reminder that Ojibwe lifeway is often thought of as circular. The treaty signing led to difficult times for the Ojibwe, but eventually circled back and would

be one of the very few things that saved this way of life. Former Chairman Taylor reiterated to the youth the difficult obstacles the tribes had to endure over the last 100 years. “Everything we do is for you. We only want the best for our babies, our children, our future.” It was only fitting that the youth drum sang his honor song, another story coming full circle.

# Humboldt ore processing mill

(continued from page 18)

Using the statistical model of the historical relation between flow and SpC developed with pre-November 1, 2018 data, we then predicted the SpC one would expect to find given the flow in the river (Figure 2). Comparing the expected SpC (green line) with the observed SpC (red line) there are three periods of exceedance of expected levels of SpC. The first period in August 2018 was during a month when Lundin reported a sample of their discharge that exceeded TDS permit limits under their 2015 discharge permit. The second period from December 2018 to spring of

2019 was during relatively low winter flow after Lundin began discharging high TDS water under its new permit. The third is another period of relatively low flow over the summer of 2019, also after Lundin was discharging high TDS water as allowed under their new permit.

Since Lundin began discharge of highly mineralized water directly into the Escanaba River under its 2018 permit, SpC in the river has increased dramatically. During the summer of 2019 SpC was continuously above the average of readings collected prior to 2018 (131  $\mu\text{S}/\text{cm}$ ) and for much of the summer more than twice the maximum SpC recorded prior to 2018 (Figure 2).

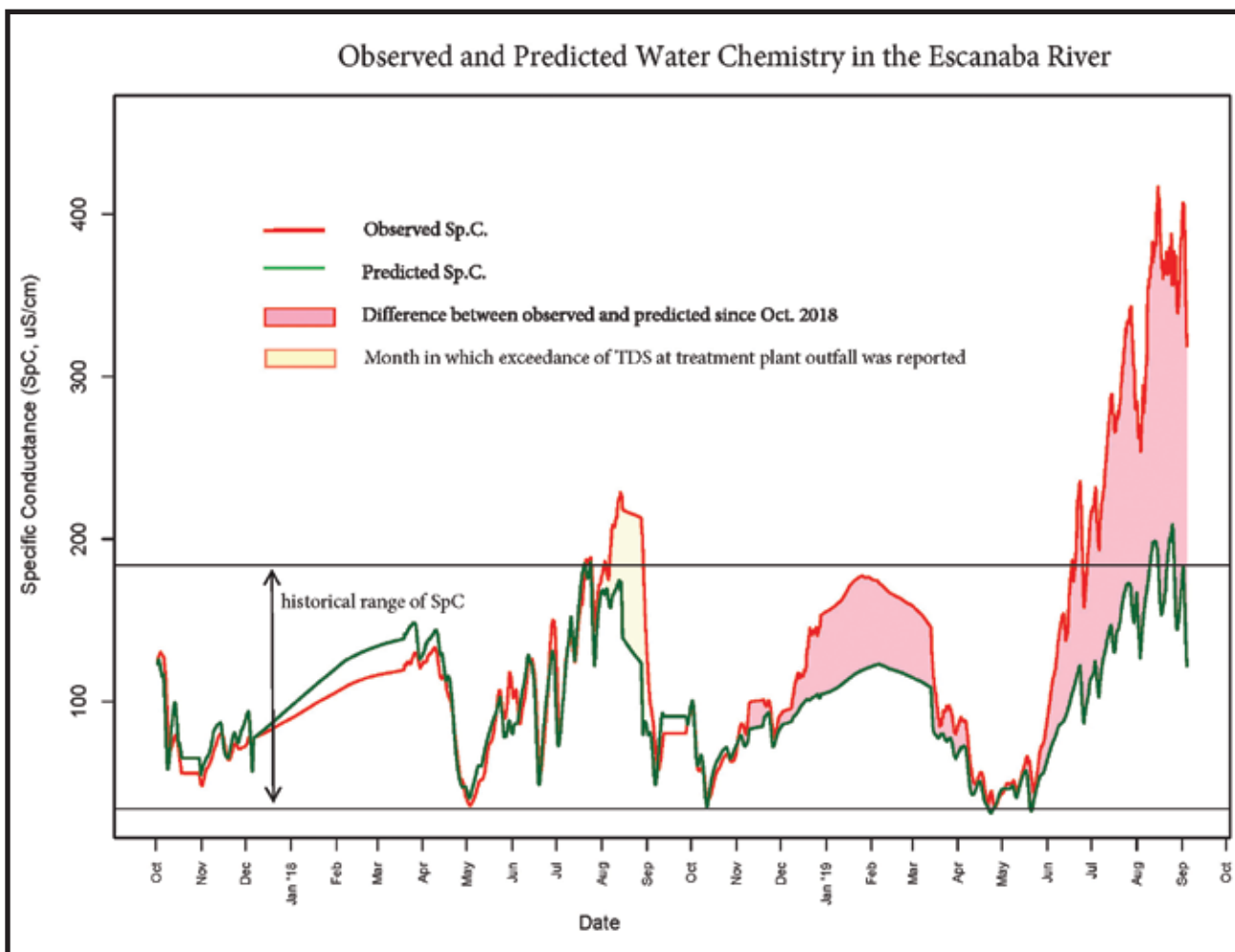
Observations of SpC above what would be expected historically occur primarily during low flow periods such as winter and summer.

