

Wisconsin Great Lakes Chronicle 2026



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On the Cover

Wisconsin Point Lighthouse, Bob Hundt



FOREWORD

Governor Tony Evers

Dear Friends of the Great Lakes,

Preserving and protecting Wisconsin's waters has been a priority of my administration because our Great Lakes, rivers, streams, inland lakes, and aquifers support every facet of our way of life.

As we celebrate the 25th edition of *Wisconsin Great Lakes Chronicle*, please join me in reflecting on collaborative actions taken to preserve our state's most valuable resource.

I declared 2019 the "Year of Clean Drinking Water," and we began work to ensure Wisconsinites have clean, safe drinking, ground, and surface water, free of harmful contaminants like PFAS. We enacted the first statewide standards for PFAS in surface and drinking water and proposed groundwater standards multiple times despite Republican obstruction. I secured the first bipartisan investment to fight PFAS with a historic \$125 million investment in our 2023-25 State Budget. Despite Republican attempts to block this funding, we remained steadfast to get this money out the door to families and communities that need it.



Also in 2019, I created the Governor's Task Force on Climate Change to fight the climate crisis through research, collaboration with local and Tribal governments, and listening to Wisconsinites. We also launched the Office of Sustainability and Clean Energy, joined the U.S. Climate Alliance, set an ambitious goal that all electricity consumed in Wisconsin be carbon-free by 2050, and developed Wisconsin's first-ever Clean Energy Plan to reduce greenhouse gas emissions, create green jobs and lower energy costs. We also created the Office of Outdoor Recreation at the Department of Tourism to support our \$12 billion outdoor recreation economy and help residents and visitors enjoy and understand the value of our natural resources.

Preserving and protecting Great Lakes coastal areas has also been a top priority, including conserving the 134-acre Clay Bluffs Cedar Gorge Nature Preserve along Lake Michigan in Ozaukee County. We also preserved more than 2,000 acres of forest surrounding the Sand River in Bayfield County, and 1,100 acres around the Gile Flowage and Montreal River in Iron County, both important Lake Superior tributaries. As a member and former chair of the Great Lakes St. Lawrence Governors & Premiers, I've collaborated with other states and provinces to reduce drinking water contaminants, fight aquatic invasive species, and grow Great Lakes shipping.

We also led the initiative for federal designation of the Wisconsin Shipwreck Coast National Marine Sanctuary along Ozaukee, Sheboygan, Manitowoc, and Kewaunee counties to preserve and protect our state's maritime history beneath the surface of Lake Michigan. We're also working to designate a National Estuarine Research Reserve within the Bay of Green Bay which will develop coastal and water management best practices along the world's largest freshwater estuary. I've also remained steadfast in my efforts to ensure the federal government meets its Great Lakes obligations by supporting maritime transportation, fighting invasive species, building resilient coastlines, restoring habitats, preventing Great Lakes water diversions, and protecting agreements with our Native Nations.

These are just a few of the many initiatives my administration has been proud to lead to preserve and protect Wisconsin's waters, but there is more work to do. I challenge future state leaders to build upon this important work in earnest in the years ahead.

It has been a privilege to be your partner in this important work. Thank you for your relentless dedication and support. I hope your work will continue to be inspired, shared, and celebrated through *Wisconsin Great Lakes Chronicle* and stories of coastal communities and leaders improving the Great Lakes and our coasts.





CALM and CHAOS are helping coastal communities better prepare for erosion, flooding, fluctuating lake levels and storm events.

COASTAL RESILIENCE COMMUNITIES OF PRACTICE

Jake Kolanowski

In this year's State of the State address, Governor Evers declared 2026 the "Year of the Neighbor" and highlighted the importance of community in Wisconsin. Within their communities, Wisconsinites are looking out for their neighbors and tackling problems in their own backyards. Sometimes that backyard is a Great Lake. Along the shores of Lake Michigan and Lake Superior, two networks are providing a space for coastal communities to engage, share, and collaborate on coastal problems: Collaborative Action for Lake Michigan (CALM) and Coastal Hazards of Superior (CHAOS).

The CALM and CHAOS communities of practice (CoPs) were developed to help communities in Wisconsin and Minnesota connect with each other as they address their common challenges of erosion, flooding, fluctuating lake levels, and increasingly extreme storms. CHAOS and CALM formed in 2020 and 2021, respectively, following historic high lake levels and storms that caused severe flooding and erosion in the region. Since then, each group's membership has grown and now includes local officials, planners, scientists, engineers, educators, and citizens with a shared goal of building coastal resilience. CALM and CHAOS connect and inform these members through networking opportunities, newsletters, virtual events, field trips, and the Wisconsin Coastal Resilience website at <https://wicoastalresilience.org>.

In 2024, funding from the Inflation Reduction Act enabled the Wisconsin Coastal Management Program (WCMP) to hire a coordinator to jointly facilitate the CoPs. The coordinator meets monthly with the CALM Leadership Team (WCMP, Wisconsin Sea Grant, the State Cartographer's Office, Southeastern Wisconsin Regional Planning Commission, and Bay-Lake Regional Planning Commission) and CHAOS Steering Committee (WCMP, Minnesota's Lake Superior Coastal Program, Wisconsin Sea Grant, Minnesota Sea Grant, and the Lake Superior National Estuarine Reserve) to set priorities for the groups and plan events for members. Since bringing on a coordinator, CALM and CHAOS have been able to distribute regular newsletters, host more frequent educational events, and increase outreach to new and current members.

In the past two years, CALM has hosted a number of educational Lunch & Learns for members. These virtual events invite guest speakers to present on exemplary coastal projects along Lake Michigan's coast. Attendees of recent Lunch & Learns have learned about the Plan Integration for Resilience Scorecard (PIRS) method to evaluate and improve local resilience plans, the OneMap Pilot Project to produce site specific GIS data, and the Milwaukee Metropolitan Sewerage District's watershed approach to flood management. Guest speakers use their platform to share lessons learned, and CALM members are able to ask questions and engage with work happening in their area.



CHAOS took a different approach to engaging members and hosted the CHAOS Spring Webinar in May 2025. The webinar combined a networking session, lightning updates from speakers on Lake Superior coastal resilience projects, and group breakout discussions. This format allowed members to form new connections, learn about work happening in their communities, and discuss common concerns.

Lightning updates highlighted diverse projects and geographies, including a shoreline stabilization project in Iron County, climate resilience efforts in Ashland, the Floodwise Communities program in Bayfield County, and creation of the Northland Climate Resilience Collaborative on Minnesota's North Shore. In breakout discussions, attendees described a need for coordination, relationship-building, and education in addressing coastal hazards, underscoring the role that CoPs can fill. Recordings of CALM and CHAOS virtual events are available on the Wisconsin Sea Grant YouTube channel at www.youtube.com/@uwiscseagrant.

In the fall of 2025, both CoPs held field trips to see coastal resilience efforts first-hand. CALM members traveled to Port Washington for a tour of Upper Lake Park and Valley Creek. Attendees learned about efforts to stabilize the park bluff and restore the creek to reduce flooding and erosion. CHAOS members returned to Duluth to tour the completed restoration of Brighton Beach which had sustained significant damage from coastal



storms. Attendees heard about the multiple design intentions of the restoration including shoreline protection, stormwater management, and accessible recreational space. Both tours finished with a Q&A and discussion about how attendees could take what they learned and apply it to their own work.

With these efforts, CALM and CHAOS are providing a space for knowledge-sharing and collaboration between communities. In a CALM member survey, 75 percent of respondents connected with other Lake Michigan municipalities or coastal experts because of CALM, and 68 percent of respondents used information shared through CALM “sometimes” or “often.” One CHAOS member reported that “CHAOS has given me a lot larger toolbox to

work out of. Not just methods to use, but people to contact for advice...” A CALM member noted that “having a better understanding of who was working on coastal related projects in the region has been helpful when I’ve needed help on my own projects.”

The CALM and CHAOS CoPs are helping coastal communities work together to better prepare for erosion, flooding, fluctuating lake levels, and storm events. In this “Year of the Neighbor,” we thank our members for their continued engagement, support, and dedication to creating a resilient Wisconsin coast for themselves and for their communities.

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Prescribed fires along
Lake Superior bring back
medicinal plant species
historically used by
Ojibwe peoples.

ISHKODE (GOOD FIRE) RETURNS TO WISCONSIN POINT

Alexander Mehne

Ishkode is the Ojibwe term for fire. Not just any fire, but particularly “good fire.” Fire that heals the landscape. Fire that enhances human-use. Fire that Indigenous cultures have utilized as land stewards. Fire that, for the last several decades, has been withheld from Wisconsin Point at the westernmost end of Lake Superior.

Wisconsin Point has long been a culturally significant location to the Fond du Lac Band of Lake Superior Chippewa. Historically, the Ojibwe used *ishkode* to manage vegetation and as a way of life throughout Turtle Island (now called North America), including in areas like Wisconsin Point. Today, the return of fire to Wisconsin Point is accomplished through cooperation between the Fond du Lac Band of Lake Superior Chippewa, the Nature Conservancy, the City of Superior, and the Lake Superior Estuarine Research Reserve.

