LAKE ERIE PROTECTION & RESTORATION PLAN

OHIO LAKE ERIE COMMISSION

2025
FISCAL YEAR

Ohio Lake Erie Commission

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THE OHIO LAKE ERIE COMMISSION

The Ohio Lake Erie Commission is a state body dedicated to preserving Lake Erie's natural resouces. It brings together the directors of six key state agencies, five Commissioners from the Lake Erie community, and two appointments from the Great Lakes Protection Fund. The Commission works to protect the quality of Lake Erie's waters and ecosystem. It also promotes the regions economic development by ensuring coordination among state government policies and programs related to water quality, toxic substances, and coastal resource management. The Commission plays a pivotal role in coordinating policies and programs that safeguard the Lake Erie watershed in Ohio.

The Commission's activities, which the Commission plans to continue, include:

- Leading the coordination of Governor DeWine's H2Ohio Initiative in partnership with the Ohio Environmental Protection Agency (Ohio EPA), Ohio Department of Agriculture (ODA), and Ohio Department of Natural Resources (ODNR).
- Overseeing Ohio's participation in federal programs under the Great Lakes Water Quality Agreement, including the Areas of Concern Program (AOC), Lake Erie Lakewide Action and Management Plan (LAMP), and Ohio Domestic Action Plan(DAP).
- Administering the Lake Erie Protection Fund, as well as other funding programs, and preparing the Lake Erie Protection & Restoration Plan.
- Raising awareness of opportunities to protect, restore, and promote Ohio's Lake Erie through the Life on Lake Erie Photo Content, Lake Erie License Plate Program, Lake Erie Quality Index (LEQI), Commission Quarterly Meetings, and various grant programs.

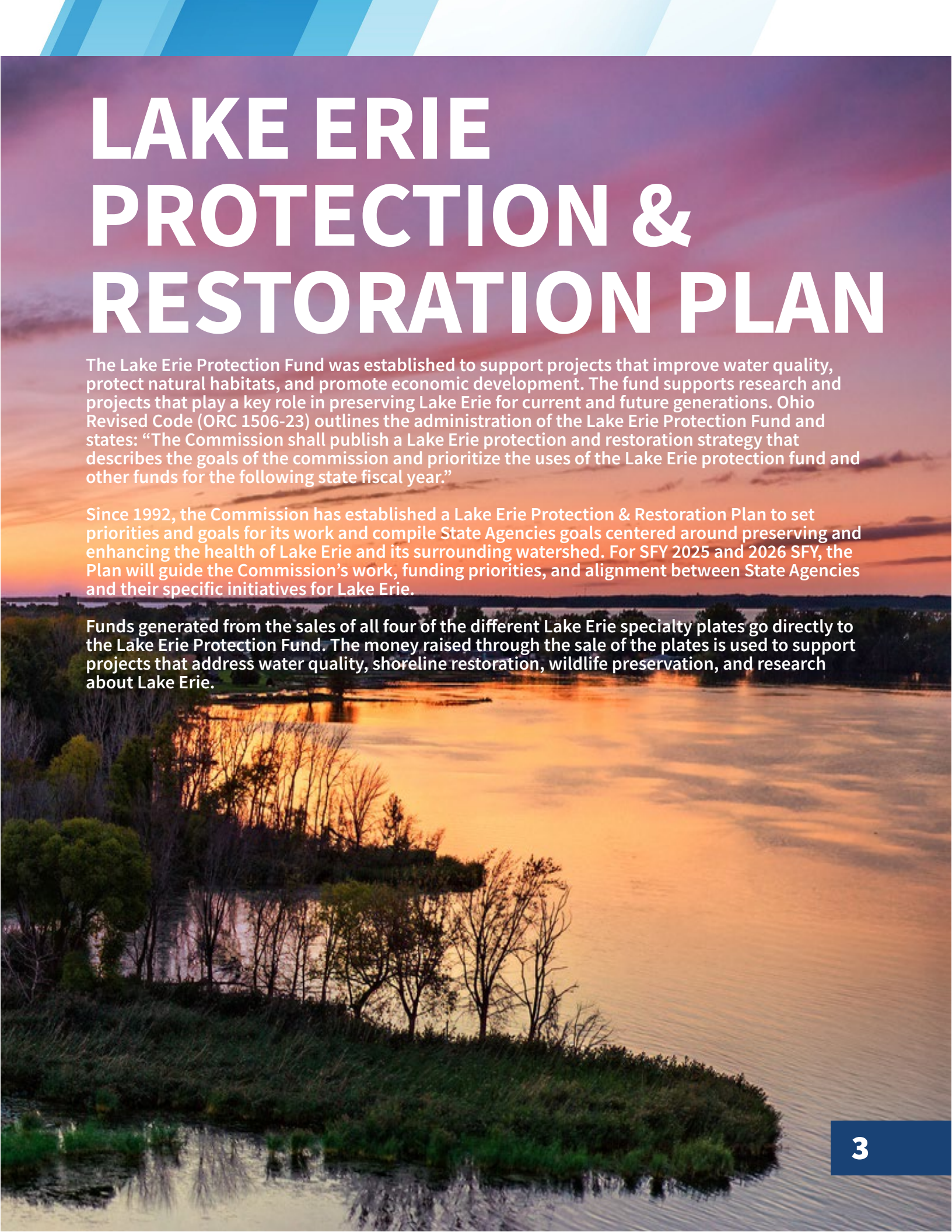
Lake Erie serves as both an ecological and economic cornerstone for Ohio and its communities. The unique assets of the lake are evident along its diverse coastline, and as Ohio's land uses, demographics, and economic drivers evolve, so too must our strategies for sustaining this valuable resource. This plan will guide Ohio in preparing for the future of Lake Erie, securing its continued legacy as a critical natural resource.