Because high SpC can have a variety of impacts on aquatic ecosystems, in 2011 EPA released guidance for discharges from Appalachian mine operations (Final Appalachian Mining Guidance\_072111) that noted:

“This final peer-reviewed study concludes that 5% of native macroinvertebrate genera are extirpated where the conductivity level reaches 300  $\mu\text{S}/\text{cm}$ , which is consistent with the endpoint typically selected by EPA when deriving numeric aquatic life criteria under section 304(a). Pond et al. (2008) demonstrates that substantial aquatic life effects have already occurred when conductivity levels reach 500  $\mu\text{S}/\text{cm}$ , which suggests impairment of the aquatic life use as measured using genus- and family-level macroinvertebrate bioassessment indices.”

-and-  
“In light of this report and Pond et al. (2008), EPA recommends that states work to assure that discharges from surface coal mining operations are generally not above 300-500  $\mu\text{S}/\text{cm}$ .”

Although the observed SpC levels (and by extrapolation TDS levels) do not exceed state standards, based on EPA’s studies and that of Pond, 2008, the levels observed are expected to be having impacts on the aquatic ecosystem of the Escanaba River, which is adapted to much lower water conductivity. Environmental staff will continue to monitor water quality at the Humboldt Mill and have contracted with the USGS for continuing water quality monitoring in the Escanaba River.



**Figure 2. Observed SpC vs. SpC predicted based on the model of flow and SpC. Periods of unexpected high SpC in the river are highlighted in yellow and pink. Historical minimum and maximum SpC from 1961 through 2017 ranged from 34 to 184  $\mu\text{S}/\text{cm}$ .**





# Mikwendamang ishkwyaang, Niigaan inaabidaa

## “When we remember the past, let’s look to the future”



Time and time again, young people within Anishinaabe communities inspire the world with their accomplishments and their desire to create a better place for all to live. Over 150 years have passed since the signing of treaties relevant to present-day Wisconsin, Michigan, and Minnesota tribes. But the recent resurgence of an old style of dance marks a sure sign that the teachings from long ago are still alive today, guiding future generations forward.

Woodland style dancing has made a comeback on the powwow scene. For Great Lakes Anishinaabeg, Woodland style resembles the regalia worn in early years, and even during treaty signing time. Floral designs and beadwork are often key indicators of Woodland regalia. Bandolier bags, furs, turbans, and even bonnets are worn for this style. Old style split toe and pucker toe moccasins adorn the feet. Woven sashes and various bells grace the stylized curves and edges of these colorful, ornate outfits.

Drums are beginning to sing the old Woodland songs once more.

Many aspects of Ojibwe song and dance are derived from the environment. When we watch these old dances and hear these old songs, we are reminded that everything the Anishinaabeg were given, ultimately comes from the woods. Ojibwe language and culture are beautifully woven from and with the earth.

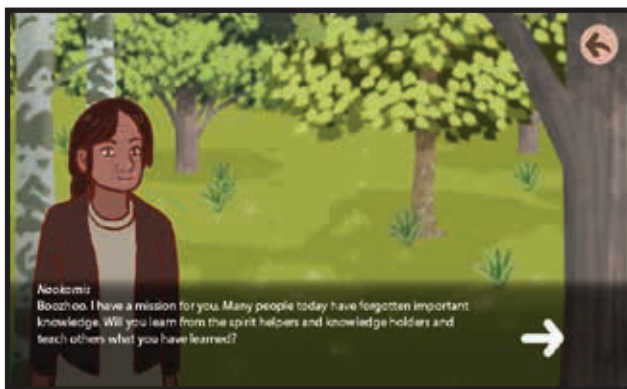
Resiliency and strength within the culture are recurring themes in Indian Country, just as they are recurring themes in nature. Resilient in the face of trauma, yet still here and still strong.

18" x 24" posters are available from GLIFWC by phone at 715.685.2108; by email at lynn@glifwc.org; or by filling out the order blank below.

Featured on GLIFWC's 2019 poster are Noodin Niimebin Shawanda, Miisheen Meegwum Shawanda, and Ningozis "Gosy" White. GLIFWC is proud to share this powerful photograph and the story it encapsulates, and continues.

# Growing up Ojibwe: The Game

GLIFWC is proud to introduce the new interactive treaty rights game "Growing Up Ojibwe: The Game." Created by GLIFWC summer intern Eleanore Falck, the video game takes players through multiple levels of harvesting and learning about Traditional Ecological Knowledge. Join the main character



Tommy Sky as he grows and learns about the environment that his Ojibwe relatives have subsisted upon for many generations.

In *Growing Up Ojibwe: The Game*, players take the role of Tommy Sky, a young Ojibwe boy sent on a mission by his grandmother to learn important knowledge that has been forgotten by many.

While you're exploring the beautiful environment of northern Wisconsin, offer asemaa to spirit helpers and knowledge holders who teach you about Ojibwe treaty rights, tribal sovereignty, and harvesting activities. You will also encounter community members who are curious about the knowledge you have gathered and will ask questions. Interacting with spirit helpers, knowledge holders, and community members will earn you mino-bimaadiziwin points. These points represent your spiritual, emotional, and physical well-being. Be careful not to answer questions incorrectly, however, or you will lose some of the resources you have been collecting. After completing the first two levels about Ojibwe treaty rights and tribal sovereignty, help Tommy Sky's grandmother to make maple sugar by tapping maple trees and gathering sap.