The fire is intended to bring back several of the important fire-dependent medicinal species historically used by the Ojibwe. Blueberries are perhaps the best known of these plants, but several other plants, particularly in the Ericaceae family, are also fire dependent. However, years of fire suppression has caused many of these species to become rare or absent on Wisconsin Point.

The Point currently still has the overstory of large pine trees that remembers fire; fire scars can still be found on them. But the smaller plants beneath them that are more susceptible to change are in an area in need of fire. Ericaceae ground flora characteristic of northern pine stands is rare because thick hazelnut brush is common throughout the area and overshadows its growth. *Ishkode* is needed to clear the brush and allow Ericaceae to grow.

Another added advantage of these prescribed fires is that they reduce fine fuel loading. Fine fuels are the first fuels that burn and enable a wildfire to enter an area. Wildfires have a very difficult time entering areas where fine fuels have been removed, particularly by planned fire. When landscapes have more areas devoid of fine fuels, it makes controlling wildfires and protecting structure much easier and safer.

Orchestrating prescribed fires today is no small task. Burn plans require approval and generally have a strict go/no-go checklist to ensure prescribed fires are not attempted in reckless or unsafe conditions. Regulations ensure that prescribed fires are done in a safe, accountable way, and place heavy burdens on getting the right personnel with the right qualifications and experience.

Organizations managing a prescribed burn have having liability if something goes wrong. Liability laws vary from state to state; in some states, burn bosses can be held liable for damage done by their burn even if they are burning within the realm of the approved burn plan, which can make pulling off burns more difficult. There is always a risk things will go wrong, even if all reasonable precautions are followed.

Prescribed fire is not unique in this sense. Actions while driving a car always carries some risk of an accident even if all reasonable precautions are

followed. Forest management in national parks has shown us the grave risks of fire exclusions in regard to fuel buildup, especially when fuel buildup is compounded by climate change making fire seasons longer and increasing the variability of precipitation and wind.

Prescribed fires today also often involve use of particular equipment designed to carry and spray water. Although use of heavy equipment was limited on the Wisconsin Point site, these are certainly tools that help manage fire today that were not available to Indigenous tribes

in precolonial times. The National Wildfire Coordinating Group (NWCG) provides courses to see that wildfire practitioners meet standards for education and experience for the various duties and roles in a prescribed fire. Some roles require much more experience than others.

There are also some pine plantations on the point that have no understory; no bushes, no ground flora, just pine needles. These areas are also in need of fire, but will have their density reduced via a thinning prior to the fire. This is because they were planted at a high concentration to encourage height growth with the assumption that they would be thinned to allow more growing space. The increase of growing space and return of *ishkode* is expected to heal this forest, too.

There is a monitoring plan for these burn to measure concrete objectives. This is no doubt a crucial step in rebuilding the body of knowledge around fire. Knowledge that the Ojibwe utilized. Knowledge that, as it gets restored, will enable the present day people of Wisconsin Point to support and benefit from the return of *ishkode* to the Point.

Alexander Mehne is the Forest Manager with Fond du Lac Band of Lake Superior Chippewa Resource Management. He can be reached at alexandermehne@fdllband.org.



A person in a white kayak is paddling on a calm river. The background is a dense forest of trees, mostly without leaves, suggesting a cooler season. The water is dark and reflects the surrounding environment. The overall tone of the image is somewhat somber and quiet.

East River communities are laying the groundwork for a safer, healthier and more resilient future.

THE EAST RIVER: A ROADMAP TO A MORE RESILIENT WATERSHED

Kari Hagenow

The East River, the largest undammed tributary in the Green Bay watershed, runs alongside the Fox River in Northeast Wisconsin for 42 miles before flowing into it. As it travels north through Brown County, the river passes through a changing landscape—from rural dairy farms to fastgrowing suburban towns and villages, and finally into the urban center of the City of Green Bay. The river has experienced significant losses of natural floodplain and wetlands since European settlement and has a long history of flooding, including 22 recorded events since the mid-1960's.

Flooding has become a growing concern for East River watershed communities as Wisconsin has seen increased annual rainfall and more frequent heavy rainstorms over the past century. Along the East River, flooding is often worsened by high Lake Michigan water levels, seiches and storm surge events. As these factors combined with population growth, continued development of the floodplain and intensive agricultural practices upstream, flooding is occurring more often and with greater severity. The damage from past floods has cost communities millions of dollars.

In March 2019, a combination of rapid snowmelt, heavy rain and frozen ground triggered severe flooding along the East River, forcing emergency crews to rescue hundreds of people. In the weeks that followed, dozens of homes were left uninhabitable and marked the worst flooding Green Bay had seen in nearly twenty

years. Flooding returned the following spring as record-high Lake Michigan water levels and a storm surge exacerbated an average size rain event that forced resident evacuations, road closures and the shutdown of public trails and spaces.

In response to calls from local leaders to address flooding across jurisdictional boundaries, The Nature Conservancy, Wisconsin Sea Grant and NEW Water (the brand of the Green Bay Metropolitan Sewerage District) formed the East River Collaborative (ERC) (<https://east-river-collaborative.tnc.org>). The ERC set out to bring together communities around shared solutions through knowledge sharing, stakeholder interviews, community resilience assessments, and flood modeling to show the effects of different rainfall and lake level scenarios on flooding. These efforts helped the ERC better understand the communities' level of preparedness, identify knowledge gaps, and set the stage for collaborative action.

This early work led to the creation of the East River Watershed Resilience Framework, a practical guide that helps local leaders plan and work together across the watershed. The framework outlines a shared approach to building resilience by focusing on five key priorities: work across community boundaries; strengthen local capacity through shared knowledge, technical support and funding; use data to guide smart and sustainable growth; ensure socially vulnerable and underrepresented residents are included



in decisionmaking; and, expand the use of naturebased solutions to reduce flooding and improve water quality and quality of life in East River communities.

Since its launch in 2020, the ERC has grown to include more than 200 partners from local, state and federal governments, water resource utilities, nonprofits and universities. Strong coordination among the founding organizations brings these partners and communities together and keeps efforts moving forward. Now in its sixth year, the ERC is entering a new phase focused on action, including the development of a decisionsupport tool to help communities identify and prioritize naturebased projects that will become part of the East River Implementation Plan.

While the plan is still in development, progress towards implementation is already underway in several communities. The City of Green Bay is designing two largescale wetland storage projects along the East River, several wetlands and tributaries in the upper watershed have been restored in partnership with Brown County, and five additional project sites in the villages of Allouez and Bellevue and the Town of Ledgeview—identified in the 2024 East River Recreational Trail Master Plan—are in early design. Together, these projects will use naturebased solutions to store floodwaters, stabilize streambanks, improve water quality, enhance fish and wildlife habitat, and expand recreational access to the river.



The ERC is also tackling other objectives from the resilience framework. In 2026, surveys will be sent to 3,000 watershed residents to better understand their experiences with flooding, preparedness and perspectives on future solutions. This input will shape recommendations for outreach and actions in neighborhoods along the river. In addition, four communities in the lower watershed will also complete local code and ordinance audits this year to reduce obstacles to green stormwater infrastructure. Lastly, ERC partners are exploring ways to build a river gauge network to support a future floodforecasting system that will give municipal staff and residents earlier warnings when flood risks arise.

There is still a long road ahead to reduce flood risk in the East River. However, our efforts signal a turning point where flooding is no longer addressed piecemeal, but through a

shared, watershedscale vision rooted in science, collaboration and community voices. While the challenges facing the watershed are significant and growing, the East River Collaborative demonstrates that coordinated action across boundaries can turn risk into opportunity. By investing in naturebased solutions, strengthening local capacity and knowledge, and centering equity and preparedness, communities along the East River are laying the groundwork for a future that is safer, healthier and more resilient.

The East River Collaborative has been funded by the Wisconsin Coastal Management Program, National Oceanic and Atmospheric Administration, The Fund for Lake Michigan, and the National Fish and Wildlife Foundation.

Kari Hagenow is a Coastal Resilience Specialist at The Nature Conservancy. She can be reached at khagenow@tnc.org.

GLOS delivers information
to safely navigate, protect
and sustainably live
alongside the Great Lakes.



GREAT LAKES OBSERVING SYSTEM (GLOS)

Samuel Johnson

The waters of the Great Lakes are vast, both in surface area and depth. For centuries, Wisconsinites have been inherently connected to their waters. They have been crucial to the economic development of the state, and have been the means to growth for some of the most notable Wisconsin cities. Yet, to some extent, they remain a mystery and, as always, they pose great danger to many who approach without caution.

The most famous of past, imperiled vessels, the ore carrier *Edmund Fitzgerald*, departed from Superior, Wisconsin, in November of 1975 without knowledge of what danger was to come. It was that very disaster that sparked widespread awareness of the need for more information about what is happening out on the Great Lakes.