Growing Up Ojibwe: The Game is great in any classroom setting. As an introduction to Great Lakes Ojibwe history, it's a fun way to teach middle school students relevant content that satisfies learning requirements set by Act 31. In addition to information about treaty rights, tribal sovereignty, and harvesting activities, it also includes an Ojibwe language component with Ojibwe words used throughout the game. An easy to read points-system displayed on the levels screen can help educators gauge a student's level of engagement with the material. Download the game for free at: [https://play.google.com/store/apps/details?id=com.GLIFWC.GrowingUpOjibweTheGame&fbclid=IwAR13rtiAOLD0QxX1paPZXgPKCtYvq\\_ABvzZc\\_ONlvGLCFzq4ohbk7P0lWq0](https://play.google.com/store/apps/details?id=com.GLIFWC.GrowingUpOjibweTheGame&fbclid=IwAR13rtiAOLD0QxX1paPZXgPKCtYvq_ABvzZc_ONlvGLCFzq4ohbk7P0lWq0)

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## Buffalo Reef continued

(continued from page 13)

### Acoustic telemetry project

As reported in the Spring edition of the *Mazina'igan*, GLIFWC, in cooperation with the Michigan Department of Natural Resources, the United States Geological Service, Michigan State University and the United States Fish & Wildlife Service, is moving forward on a multi-year acoustic telemetry study designed to determine the effects of stamp sands on whitefish and lake trout spawning behavior. The array of 49 acoustic receivers has been deployed on Buffalo Reef and a total of 30 lake trout have been implanted with acoustic tags which can be detected by the receivers. Tagging of 30 whitefish on Buffalo Reef occurred during fall 2019.

### What's next?

GLIFWC expects to continue work to permanently protect the spawning and nursery habitats as well as the important harbor for tribal fishing boats for the next few years. We will continue our active participation in the BRTF and continue advocating for a permanent solution to this serious environmental threat.





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

Gidizhaa na agwajiing? Gaye niin. Noogishkaan! Bizindan! Awenen eyaad imaa? Aaniin ezhichigewaad? Oonh, inashke! Mitigong, ingiw esibanag odakwaandawewag. Iwidi waasa, jiigikana ingiw niizh makwag animosewag. Howah! Mandaamini-gitigaaning, endasonaagosh ingiw waawaashkeshiiwag wiisiniwag. Wewiib! Biboon. Wiisinig! Noongom gigii-mikaanaawaan, giwaazhinaanan. Waawaashkeshiwag, izhaag awas mashkiigong. Gaawiin ingii-ashamaasiinaanig biboong. Ningii-pooni'aanaanig ingiw waawaashkeshiiwag. Ganawendan aki miinawaa nibi. Ikwanaamon! Miigwech!

(Are you going outside? Me too. Stop! Listen to it! Who is there? What are they doing? Oh, look! In the tree, those raccoons are climbing. Far over there, by the road those two bears are walking away. Wow! In the corn field, every evening, those deer eat. Hurry up! It is winter. You all eat! Now you all found your dens. Deer, you all go away to the swamp. No, we did not feed them as it is winter. We left those deer alone. Protect the land and water. Breathe in! Thank you!)