Today, the Great Lakes and their connecting waterways are monitored by hundreds of observing platforms, from fixed shore based towers and sensors, to remote in-situ buoys, to uncrewed autonomous vehicles. These are deployed and maintained by a regional network of university, nonprofit, government, and community partners that aim to advance and expand technology throughout the region to better understand the Lakes and inform the public of risks to life and property.

Around Wisconsin's 820 miles of Great Lakes shoreline, there are roughly 50 real-time observing platforms, many of which are supported by full or partial funding from the Great Lakes

Observing System (GLOS). GLOS is a nonprofit and certified Regional Association of the U.S. Integrated Ocean Observing System enterprise. GLOS is tasked with monitoring the Great Lakes, and the organization does that by supporting regional partners to address local needs.

For example, GLOS works closely with institutional academic partner University of Wisconsin-Milwaukee to track area-specific concerns by supporting a collection of near-shore buoys that are equipped and placed strategically to monitor lake conditions across Lake Michigan. This collaborative work expands to Green Bay. GLOS has supported the procurement and deployment of buoys throughout Green Bay to collect water quality readings that can indicate harmful algal blooms (HABs). HABs can negatively impact public health for beachgoers, and have also been tied to hypoxia events, which have led to mass fish kills in Green Bay, an area that is popular for fishing.

All of the data collected by these platforms are made freely available to the public on GLOS's data platform Seagull. Seagull provides users with real-time, location-specific information, in addition to operational wind, wave and water temperature model overlays. Depending on the platform, one can access information about air pressure, wave heights, wind speeds and water temperatures (at depth), as well as water quality readings such as chlorophyll concentrations and dissolved oxygen levels.



Seagull also enables users to set customized alerts to particular parameters on platforms. This is information that individual civilian boaters, swimmers and anglers access on their own, but is also utilized to great effect by coastal management authorities and regional forecasting agencies including the National Weather Service (NWS) to make decisions about beach safety and advisories.

Seasonal irregularities contribute to annual 'unknowns' around the entire region. The collection and analysis of these data can contribute to more precise projections and planning for coastal management and remediation. GLOS projects tracking water level fluctuations seek to give coastal communities even more insights into hazards by way of strategically placed webcams and full wave spectrum sensors, in addition to innovative ways to deliver this critical information via alerts at points of water access.

The Great Lakes Coastal Warning System project marks a newly established partnership between GLOS and SwimSmart Technology, integrating onsite electronic warning systems with information from remote assets via GLOS's Seagull. Combining these technologies will enhance real-time hazard detection and improve rip current forecasting, while providing critical insights to coastal communities.

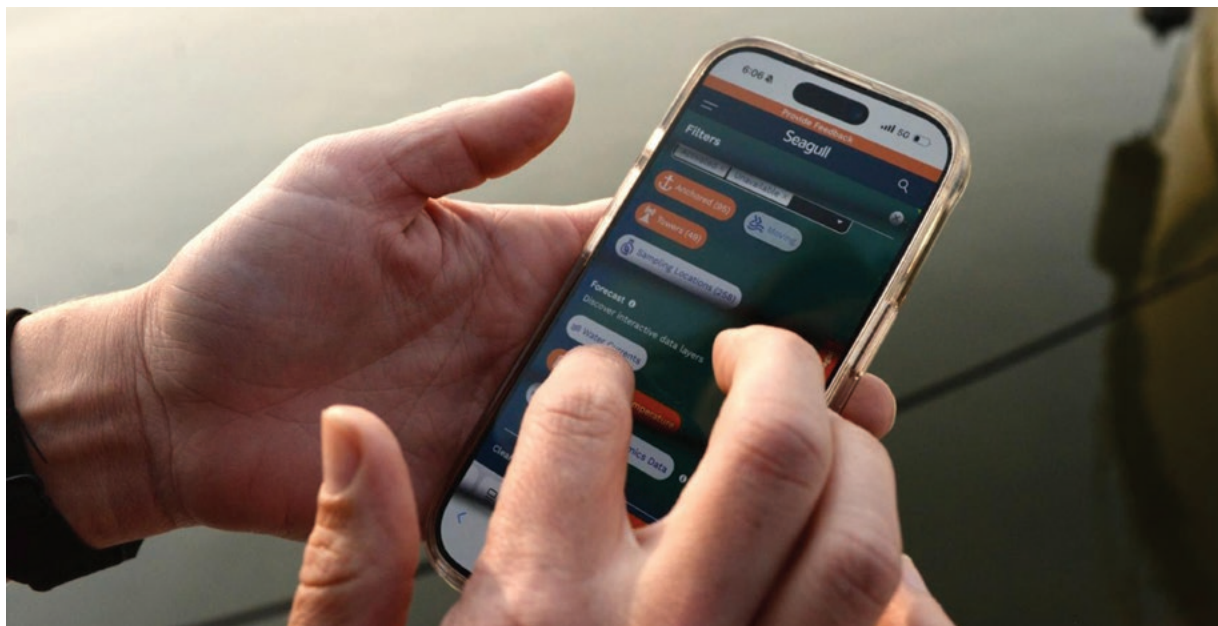
GLOS continues to identify and address observing gaps in Wisconsin waters and along its coast through recent projects with local groups. GLOS has recently supported the expansion of sensors utilized by the Lac du Flambeau (LDF) Band of Chippewa Indians. Data collected from lakes within the LDF Indian Reservation will monitor parameters as it relates to restoring wild rice, or manoomin. GLOS has also supported moorings in NOAA's Wisconsin Shipwreck Coast National Marine Sanctuary.

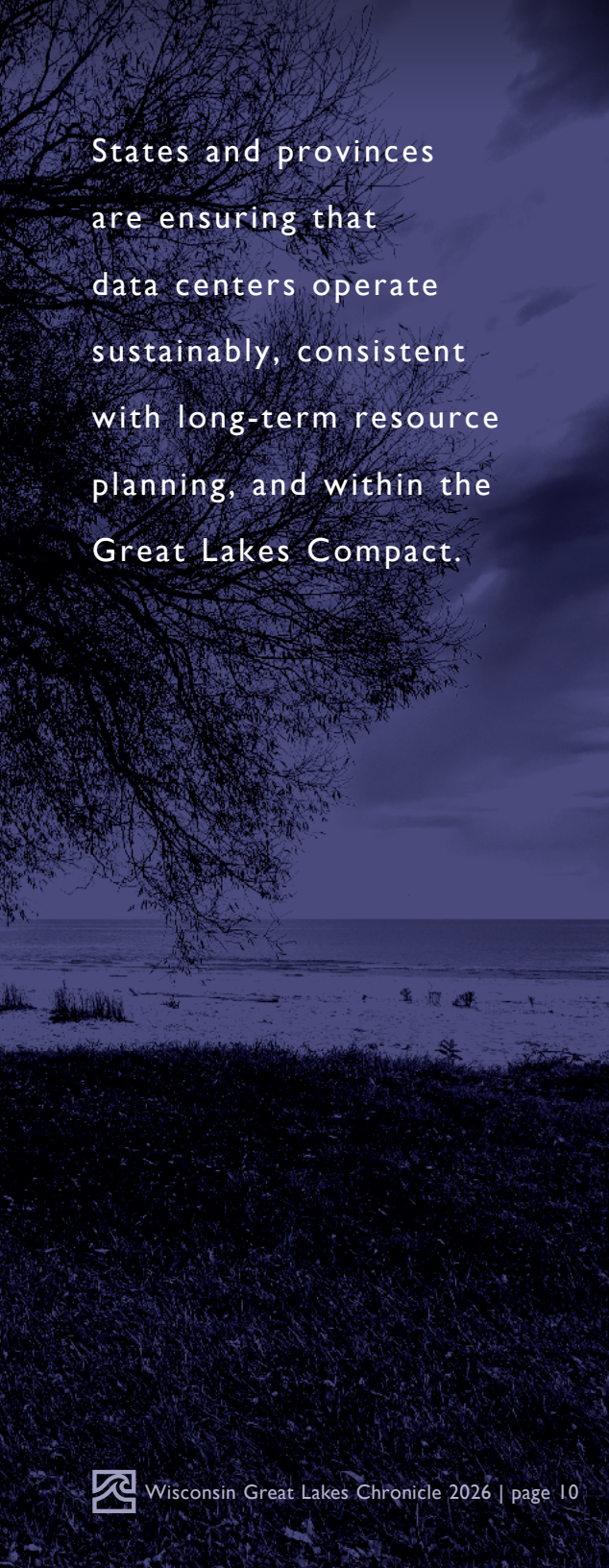
Buoys monitor the waters off Port Washington and Two Rivers, informing lake-farers of these popular port towns with real-time water information.

One of the biggest shared challenges across the Great lakes is that 85 percent of the lakebeds are yet to be mapped to modern standards. To address this, GLOS helps lead Lakebed 2030, a Great Lakes Mapping initiative which has grown from grassroots beginnings into a binational network of U.S. and Canadian organizations, multi-jurisdictional agencies and individuals. Together, this coalition is working to map the Lakes at high resolution. A full survey of the Great Lakes will unlock insights into coastal ecosystems and the long-term changes impacting coastal homes and businesses.

The Great Lakes are central to Wisconsin's economy and security. Maritime commerce, safe recreation and access to clean freshwater all depend on reliable data. Without the information, vessel operators navigate with uncertainty and vulnerable coastal communities are left guessing about incoming conditions. GLOS is changing that by investing in observing technologies and strengthening regional partnerships. GLOS delivers the information people need to safely navigate, protect and sustainably live alongside the Lakes.

Samuel Johnson is a Communications Specialist at the Great Lakes Observing System. He can be reached at sam@glos.org. With contributions from Jennifer Boehme, Heather Stirratt and Katie Rousseau.





States and provinces
are ensuring that
data centers operate
sustainably, consistent
with long-term resource
planning, and within the
Great Lakes Compact.

GREAT LAKES STATES WORKING TOGETHER TO PLAN FOR DATA CENTERS

Peter Johnson

The growth of data centers across the United States has been a growing focus of policy makers and the public, as data centers use water on-site for operations and cooling as well as generating the electricity they need. Therefore, while they can represent significant economic opportunities—creating jobs and supporting local communities—it is recognized that this potential must be balanced with a diligent approach to managing our shared water resources.

According to a recent study by the Weldon Cooper Center for Public Service at the University of Virginia, the State of Wisconsin currently has 32 operational data centers, most of which are “retail and relatively small in area.” The same study also found that there are several larger data centers being planned for construction in Southeast Wisconsin. This study and other assessments map the current locations of data centers and their expected growth, helping us understand the localized impact on water resources and energy consumption.

However, Wisconsin is not on its own as it seeks the best path forward for managing this growing sector of industrial water usage. The same study found that “...the Great Lakes states of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania and Wisconsin now host about one-fifth of U.S. data centers.” Fortunately, the

Governors and Premiers of these states and Ontario and Québec came together more than 20 years ago to create tools to cooperatively manage all new developments with the potential for high water use sustainably. Today, that framework continues to protect 21 percent of the world’s surface freshwater through regional cooperation.

The eight-state Great Lakes Compact and the companion ten-party Agreement between the Governors and the Premiers of Ontario and Québec were established to collectively manage the world’s largest freshwater system by prohibiting large-scale diversions and ensuring that water resources are preserved for future generations. This commitment is essential as we face new demands from various sectors, including industrial water users such as data centers.

The growing demand for data processing and storage, driven by digital transformation across industries, necessitates a thoughtful, collaborative approach to water management. The Compact and Agreement not only made long-range, large-scale diversions illegal, but also set a guiding framework that empowers our states to manage water sustainably while encouraging economic growth.

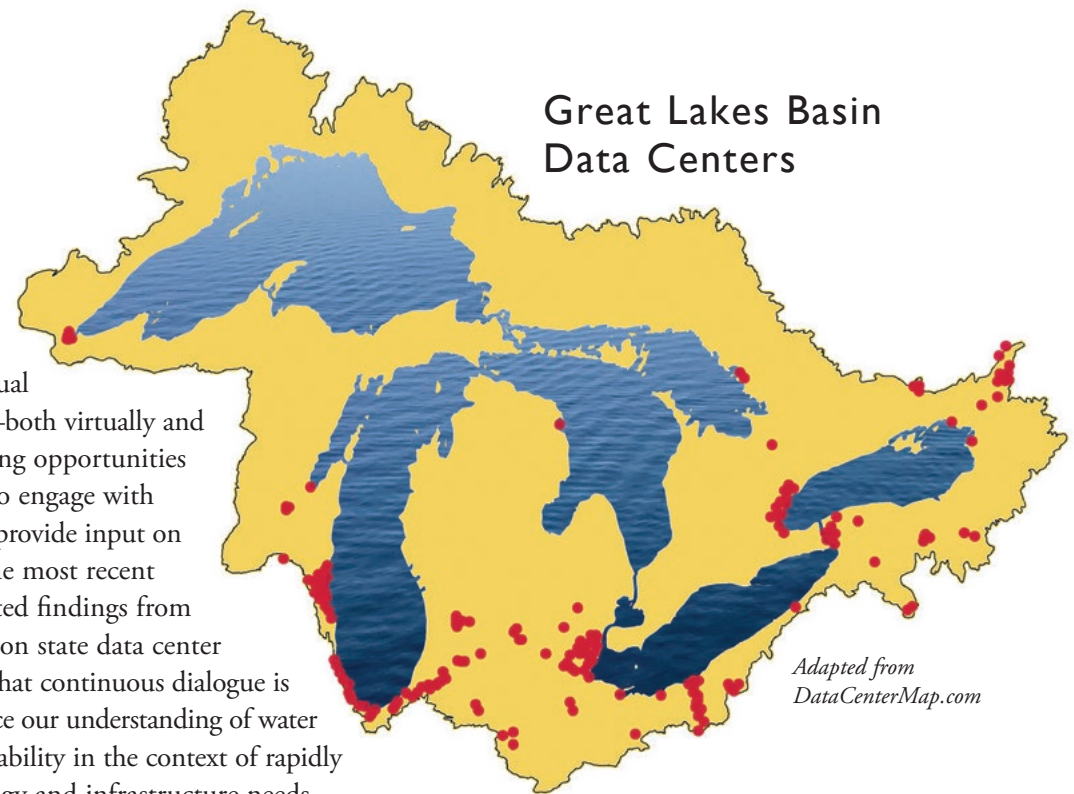
Every state that is a party to the Great Lakes Compact takes a tailored approach to managing industrial water use and ensuring alignment with

the goals of the Compact, including sustainable management. Their regulations governing water withdrawals reflect each state's unique context and needs while adhering to common principles that protect the integrity of the Great Lakes. For example, they collectively take proactive measures to address concerns about water use by requiring prior notification to the other states for new water losses exceeding 5 million gallons per day—a substantial threshold designed to enable responsible oversight and public engagement.

To further support informed decision-making, the Governors and Premiers established avenues for collaboration through the eight-Governor Great Lakes Compact Council and the Governors and Premiers Regional Body. The Compact Council and Regional Body serve as forums for states and provinces to learn from each other about best practices, research and insights on the impacts of industrial water users, with a recent particular focus on data centers, allowing for smart planning. By relying on data-driven research and expert opinions, the states and provinces aim to anticipate and mitigate potential challenges while maximizing the benefits data centers can bring to our economies. This includes creating opportunities to hear directly from studies' authors and discuss conclusions with each other as states and provinces strive to balance economic development with environmental stewardship.

The Compact Council and Regional Body convene semiannual public meetings—both virtually and in person—creating opportunities for stakeholders to engage with study results and provide input on developments. The most recent meeting highlighted findings from ongoing research on state data center laws. We believe that continuous dialogue is essential to enhance our understanding of water demand and availability in the context of rapidly evolving technology and infrastructure needs.

Each state and province is also mandated to submit annual water-use reports, and the Compact Council and Regional Body use these reports and other information to conduct a Cumulative Impact Assessment every five years. This assessment is designed to analyze and understand the cumulative effects of water use at a Lake and Basin scale, including data centers and other industrial water uses, fostering a comprehensive approach that accounts for the health of our watersheds and ecosystems. The Compact starts from a position of strength—recognizing that Great Lakes collectively are the single largest freshwater system in the world—while putting in place the means to keep them that way.



*Adapted from
DataCenterMap.com*

In conclusion, the Great Lakes Water Compact and Agreement are not just regulatory frameworks; they are a testament to the Governors' and Premiers' commitment to protecting our collective water resources while embracing economic growth. By continuing to collaborate and share knowledge, we can ensure that data centers and other future water uses contribute positively to our communities while protecting the environment. Together and using these tools, we can navigate the challenges and opportunities of this evolving landscape, ensuring a sustainable future for the Great Lakes and the people who rely on them.

Peter Johnson is Deputy Director of the Great Lakes St. Lawrence Governors and Premiers, and Secretary of the Great Lakes St. Lawrence River Basin Water Resources Council. He can be reached at pjohnson@gsgp.org.



Multiple partners joined forces to preserve the ecologically important Gile Flowage and protect water quality in Lake Superior.

GILE FLOWAGE LAND CONSERVATION PROJECT

Lydia Salus, Eric Peterson and Cathy Techtmann

The Gile Flowage is the largest Laurentian shield lake in Wisconsin. The 3,384-acre lake in Iron County was formed in 1947 by the construction of a dam on the West Branch of the Montreal River, which flows north from the Flowage to Lake Superior for hydroelectric power generation. The environmental quality and resiliency of the Gile Flowage ecosystems directly impact downstream water quality and Lake Superior coastal resources.