<p><b>Bezbig — 1</b></p> <p>Double vowel system of writing Ojibwemowin. —Long vowels: AA, E, II, OO Waabooz—as in father Miigwech—as in jay Aaniin—as in seen Mooz—as in moon</p> <p>—Short Vowels: A, I, O Dash—as in about Ingiw—as in tin Niizho—as in only</p> <p>—A glottal stop is a voiceless nasal sound as in A'aw. —Respectfully enlist an elder for help in pronunciation and dialect differences.</p>	<p><b>OJIBWEMOWIN (Ojibwe Language)</b></p> <p><b>VII: "To it" Verbs, Inanimate, Intransitive; action for It is/was/will...or There is/was/will...</b></p> <p>Biskane.—It catches fire; ignites. Gii-piskane.—It caught fire; ignited. Wii-piskane.—It will catch fire; ignite. Nawadide.—It catches fire. Gii-nawadide.—It caught fire. Wii-nawadide.—It will to catch fire. Zaka'igaade.—It's lit on fire by someone. Gii-saka'igaade.—It was lit on fire by someone. Boodawaade.—There's a fire in the fireplace. Wii-poodawaade.—There will be fire in fireplace.</p> <p><b>VAI: Nawadizo.</b>—S/he catches fire. Ningii-nawadiz.—I caught fire. Wii-nawadizowag.—They will catch fire. VAI only—drop short end vowel in 1st (I) and 2nd (you) person</p>	<p><b>Niizh — 2</b> Circle the 10 underlined Ojibwe words in the letter maze. (Translations below)</p> <p>A. Dibaajimishin! <u>Aaniindi</u> (or Aandi) gaa-atoon i'iw <u>mishi</u>?</p> <p>B. <u>Agwajiing</u> (n)indayaanan iniw <u>misan</u>. Ninga-naadinan.</p> <p>C. Nindaa-naajimijime na wiisiniwigamigong? <u>Gibakade</u> na??</p> <p>D. Eya'. Boodawaaning <u>omaa</u> niwii-miijimin baaka'aakwe-wiyya.</p> <p>E. <u>Gisinaa</u> agwajiing. <u>Niwii-mikaan</u>. Niwii-piichibabiinzikawaagane.</p> <p>F. Aaniin ezhiwebak agwajiing? <u>Zoogipon</u> ina.</p> <p>G. Giwedining. Gaawiin zoogiponziinon.</p> <p>H. Dakate waaka'igan <u>Gizizan!</u></p> <p>I A N G A O G G M I T S W I A D Z M ' A Z S I E I I H J I H I W D Z S W I S K ' N Y I A A O I I T I J A B W N N M N G I B A K A D E Y O A G N Z O O G I P O N B A A O N A I A D J B E G A N I W I I M I K A A N</p>
<p><b>Niswi — 3</b></p> <p><b>IKIDOWIN ODAMINOWIN (word play)</b></p> <p><b>Down:</b></p> <ol style="list-style-type: none"> <li>Stop</li> <li>Who</li> <li>Protect it!</li> <li>Those (animate)</li> <li>As it is winter.</li> </ol> <p><b>Across:</b></p> <ol style="list-style-type: none"> <li>To the swamp</li> <li>Hurry up!</li> <li>Question marker</li> <li>Oh!</li> <li>Far, distant</li> </ol> <p><b>Mamaangipon.</b> There are big snowflakes.</p>	<p><b>Niiwin — 4</b></p> <p>Wegonen enendaman biboong?— What are you thinking about in winter?</p> <p>Niminwendam aagimeyaan megwayaak.— I am happy as I snowshoe in the woods.</p> <p>Niwii-zhooshkwaagime wayiiba.—I want to ski soon.</p> <p>Gaawiin ninitaawaada'esiin.—No, I don't skate.</p> <p>Ingiipedaada'e.—I did skate slowly.</p> <p>Da-soogipon.—It will definitely snow.</p> <p>Wii-gisinaa.—It will be cold.</p> <p>Biboonong, nibabaamaadiz zhaawannong.—Last winter, I traveled to the south.</p> <p>Mii'iw.—This is it.</p> <p><b>Online Resources</b> ojibwe.lib.umn.edu ojibwe.net glifwc.org glifwc-inwe.com</p>	<p>—yaan</p> <p>wii—</p> <p>ningii—</p> <p>Gaawiin</p> <p>—ong</p> <p>1. Waabang ni _____ mikaan i'iw gichi-wiiwakwaan</p> <p>2. Biijinaago _____ aagime naano-diba'igan. Howah!</p> <p>3. _____ niminwendanzii mangaanibaazhag.</p> <p>4. Giwedini _____ ninganawaab, waawaateg.</p> <p>5. Niminwendam wisini _____, nibaa _____, ojibwemo _____, odamino _____. Miigwech.</p>

**Translations:**

**Niizh — 2** A. Tell it to me! Where is the piece of wood? B. Outside I have the firewood. I will get it. C. I could go get food at the restaurant? Are you hungry? D. Yes, by the fire here we will eat chicken (meat). E. It is cold outside. I will find it. I will put on a coat. F. No, I do not have it. I want to go to the grocery store. G. What's the weather like outside? Is it snowing. H. There is a north wind. No, it is not snowing. I. The house is cold. Heat it up!

**Niswi — 3** Down: 1. Noogishkaan 2. Awenen 3. Ganawendan 5. Ingiw 6. Biboon Across: 4. Mashkiigong 7. Wewiib 8. Ina 9. oonh 10. Waasa

**Niiwin — 4** 1. Tomorrow I want to find that big hat. (wii-) 2. Yesterday I snowshoed five miles. Wow! (ningii-) 3. No, I am not happy when I shovel snow (Gaawiin. -siin). 4. I look to the north when there are the Northern lights. (-ong) 5. I am happy when I eat, when I sleep, when I speak Ojibwe, when I play. (-yaan)

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 *The Concise Dictionary of Minnesota Ojibwe* by John D. Nichols and Earl Nyholm. All inquiries can be made to **MAZINA'IGAN**, P.O. Box 9, Odanah, WI 54861 [lynn@glifwc.org](mailto:lynn@glifwc.org). © 2019 Shelly Ceglar • Edited by Jennifer Ballinger, Saagajiwe-Gaabawiik





# National Indian Education Conference comes to Minnesota Ceded Territory leadership on board

By Bizhikiins Jennings, Staff Writer

The 2019 Annual National Indian Education Association Conference was held in downtown Minneapolis on October 8-12. Educators across Indian Country turned out in numbers to present, network, and attend sessions ranging from early Head Start programming to college preparedness and climate.

This year marks the 50th annual conference, which also garnered special importance. NIEA was founded in 1970 in Minneapolis to help meet educator, student, and community needs—which were of rising concern at the time. Since its inception, NIEA has hosted regional and national gatherings to garner support, make legislative change, and implement policy.