The Laurentian shield is a geologically significant region of ancient bedrock that was exposed by glaciers during the Wisconsin glaciation 20,000 years ago. The region is characterized by rocky outcrops, boreal forests and clear lakes. Featuring rocky shores and diverse riparian, wetland, island and upland habitats, the Flowage remains one of the last undeveloped large water bodies in northern Wisconsin.

Long before settlement, generations of Ojibwe people followed a 40-mile overland portage trail that skirted the non-navigable Montreal River and crossed what is now the Gile Flowage. The trail linked Lake Superior Ojibwe communities with those further south through a network of trading routes. Later used by fur traders and named the “Flambeau Trail,” voyageurs laden with fur and trade goods traversed this portage until the mid-1800’s.

The Gile Flowage is in Wisconsin due to an 1840 surveying error by Captain Thomas Jefferson Cram. Cram was ordered to find the Montreal River’s

origin and use it to form the border between Wisconsin and Michigan. He incorrectly identified the East Branch of the Montreal River as its source, setting the state line eight miles further east.

By 1885, the area was booming. Iron ore mining operations began at the Montreal Mine, adjacent to what would become the Gile Flowage. The mine’s massive waste rock piles are still visible from the Flowage today. That same year, the Montreal River Lumber Company built the first dam on or near the site of today’s Gile Dam for floating logs to mill. By the 1920s, the company and dam were gone. Mining ceased by the 1960’s, adding to the area’s economic distress.

The Gile Flowage began filling in 1941 following the completion of the Gile Dam built to provide steady water supply for Lake Superior District Power Company’s (now Xcel Energy) downstream hydroelectric facilities. Stewardship of the lands purchased by the power company to create the new flowage kept them undeveloped for decades.

Through the Federal Energy Regulatory Commission (FERC) licensing process of the Gile Flowage, Xcel Energy looked to divest in the uplands not affected by the water levels required for power generation. Consequently, the land around the Flowage faced imminent threat of encroachment of non-riparian owners and private development. Such development would fragment the Flowage’s riparian corridors and uplands, impact water quality, reduce public and

tribal access, diminish recreational and aesthetic values, and decrease overall ecosystem resilience to changing climate conditions.

Xcel Energy approached Iron County in 2019 about the possibility of acquiring this land. This lump sum acquisition of more than 1,000 acres of land from Xcel Energy was a one-time opportunity for the Iron County Forestry Department to protect the Flowage lands for their resilience values while ensuring perpetual public and tribal access. The project received broad support from local municipalities, tribes and conservation groups. The acquisition included 592 acres in the Town of Carey and 513 acres in the Town of Pence, both of which provided formal resolutions of support for the project. While there was immediate interest from the County in purchasing this unique property, funding was a barrier for the County to move forward with the acquisition.

Conservation takes coordination and collaboration at all levels of government. This landmark \$5.6 million project was 100 percent grant-funded through a strategic partnership between federal and state agencies. \$4.1 million was secured through the Wisconsin Coastal Management Program and the National Oceanic and Atmospheric Administration under the Bipartisan Infrastructure Law. An additional \$1.5 million was leveraged through a Knowles-Nelson Stewardship Grant through the Wisconsin Department of Natural Resources.

On December 30, 2025, 1,104 acres of diverse habitat surrounding the Gile Flowage were successfully acquired by the Iron County Forestry Department from Xcel Energy. This massive six-year conservation effort ensures the permanent protection of nearly eighteen miles of shoreline and vital forested wetlands within the Lake Superior coastal zone.

The parcels are connected to a contiguous block of more than 68,000 acres of the Iron County Forest that are managed for multiple uses including habitat corridors, climate resilience and public access. This newly acquired land will be enrolled into the Iron County Forest and managed under its existing 15-Year Comprehensive Land Use Plan, guaranteeing public access and habitat preservation for future generations.

Additionally, this land is within the Ceded Territory of the Lake Superior Chippewa Indians, who retain treaty rights to hunt, fish and gather on non-tribal lands that are in public ownership. The conservation of this land protects treaty rights usage including by the neighboring Bad River Band and Lac du Flambeau Band of Lake Superior Chippewa Indians who offered project support together with the Great Lakes Indian Fish and Wildlife Commission. Ultimately, this project will result in transformational effects on both the ecological and human communities connected to the flowage.

Lydia Salus is a Program Coordinator at the Wisconsin Coastal Management Program within the Department of Administration. She can be reached at lydia.salus@wisconsin.gov. Eric Peterson is the Forest Administrator with the Iron County Forestry Department. He can be reached at icfadmin@ironcountyforest.org. Cathy Techtmann is an Environmental Outreach Specialist at the University of Wisconsin-Madison and President of the Friends of the Gile Flowage lake association. She can be reached at cathy.techtmann@wisc.edu.



More and larger icebreakers, including a second *Mackinaw*-sized cutter, may be needed to keep shipping lanes open between Lake Superior ports and the Lower Lakes.

GREAT LAKES ICEBREAKING

Richard D. Stewart, Ph.D. CTL

Great Lakes Icebreaking Operations. Peter Kakela's 2013 study for the US Army Corps of Engineers determined that the total dollar value of iron ore shipped through the Soo Locks, including shipments from the Port of Duluth-Superior, in 2012 amounted to \$500.4 billion, or 3.2% of the U.S. Gross Domestic Product (GDP). The "New Soo Lock Economic Validation Study" released in 2018 further validated Great Lakes shipping's significant economic impact. The critical importance of this trade lane was a driving force in the construction of a new 1,000-foot long second "Poe" lock at Sault Ste. Marie that should be completed by 2030.

To support the vital Great Lakes maritime industry, the U.S. Coast Guard (USCG) has a fleet of icebreakers stationed around the Lakes. The USCG has annual operations to keep the shipping lanes open. Operation Coal Shovel is the domestic ice-breaking operation with an area of responsibility spanning from southern Lake Huron to Lake St. Clair to the St. Clair/Detroit River system and into Lake Erie and Lake Ontario, including the St. Lawrence Seaway. Operation Taconite performs icebreaking in the Lakes Superior, Northern Huron, Michigan and the St. Mary's River. Both operations cooperate with Canadian Coast Guard icebreakers.

Climate Change and Ice Coverage. A 2011 study published in the "Journal of Climate" provided a synopsis of reduced Great Lakes ice coverage over a 38-year period. The study's findings indicated

a significant downward trend in lake ice cover for the lakes for the period 1973-2010. Later research by NOAA researcher Tom Di Liberto extended analysis to 2018 showing a continuing trend toward reduced ice coverage and significant yearly variations.

Air temperature impacts ice formation and break-up. The 2019 study "An Assessment of the Impacts of Climate Change on the Great Lakes" found a trend of upward trajectory of air temperatures in the Great Lakes Basin: "Between 1901-1960 and 1985-2016, the Great Lakes basin has warmed 1.6°F in annual mean temperature, exceeding average changes of 1.2°F for the rest of the contiguous United States." Warmer surface water temperatures cause lake ice to form later than usual and/or go out earlier, resulting in a shorter duration of ice coverage.

Climate Change and Icebreaking. Over the past fifteen years, the opening dates of Operation Coal Shovel are trending later in the winter, and the closing dates are trending earlier in the spring. Operation Taconite has deployed icebreaker assets every winter season during the fifteen-year time frame. Their trend line also indicates ending sooner in the spring and starting later in the winter

The Soo Locks are closed to vessels by law for winter maintenance from January 15 to March 25. Historically, this down time has coincided with ice conditions on the St. Mary's River or Whitefish Bay that impede safe navigation.



Since 1959, new technologies against ice formation in locks and canals have extended the shipping season by more than 25 days. The average navigation season is currently 276 days. A reduction in ice coverage due to warming coupled with a second Poe-sized lock could enable an extended season, allowing vessels and fleets to carry cargo in the “extended shipping season.” In the 1970’s, a demonstration project of operating year-round shipping through the Soo was tried and in much colder average temperatures was found to be technically feasible.

The principal factors that have limited year-round vessel operations on this route include lock constraints, ice in the channels, and windrows of ice in Whitefish Bay on Lake Superior driven by the prevailing westerly winds. The warm and windy periods between cold periods cause ice plates to drift, followed by ice pressure and ridging in the ice fields. Windrows and brash ice barriers are formed, requiring additional ice-breakers support.

U.S. Assets Lag Baltic Icebreaking. The Baltic Sea has many similarities to the Great Lakes in terms of weather, size and ice impacting shipping. Research into the impact of global warming on Baltic Sea maritime commerce indicates that more, not fewer icebreakers will be needed to ensure that traffic is reliable. The warmer seasons in the Baltic are making ice navigation more difficult. Average seasons tend to be the hardest for ice navigation as the ice moves about.



There are other factors in Great Lakes icebreaking beyond ice that impact the duration and start and stop dates of the operations. The number of icebreakers, each vessel’s tonnage, horsepower, age, operational availability and funding are all of consequence in effective icebreaking.