NIEA leadership is comprised of regional and national representatives from across greater Indian Country. Local leadership is working diligently to represent GLIFWC member tribes and the Ceded Territory. Bad River tribal member and Head of School at Indian Community School of Milwaukee, Jason Dropik was recently elected as 1st Vice President. Lac du Flambeau tribal member and Wisconsin Indian Education Association President, Brian Jackson, also serves as a current General Board Member. Both gentlemen are staunch advocates for treaty rights, harvesting, and creating cultural foundations for youth.

“It’s such an honor to be elected into this position,” Dropik said. “And I look forward to serving not only our Ojibwe and Wisconsin communities, but all the regions and tribal communities across the greater landscape.”

Local state government representatives made appearances, including Minnesota Lieutenant Governor Peggy Flanagan—a member of the White Earth Nation. As a keynote, newly elected official, and a mother, she preached to the crowd of educators: “Last year my kindergartner’s teacher reached out and she asked how to best teach about Thanksgiving. I was extremely thankful that she reached out and took the time to do things in a good way. Someday, I don’t want to have to tell teachers what to do. I want them to already know. I want them to have the resources and tools they need to teach about our history.”

Some breakout sessions focused on early development, specifically in the Head Start realm. The Yup’ik immersion program at the Cook Inlet Native Head Start built a brand-new cultural playground and shared how the program involves families. National Indian Head Start Director’s Assembly Board Member Ethan Petticrew spoke about the school and their experience implementing harvesting



Jason Dropik, head of Indian Community School in Milwaukee, Wisconsin, and a member of the Bad River Band now serves the National Indian Education Board as the vice president. (B. Jennings photo)

and cultural ways. “For us, it had to be Alaska Native culture every day, and not just a few weeks out of the year.”

Other presentations focused on local language endeavors and cultural rights of passage, and curriculum. Dr. Mark Powless and other Indian Community School (ICS) staff presented on the cultural “our ways,” program calendar and the related curriculum, while Dr. Mike Migizi Sullivan of the Waadookodaading Language Immersion School presented on proficiency assessments and how these benchmarks inform instruction and curriculum.

The 2019 conference began with a grand entry and posting of the flags, and ended in the same fashion. A pow-wow began Friday evening and welcomed singers, dancers, vendors, and educators into the dance arena. It was truly humbling to see so many participants across the country gather to discuss pedagogy, research, and opportunities. It was enlightening to see leaders in the education realm make strategic plans to better the lives and futures of our tribal communities.

## Book Review: The Dancers Thomas Peacock’s new book an ode to the powerful role of our aunties

Aunties are a special kind of being. Within the space of a raised eyebrow, they can convey sheer love, or tell you to get in line. NOW. My aunties taught me how to put on black eyeliner and use an eyelash curler (two of the scariest parts of putting on makeup). They also taught me how to wrap Christmas presents, bake pies, and generally, how to look cool riding around the rez and neighboring town during the 1980s. That’s a lesson I’ve carried forward into this century.

Thomas Peacock’s new book, **The Dancers**, is a story about a very special auntie, her sister, and her niece. When we meet them, they are dancing at powwows together. As the summer ends, auntie leaves to join the Army and become an ogichidaquay (female warrior). Soon after, she is sent to war.

One day, the young girl’s mother tells her that auntie’s truck drove over a bomb, which exploded. Auntie returns to America to be treated in a hospital, and her community prays for her in ceremony. After many months, auntie is able to return home, but not as the girl expected.

“When the army nurse helped her from the plane I saw for the first time that the bomb had taken her legs.”

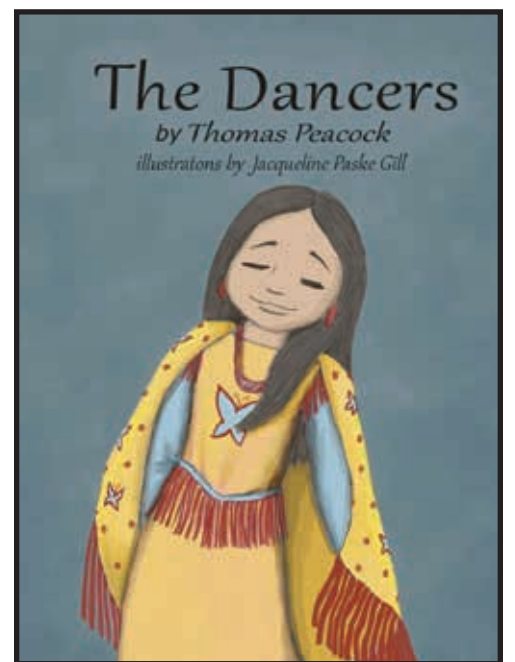
The rest of the story is a tribute to the strength, the tenderness, and the friendship of our aunties. It is also a look inside the moments that forge such a strong connection between auntie and child. I appreciated the exchanges between the characters in Peacock’s book; it reminded me that even in a relationship with a child, especially in a relationship with a child, the learning goes both ways.

**The Dancers** also made me reflect on the warrior in my own aunties. My auntie Jody, who lost her son when he was just 16 years old, and her husband some years later. She still goes out and jingles at powwows. My auntie Cheri, who was in a car accident as a young girl and permanently bound to a wheelchair. She still bakes and delivers pies and biscuits with more love than anyone I know. My auntie Spike, who battled cancer. And won. And my auntie Terri, who struggled in sadness after my grandfather (her father) walked on. She now honors his memory by making sure the holidays are special for all of us, the same way that he always did.