The USCG defines large icebreakers as vessels with more than 10,000 horsepower and able to enter the Arctic Ocean alone. The largest icebreaker on the Great Lakes is the 9,914-horsepower *USCGC Mackinaw*. The nations bordering the Baltic (not including Russia) have 25 icebreakers over 10,000 horsepower.

A major expansion of USCG icebreaking capability is currently being undertaken with the first vessels being built in Finland on the Baltic. In 2021 the Lake Carriers Association cited a

\$2 billion loss due to inadequate Great Lakes icebreaking resources causing significant delays.

Expanding the shipping season due to the reduction of ice coverage creates new supply chain models that may appeal to shippers currently using other modes of transportation thus increasing Great Lake maritime commerce. Further research is needed into optimal icebreaker configuration by both U.S. and Canadian agencies, with input from industry. It may be that more and larger icebreakers are needed including a second Mackinaw-sized cutter stationed in Lake Superior.

Richard D. Stewart, Ph.D. CTL is Professor Emeritus Transportation and Logistics Management, University of Wisconsin-Superior. He can be reached at RStewart@uwsuper.edu.



WISCONSIN GREAT LAKES CHRONICLE AT 25

“Welcome to the inaugural *Wisconsin Great Lakes Chronicle*. This and future editions are intended to promote public awareness of Wisconsin Great Lakes issues, provide a vehicle for experts to educate public policy and opinion leaders, and create a historical record of Great Lakes events and perspectives.”

These words launched the first *Chronicle* in 2002, and the Wisconsin Coastal Management Program continues to fulfill those goals in this 25th edition. The publication’s strength comes from the scores of authors who have contributed over 180 articles containing insights and best practices that inform the public and fellow coastal managers in Wisconsin, across the Great Lakes region and beyond. Their articles, listed below, have enduring value and are available on the WCMP website at coastal.wisconsin.gov. We thank all authors for their work to protect and preserve Wisconsin’s Great Lakes coasts.

2002

“Why Coastal Management?” *Jim Langdon*

“Coastal Hazards,” *Alberto Vargas, Ph.D. and David Hart, Ph.D.*

“Wisconsin Commercial Ports,” *Dean R. Haen*

“Great Lakes Challenges,”
Secretary Darrell Bazzell

“Managing the Bad River of Lake Superior,”
Rae Ann Maday

“Protecting Coastal Wetlands on the Door Peninsula,” *Cate Harrington*

“Wisconsin Coastal Population Trends,”
Donald R. Harrier

2003

“Wisconsin Loves Its Great Lakes,” *Jane Elder*

“Restoring Coastal Resources in Wisconsin,”
Travis Olson

“A String of Pearls: The Estuaries of Chequamegon Bay,” *Cathy Techtmann*

“River Restoration Through Selective Dam Removal,” *Helen Sarakinos*

“Beach Monitoring in Milwaukee,”
Mary Ellen Bruesch and Sandra McLellan, Ph.D.

“Clean Boating,” *Mike Friis*

“Coastal Communities: Growing Smart, Tending the Past,” *Geoffrey M. Gyrisco, Ph.D.*



2004

- “Coaster Brook Trout Rehabilitation in Lake Superior,” *Laura Hewitt*
- “Restoring the West Shore of Green Bay,” *Kendra Axness*
- “Signs of Stress: Lake Michigan Algae,” *Victoria A. Harris and John Karl*
- “Bayfield County Shoreviewer,” *David Lee*
- “Projected Population Change in Wisconsin Coastal Counties,” *David Egan-Robertson*
- “Wisconsin’s Maritime Trails,” *Russ and Cathy Green*
- “Wisconsin Harbor Towns: Promoting Coastal Communities,” *Tom Lyons*
- “Recreational Boating Facilities Program,” *Larry Freidig*
- “Paddle-to-the-Sea,” *Jim Langdon*

2005

- “Apostle Islands Wilderness,” *Harald (Jordy) Jordahl*
- “Sustainable Development in the Menomonee Valley,” *Mary Beth Driscoll*
- “Protecting Beach Health in Door County,” *Vinni Chomeau*
- “Lake Michigan Communities Reinvent For Tourism,” *Jennifer Garrett*
- “Coastal Performance Indicators,” *Elizabeth Mountz*
- “Waterfront Redevelopment,” *Andrew Savagian*
- “State and Federal Coordination on Wisconsin’s Great Lakes,” *Kathleen Angel*

2006

- “The Great Lakes-St. Lawrence River Basin Water Resources Compact and Agreement,” *Kathleen Angel*
- “Spreading the Word About Stormwater Pollution,” *Kari Jacobson-Hedin*
- “Wisconsin Lake Superior National Estuarine Research Reserve,” *Travis Olson*
- “The Milwaukee Urban Water Trail,” *Cheryl Nenn*
- “Mashkiigimin (Cranberry) in the Kakagon Sloughs,” *Leah Anne Gibala*
- “Project Shipshape,” *Carolyn Colwell and Virginia Schwartz*
- “Coastal Community Planning,” *Angela Pierce*

2007

- “Revitalizing Racine’s North Beach,” *Dr. Julie Kinzelman*
- “The Niagara Escarpment: A Unique Wisconsin Coastal Resource,” *Angela Pierce*
- “Lake Superior Coastal Visual Quality,” *Jason Laumann*
- “Climate Change Comes to the Great Lakes Coasts of Wisconsin,” *Philip Keillor*
- “Wisconsin Shipbuilding,” *Mike Friis*
- “The Smart Prevention Approach to Managing Invasive Species,” *Jeff Maxted and Jake Vander Zanden*
- “Great Lakes Circle Tour – Coastal Access Guide,” *David Hart*

2008

- “St. Louis River Freshwater Estuary,” *Becky Sapper*
- “Saving the Kinnickinnic,” *Ben Gramling*
- “Wind Point Lighthouse: Gateway to the Stars,” *Bill Schalk*
- “Conservation Ensures Great Lakes Sustainability,” *Jeff Ripp*
- “Economics of Great Lakes Recreational Boating,” *Dave Knight*
- “Green Tier Charters,” *Jeffrey Voltz*
- “Wisconsin Coastal Management at 30,” *Mike Friis*

2009

- “Finding Solutions to a Mysterious Harbor Corrosion Problem,” *Gene Clark and Kathleen Schmitt Kline*
- “Marketing Wisconsin’s Great Lakes Tourism Experience,” *Secretary Kelli A. Trumble*
- “Lake Superior National Estuarine Research Reserve: Closer to Reality,” *Travis Olson*
- “Planning Brown County’s Parks,” *Aaron Schuette*
- “Disposal of Old Medicines,” *Steve Brachman*
- “Small Community Stormwater Management,” *Sandra Dee Schultz-Naas*
- “Wind on the Water,” *Timothy Le Monds*

2010

- “New Life for an Old Coal Dock,” *Rob Vanden Noven*
- “A View of Wisconsin’s Coast from Washington,” *Donna Wieting*
- “Real-Time Wave Information System at the Apostle Islands Mainland Sea Caves,” *Gene Clark, PE and Dr. Chin Wu*
- “The Wisconsin Coastal Management Council,” *Mayor Larry MacDonald*
- “Wetland Gems: Recasting the Image of Wetlands,” *Katie Beilfuss, Becky Abel and Laura England*
- “Duck Creek Fish Passage,” *Stacy Gilmore*
- “Light Detection and Ranging (LiDAR) Data,” *Scott M. Galetka*

2011

- “Wisconsin Ports are Strong Economic Engines,” *Jason Serck*
- “Wisconsin’s Coastal Counties: Demographic Trends,” *David Egan-Robertson*
- “Wisconsin’s Clean Marina Program,” *Victoria Harris and Jon Kukuk*
- “Milwaukee’s Second Shoreline: The Milwaukee River Greenway,” *Ann Brummitt*
- “Chequamegon Bay Area Partnership,” *Ed Morales*
- “Bradford Beach: Jewel of Milwaukee’s Emerald Necklace,” *Laura Schloesser*
- “Restoring Wild Rice in Allouez Bay,” *Amy Eliot*



2012

- "Asian Carp: A Call to Action,"
Attorney General J.B. Van Hollen
- "Wisconsin Shoreline Analysis,"
Dr. David Mickelson and Jeff Stone
- "Wisconsin Lake Michigan Water Trail," *Angela Pierce*
- "Superior's Shores: Nature, History and Recreation," *Mary Morgan*
- "Redeveloping the Lower Fox River and Green Bay Waterfront,"
Aaron Schuette
- "Milwaukee's Menomonee Valley,"
Laura Bray
- "A Coastal Fellow's Wisconsin Adventure," *Kathy Johnson*