These women are ogichidaquay. They fight their own wars, experience their own loss, and feel their own heartbreak. But in the way that they continue to dance, to bake, to bead, and to celebrate, it turns out they also taught me how to be strong the same way that auntie teaches her niece to be strong in Peacock’s book.

**The Dancers** is a good book about a hard truth. Life is not perfect. We can’t control everything. And there will be times that we don’t want anyone to see us how we are. But no matter what happens, there will always be someone who loves you like an auntie, encouraging you to dance with your heart.

—P. Maday



Published in early 2019, **The Dancers** by Thomas Peacock is available on Amazon.com.

## Walking on

For more than 15 years Bizhiki, Leonard Sam played an essential leadership role on GLIFWC’s Voigt Intertribal Task Force, helping Ojibwe treaty tribes implement off-reservation harvests in the 1837 Ceded Territory.

An active hunter, fisherman and gatherer, Sam knew natural resources intimately—at home among the waters and woodlands of Wisconsin and Minnesota.

His presence at both intertribal gatherings and at his Mille Lacs Lake homeland invariably evoked an appreciation for Ojibwe culture, traditional knowledge, and thoughtful use of the language.

Sam walked on September 23 at the Mayo Clinic in Rochester at age 80. Friends and family gathered at Chiminising Community Center in Isle, Minnesota, conducting a ceremony to honor Sam and see him off on his next journey. He will be missed by many, including his colleagues and friends at GLIFWC.

—CO Rasmussen



Leonard Sam on a Minnesota deer hunt in 2002. (MPR photo)





# Sokaogon-area warden joins Eastern District



With some formative advice, timely work opportunities, and an enduring love for the outdoors, Sokaogon Chippewa Roger Weber followed a years-long trajectory that led him to the GLIFWC Enforcement Division.

Weber is the latest addition to a Ceded Territory conservation warden force that covers off-reservation hunting, fishing and gathering across three states. His primary work area is in northeast Wisconsin, a region that is home to the Sokaogon Mole Lake Band.

Beginning as a high school student in Crandon, a part time job with the Sokagogon natural resources department opened doors to network with outdoors professionals. Weber worked on annual fishery assessments and, on a recommendation from Mole Lake Biologist Mike Pruel, went onto Fox Valley Technical College, leading to technician positions in forestry and natural resources for the tribe.

More recently, a conversation with GLIFWC Officer Roger McGeshick led Weber to enroll at the Nicolet College Law Enforcement Academy. Weber successfully completed the 19-week program last October and is wrapping up specialized field training with a collection of GLIFWC wardens in a variety of settings.

During free time, Weber is usually found outside, oftentimes involved in his greatest passion, baseball. For the past few years, he's served as an assistant coach for the Antigo Red Robins baseball team. Weber lives in Antigo, Wisconsin with his wife and two dogs.

—CO Rasmussen

# Alakayak on the move in manoomin assessment work

From the Fur Trade era to today, manoomin has long occupied an important niche in Ojibwe commerce. Bringing wild rice from the shallow waters of the Ceded Territory to consumers in a cost-effective way, however, can be challenging. On a year-long project Wabanungoquay Alakayak is working to identify ways for manoomin harvesters and producers to overcome obstacles and build capacity to reach modern marketplaces.



With support from the "Keep-seagle" Native American Agriculture Fast Track Fund, Alakayak is spearheading GLIFWC's Needs Assessment Project, which involves interviewing manoomin harvesters and producers across the Ceded Territory and prioritizing the greatest needs expressed by tribal members. She'll be meeting with manufacturers to construct 22 wild rice threshers, an important tool that helps separate manoomin grains from the hulls. Select project participants will ultimately serve as wild rice processors, setting up opportunities for community members to come together and get their harvest ready for consumption.

In addition, Alakayak is sharing information with tribal members through workshops on food safety regulations, packing and labeling manoomin for sale, and marketing.

A Keweenaw Bay Indian Community tribal member, Alakayak attended her homeland community college to earn an environmental science associate degree. She's currently well on her way completing a bachelor degree in applied ecology and environmental science at Michigan Technological University.

Family-focused Alakayak is mother to two boys, 14-year-old Aidan and Johnny, 6. They spend a great deal of time in the outdoors and Alakayak makes music a priority, both singing and developing her skills as a pianist. She makes her home in Alberta, Michigan with her family.

—CO Rasmussen

# Policy analyst addition bolsters DIA

With work experience from Ecuador to Alaska, Seth Bichler has built a resume rooted in assisting native people. At his most recent stop, Bichler served as a staff attorney for the Fond du Lac Band, where he engaged the Minnesota Department of Natural Resources, multinational corporations, and helped advocate for cultural and environmental resources. Now, beginning this past autumn, he brings his talents to GLIFWC's Division of Intergovernmental Affairs, conducting a review of GLIFWC internal policies and procedures.



Growing up in northwest Wisconsin, Bichler has a close connection with the region's landscape—particularly in Maple Plain Town—marked by rolling hills, forests, and small pothole ponds that provide excellent waterfowl hunting. Along with his partner Katy and a houseful of four-legged pets, he said he's looking forward to moving from Duluth back into a rural landscape near GLIFWC central offices that provides easy access to hunting, fishing and gathering opportunities.