2013

- "Low Water, High Challenge,"
Dave Knight and Gene Clark, PE
- "Washington Island: A Unique Way of Living!," *Joel Gunnlaugsson*
- "Red Cliff Band Reclaims Frog Bay,"
Dennis McCann
- "Protecting Wisconsin's Great Lakes Beaches," *Todd Breiby*
- "Community Involvement Improves Areas of Concern,"
Gail Epping Overholt
- "Ozaukee County Fish Passage Program," *Andrew Struck and Matt Aho*
- "Two Rivers Plans for the Future,"
Peter Herreid

2014

- "Apostle Islands Ice Caves Go Viral,"
Bob Krumenaker and Neil Howk
- "Crumbling Coastal Infrastructure: What Can Be Done?" *Gene Clark, PE*
- "Lake Superior National Estuarine Research Reserve Starts Strong,"
Becky Sapper
- "Oak Creek Redevelopment,"
Mayor Steve Scaffidi
- "G-Wow Changing Climate, Changing Culture, Changing Coasts," *Cathy Techtmann*
- "Egg Harbor Beach and Marina Improvements," *Josh Van Lieshout*
- "Digital Coast," *Rebecca Love and Jeff Stone*

2015

- "Commercial Ports: Wisconsin's Comparative Advantage,"
Ernie Perry, Ph.D.
- "NOAA Coastal Storms Program,"
Julia Noordyk
- "Cat Island Chain Restoration,"
Mark A. Walter
- "Wisconsin Lake Superior Scenic Byway," *Mary Nowakowski*
- "The National Marine Sanctuary System," *Ellen Brody and John H. Broihahn*
- "New Hope for Islands at Death's Door," *Tim Sweet*
- "Three Bridges Park," *Corey Zetts*

2016

- "Transform Milwaukee Creates a Vision for an Industrial Corridor,"
Wyman Winston
- "Wisconsin Point—Urban Wilderness and Coastal Asset," *Mary Morgan*
- "Back to the Root," *Mayor John Dickert*
- "Wisconsin Invests in Shipbuilding Industry," *Sheri Walz*
- "Coastal States Organization and Its Wisconsin Perspective," *Mike Friis*
- "New Water Protects Our Most Valuable Resource," *Bill Hafz*
- "Wisconsin Wetlands of International Importance," *Katie Beilfuss*

2017

- "Saxon Harbor Recovery and Redevelopment," *Jason Laumann*
- "Milwaukee's Harbor District,"
Lilith Fowler
- "Two Rivers: Turning Our Face Back to the Water," *Greg Buckley*
- "Wisconsin Harbor Towns Association,"
Kathy Tank
- "Follow the Drop: A Watershed Odyssey," *Bill Moren and David Libert*
- "J. Philip Keillor Fellowship,"
Adam Bechle
- "Kids on the Coast: The Rivers2Lake Education Program," *Deanna Erickson*

2018

- "Ashland Ore Dock: Redeveloping an Icon," *Sara Hudson*
- "Dunes Lake—A Forgotten Paradise," *Mike Grimm and Greg Coulthurst*
- "Managing Coastal Resources: A Small City's Path to Success,"
Tom Mlada
- "Great Lakes Accessibility for All,"
Mike Friis
- "Great Lakes Coastal Resiliency Study," *Alex Hoxsie and David Bucaro*
- "Visualizing Wisconsin's Coasts with Story Maps," *Joe Dwyer*
- "Improving Coastal Resilience Through Digital Coast,"
Jake Thickman

2019

- "Regional Maritime Strategy,"
Mike Friis
- "Water Resources and LiDAR in Wisconsin," *Jim Giglierano*
- "Bay Beach Restoration,"
Dan Ditscheit
- "Fresh Coast Resource Center,"
Christopher Schultz and Jacob Fincher
- "Apostle Islands: Partnering for Accessibility," *Mark R. Peterson*
- "Managing Visitor Use in Coastal Protected Areas," *Lauren Leckwee*
- "Coastal Processes Manual," *Yi Liu*



2020

- “Saxon Harbor Restoration,”
Eric Peterson
- “Great Lakes High Water Levels,”
Deanna Apps
- “Southeastern Wisconsin Coastal Resilience Project,” *Adam Bechle*
- “Sheboygan River Area of Concern,”
Stacy Hron and Kendra Axness
- “Renard Island Master Plan,”
Mark Walter
- “Bayfield County Hydrogeologic Atlas,” *Mark Abeles-Allison*
- “Office of Outdoor Recreation,”
Mary Monroe Brown

2021

- “Outdoor Recreation in the Time of COVID,” *Mike Friis*
- “Generation Green,” *Karina Gonzalez*
- “Green Bay Climate Resiliency,”
Melissa Schmitz
- “Bayfield’s Big Ravine,” *Kate Kitchell*
- “Port Washington Rip Current Alert System,” *Dr. Chin Wu and Todd Breiby*
- “Wisconsin Coastal Management Data Infrastructure Project,”
Melanie Kohls and Jim Giglierano
- “University of Wisconsin and the Great Lakes,” *Tommy Thompson*

2022

- “Wisconsin Environmental Equity Tool,” *Maggie Thelen and Dominic Holt*
- “Wisconsin Initiative on Climate Change Impacts,”
Dea Larsen Converse
- “Great Lakes Anishinaabe Place Names,” *Dr. Margaret Noodin and Jim Langdon*
- “Green Bay National Estuarine Research Reserve,” *Emily Tyner*
- “Wisconsin Shipwreck Coast National Marine Sanctuary,” *Russ Green and Mike Friis*
- “Soo Locks Expansion Will Benefit Superior,” *Jim Langdon*
- “50 Years of Coastal Zone Management,” *Donna McCaskill*

2023

- “Focusing on Milwaukee’s Maritime Future,” *Jackie Q. Carter*
- “Conserving Bayfield’s Sand River Headwaters,” *Emily Rau and Jason Bodine*
- “Collaborative Action for Lake Michigan (CALM),” *Lydia Salus*
- “Coastal Hazards of Superior (CHAOS),” *Sarah Brown*
- “Wisconsin Clean Marina Program,”
Theresa Qualls and Todd Breiby
- “Wisconsin Historical Society Field School,” *Tamara Thomsen*
- “Tony Earl,” *Julia Earl*

2024

- “Clay Bluffs Cedar Gorge Nature Preserve,” *Andrew Struck, Matt Aho and Tom Stolp*
- “Climate Impacts on Manoomin,”
Illeana Alexander, Rob Croll, and Hannah Panci
- “Partnership to Protect Pebble Beach,”
Cinnamon Rossman
- “Green and Healthy Schoolyards,”
Heather Dietzel and Michael Timm
- “Lake Superior Cyanobacterial Blooms,”
Matt Hudson
- “Restoring Habitats in Great Lakes Coastal Watersheds,” *Vidya Balasubramanyam and Todd Breiby*
- “A Broad and Narrow View of Coastal Management,” *Larry MacDonald*

2025

- “Why Coastal Management?” *Jim Langdon*
- “Ganawenindiwag: Plant Relatives to Heal and Protect Gichigami Shorelines,”
Karina Heim, Rob Croll and Hannah Panci
- “Madeline Island Ferry: A Future Secured,”
Glenn Carlson
- “Protecting and Restoring Natural Areas for Floodwater Management,”
Kristin Schultheis and Anthony Hatcher
- “Pike River Restoration Phase III,”
Karli Schwer and Wyatt Moore
- “100% Great Lakes Fish Initiative: A New Way to Think About Fish,” *John Schmidt*
- “Coastal Scenic Byways,” *Mike Friis and Todd Breiby*
- “Brown County One Map Pilot Project,”
Jim Giglierano and Jeff DuMez

2026

- “Coastal Resilience Communities of Practice,” *Jake Kolanowski*
- “Ishkode (Good Fire) Returns to Wisconsin Point,”
Alexander Mehne
- “The East River: A Roadmap to a More Resilient Watershed,”
Kari Hagenow
- “Great Lakes Observing System (GLOS),” *Samuel Johnson*
- “Great Lakes States Working Together to Plan for Data Centers,” *Peter Johnson*
- “Gile Flowage,”
Lydia Salus, Eric Peterson and Cathy Techtmann
- “Great Lakes Icebreaking,”
Richard D. Stewart, Ph.D. CTL





2026 WISCONSIN COASTAL MANAGEMENT PROGRAM GRANTS

Project Name
Grantee
WCMP Award
Project Description
Contact

Coastwide

Maxwell Forest Project

Bayfield County

\$180,774

Purchase 132 acres of unfragmented forest land, shoreline and river bluffs in the White River watershed straddling Ashland and Bayfield Counties from Northland College to protect and expand public access.

Mr. Jason Bodine,
jason.bodine@bayfieldcounty.wi.gov

Michigami Basin Manoomin (Wild Rice)

The Board of Regents of the University of Wisconsin System

\$100,666

The University of Wisconsin-Madison will develop tribally-led educational materials to increase manoomin literacy in Brown and Milwaukee Counties.