Bichler earned a bachelor of arts in history & American Indian studies at UW-Madison, followed by a JD at the University of Oregon School of Law, where he studied natural resources law & public interest law.

—CO Rasmussen

# Tribal liaison honored



GLIFWC and its member tribes recognized US Forest Service Tribal Liaison Mary Rasmussen at the annual Tribal/Forest Service Memorandum of Understanding annual meeting October 2 with gifts and an honor song on the GLIFWC dewe'igan. GLIFWC officials credited Rasmussen with helping make the MOU a success over the past dozen years. Rasmussen is retiring in December.

"Any issue that came up, any information we needed, Mary has handled it," said GLIFWC Executive Administrator. "We're going to miss her."

The MOU spells out natural resource gathering protocols for treaty tribes in Ceded Territory national forests. In addition, the formal agreement includes joint research projects for key resources like birch and sugar maple. GLIFWC Executive Administrator Mic Isham presented Rasmussen with a black ash gift basket during the annual MOU meeting in New Odanah.

USDA officials are parsing out Rasmussen's three-forest service area with two staffers going forward. On the Hiawatha National Forest in Michigan, Tribal Liaison Rita Mills is covering Bay Mills and other tribes in the 1836 Ceded Territory. For the Ottawa and Chequamegon-Nicolet National Forests, federal officials are in the processes of selecting a new liaison. (COR)



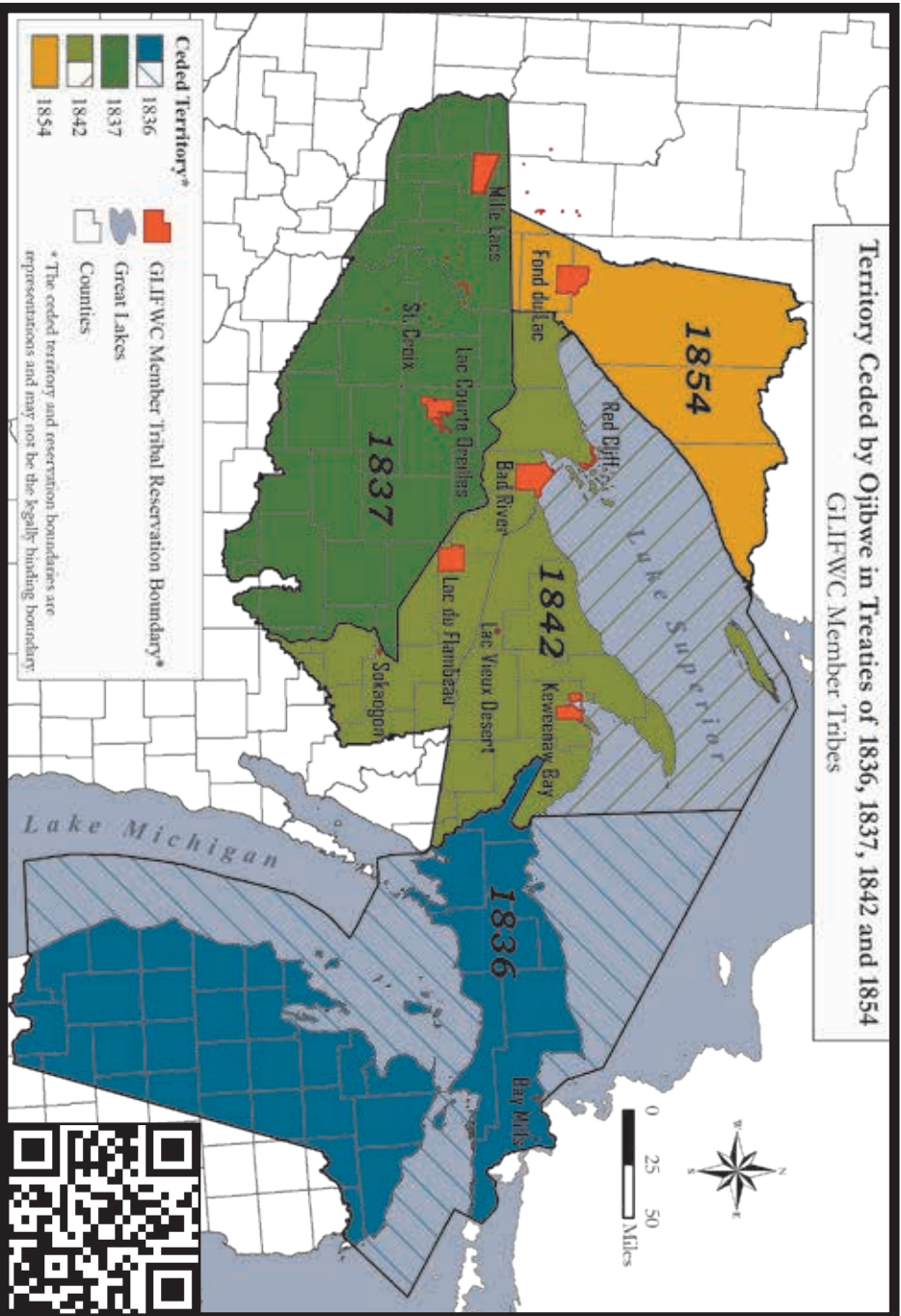


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# Farm Aid welcomes Indian Country insights

Representatives from Indian Country were on hand for the 2019 rendition of Farm Aid, held September 21 at Alpine Valley Music Theatre in southern Wisconsin.