Ms. Brenda Egan, preaward@rsp.wisc.edu

Guiding Wisconsin Coastal Wetland Restoration Priorities

The Board of Regents of the University of Wisconsin System

\$100,122

The University of Wisconsin-Milwaukee will evaluate how coastal wetland water levels and connectivity with the Great Lakes influence nutrient retention and export dynamics across Wisconsin's coasts.

Dr. Xinyi Shen, xinyis@uwm.edu

Stewarding Wisconsin's Shore

Wisconsin Counties Association

\$90,750

Create a Great Lakes Stewardship Series including a 30-minute *Into the Outdoors* episode, a *Discover Wisconsin* original short, a broadcast television commercial and supplemental educational resources.

Mr. Mark O'Connell, oconnell@wicounties.org

Community-Centered Land Protection Planning 2025-2035

Ozaukee Washington Land Trust

\$55,353

Create a plan for future land acquisitions within the Milwaukee River and Lake Michigan Basins, including creating an evaluation tool for land acquisition decisions.

Ms. Emily Stoll, estoll@restoringlands.org

Comprehensive Natural Resources and Interactive Environmental Education
Bay-Lake Regional Planning Commission
\$37,335

Update the Natural, Cultural and Agricultural Resources section of the Bay-Lake Regional Comprehensive Plan.
Ms. Lydia Bernhoft, lbernhof@baylakerpc.org

Natural Areas Explorer Webtool Update
Southeastern Wisconsin Regional Planning Commission
\$29,877

Upgrade and expand the Natural Areas Explorer tool to aid in the development of management practices and strategies for Natural Areas and Critical Species habitat sites.
Dr. Thomas Slawski, tslawski@sewrpc.org

On-Farm Prairie Strips to Improve Water Quality and Biodiversity
Sand County Foundation
\$29,568

Identify interested farmers, provide technical assistance, and develop design plans to scale up adoption of prairie strips in the Lake Michigan basin.
Mr. Craig Ficenec, cficenec@sandcountyfoundation.org

Collective Framework for Tree Planting Programs on the Lake Michigan Coast
Southeastern Wisconsin Watersheds Trust, Inc. (Sweet Water)
\$27,013

Develop a capacity-building framework to increase collective tree planting and forest restoration across Wisconsin's Lake Michigan coastal zone.
Mr. Jacob Fincher, fincher@swwtwater.org

Brule River Protection Plan
Northwest Regional Planning Commission
\$25,000

Develop a protection plan to identify priority areas for conservation, evaluate stressors, and recommend strategies for maintaining the watershed's hydrology, water quality and habitat.
Mr. Jason Laumann, jlaumann@nwrpc.com

Stream Stories: Restoration and Monitoring of the Lower Fox River, Green Bay and Tributaries
The Board of Regents of the University of Wisconsin System
\$13,013

The University of Wisconsin-Green Bay will create digital StoryMaps that showcase the educational and ecological accomplishments of UW-Green Bay and its partners' freshwater outreach programs.
Ms. Emily Tyner, tynere@uwgb.edu

Update and Redesign of Wisconsin Lake Superior Byway Map and Guide
City of Washburn
\$9,250

The Scenic Byway Council will update, print and distribute the Lake Superior Scenic Byway brochure and map.
Ms. Mary Motiff, mayor@cityofwashburnwi.gov

Technical Assistance
Bay-Lake Regional Planning Commission
\$30,000

Provide public information and outreach on issues affecting coastal resources by providing information, presentations, support, newsletter articles, social media posts and technical assistance.
Ms. Lydia Bernhoft, lbernhof@baylakerpc.org

Technical Assistance
Northwest Regional Planning Commission
\$30,000

Provide technical assistance to the Department of Administration in the implementation of the Wisconsin Coastal Management Program.
Mr. Jason Laumann, jlaumann@nwrpc.com

Technical Assistance
Southeastern Wisconsin Regional Planning Commission
\$30,000

Assist the Department of Administration in the implementation of the Wisconsin Coastal Management Program through technical assistance, regional analysis and public outreach services.
Dr. Thomas Slawski, tslawski@sewrpc.org



Bayfield County

Sioux River Big Rock Acquisition

Bayfield County

\$50,000

Acquire 11.59 acres of land along the Sioux River and adjacent to Big Rock County Park and Campground.

Mr. Jason Bodine,

jason.bodine@bayfieldcounty.wi.gov

Lost Creek Falls Trail Addition and EMS Access

Bayfield County

\$25,000

Bayfield County Forestry and Parks Department will construct a new trail and improve EMS access at Lost Creek Falls to improve user experience and public accessibility.

Mr. Jason Bodine,

jason.bodine@bayfieldcounty.wi.gov

Brown County

Bay Shore Park Fish Cleaning Station

Brown County Parks

\$80,000

Install a new fish cleaning station at Bay Shore County Park to improve coastal water quality, public access and user convenience for anglers.

Mr. Matt Kriese,

Matt.Kriese@browncountywi.gov

Door County

Peninsula State Park Multimodal Trail & Trailhead Green Infrastructure

Friends of Peninsula State Park

\$53,422

Design a critical connective segment of multimodal trail and improvements at key trailhead parking areas within Peninsula State Park.

Mr. Bill Pennoyer, info@peninsulastatepark.org

Manitowoc County

Resilient Waterfront Parkland Public Access and Restoration

City of Two Rivers

\$47,700

Develop final design engineering for improved public access amenities and nature-based stormwater management infrastructure along the 3.2-mile Mariners Trail adjacent to the Lake Michigan shoreline.

Mr. Mike Mathis, mikmat@two-rivers.org

Improve Access to East Twin River for Educational Programming

Mishicot School District

\$41,200

Complete a construction-ready design plan for improved access to the East Twin River for classroom activities.

Ms. Christine Thelen, cthelen@mishicot.k12.wi.us



Milwaukee County

Transforming Greener Schools in MPS

Milwaukee Board of School Directors

\$60,000

Develop plans that integrate green infrastructure into schoolyards at five Milwaukee Public Schools to repurpose impermeable schoolyards, manage stormwater and support environmental education. Dr. Brenda Cassellius, 560@milwaukee.k12.wi.us

Sturgeon Protectors: Protecting and Sharing the Journey of the Lake Sturgeon

Milwaukee Riverkeeper

\$30,000

Support volunteer patrols to protect migrating sturgeon, fund public education, raise awareness about the ecological and cultural significance of sturgeons, and host Menomonee Nation youth field trips.

Ms. Cheryl Nenn,

cheryl_nenn@milwaukeekeeper.org

Ozaukee County

Reconnecting the Milwaukee River to Historic Floodplain, Wetlands and Oxbow

Ozaukee County Planning and Parks Department

\$90,000

Implement a riparian floodplain, wetland and oxbow habitat restoration project in the Village of Saukville including native specie plantings, invasive species control, and post-construction monitoring.

Mr. Andrew Struck, astruck@ozaukeecounty.gov

Protecting Lake Sturgeon and its Habitat through Riveredge's Watershed Education Program

Riveredge Nature Center, Inc

\$44,320

Deliver a sturgeon-focused curriculum to Title I Milwaukee middle schools to engage students in awareness about the Great Lakes ecosystem and foster sturgeon habitat protection.

Ms. Anna Jean Hallmann,

ajhallmann@riveredge.us

Sheboygan County

Great Lakes Literacy for Middle School: Data Collection and ROV Experiences

Science on a River, Inc. (SOAR)

\$26,527

Develop a progressive series of Great Lakes literacy programs for 6th, 7th and 8th grade students in the Sheboygan Area School District.

Ms. Katherine Cannistra,

katherinecannistra@gmail.com





ACKNOWLEDGMENTS

The Wisconsin Coastal Management Program was established in the Department of Administration (DOA) in 1978 under the Federal Coastal Zone Management Act. The program and its partners work to achieve balance between natural resource preservation and economic development along Wisconsin's Great Lakes coasts. The program thanks its principal federal partner, the National Oceanic and Atmospheric Administration, Office for Coastal Management, for the technical and financial support it provides on behalf of Wisconsin's coastal communities.

Wisconsin Coastal Management Program

Tony Evers
Governor

Kathy Blumenfeld
Secretary, DOA

Dawn Vick
Administrator, DOA Division of Intergovernmental Relations

Mike Friis
Resource Policy Bureau Director, DOA

Kathleen Angel
Program Manager, WCMP

Todd Breiby
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Funded by the Wisconsin Coastal Management Program and the National Oceanic and Atmospheric Administration, Office for Coastal Management, under the Coastal Zone Management Act, Grant NA24NOSX419C0009-T1-01.

The Wisconsin Coastal Management Program in the Wisconsin Department of Administration publishes *Wisconsin Great Lakes Chronicle*. It welcomes, but is not responsible for, the opinions expressed by contributing authors.



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Wisconsin Great Lakes Chronicle 2026 is dedicated to former Department of Natural Resources Secretary George Meyer, a steadfast advocate for the Great Lakes. Secretary Meyer brought together people across geographic and political spectrums to advance clean water policies and responsible resource management.