From GLIFWC, Executive Administrator Michael J. Isham Jr and WabaAlakayak, Keepeagele project coordinator, made the trip to participate in a live satellite radio broadcast of Willie's Roadhouse on SiriusXM.

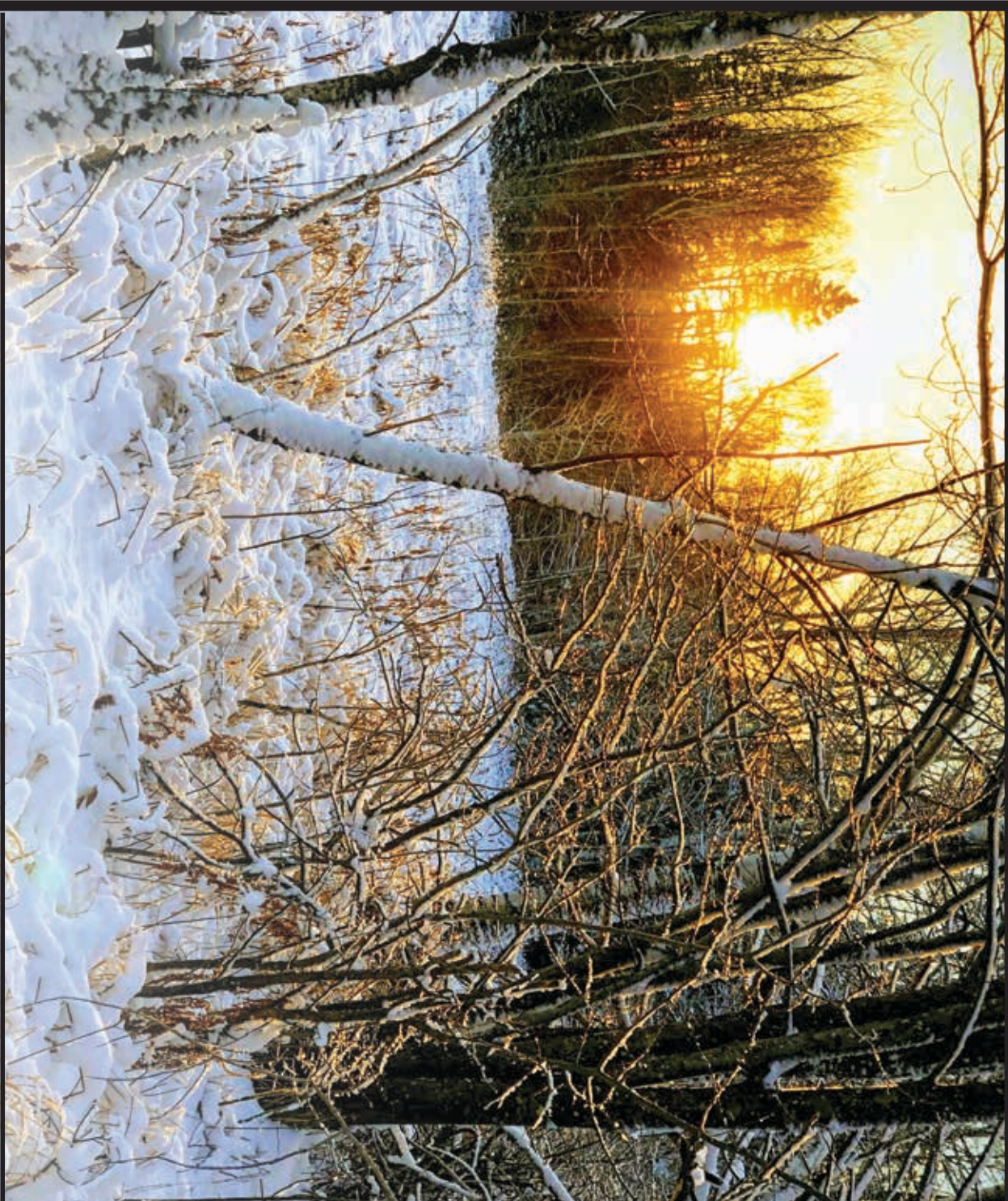


Isham also addressed several food panels as well as the sold-out crowd of 30,000, explaining tribal food production history and current initiatives in food sovereignty. No matter where you're from, "we are all connected," Isham told the audience. Alakayak met with concertgoers on the festival grounds, sharing insights into the Ojibwe spirit food, manoomin.

Representatives from Potawatomi, Bad River, and Oneida nations also took part in the festival, furthering discussions about pushing back against corporate food systems. And Ho Chunk singers enriched the day's musical offerings with hand drum songs. Farm Aid was established by Willie Nelson, Neil Young, and John Mellencamp in 1985 to support family farms.—CO Rasmussen

# Mazina'igam

A Chronicle of the Lake Superior Ojibwe



## BIBOON 2019/20

**INSIDE:**  
Saving Buffalo Reef  
Bandler bags  
Phenology calendar returns