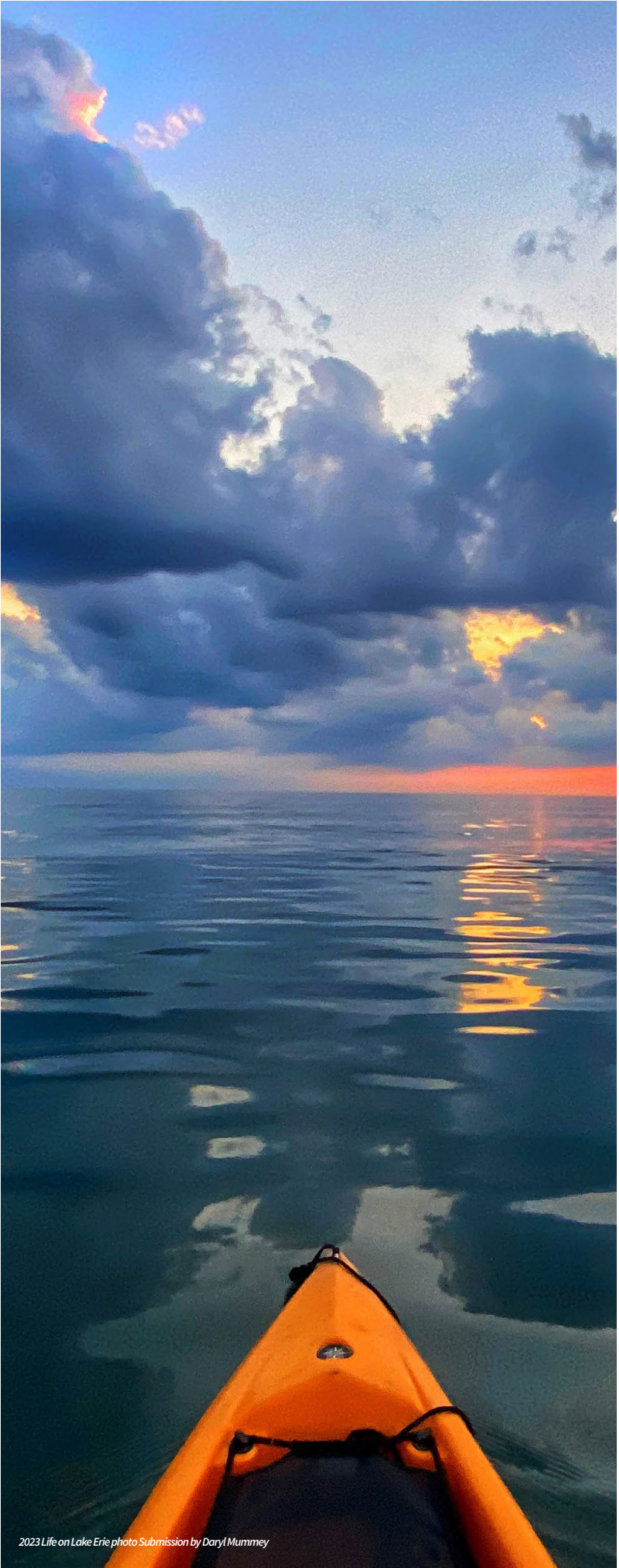
LAKE ERIE PROTECTION & RESTORATION PLAN

The Lake Erie Protection Fund was established to support projects that improve water quality, protect natural habitats, and promote economic development. The fund supports research and projects that play a key role in preserving Lake Erie for current and future generations. Ohio Revised Code (ORC 1506-23) outlines the administration of the Lake Erie Protection Fund and states: "The Commission shall publish a Lake Erie protection and restoration strategy that describes the goals of the commission and prioritize the uses of the Lake Erie protection fund and other funds for the following state fiscal year."

Since 1992, the Commission has established a Lake Erie Protection & Restoration Plan to set priorities and goals for its work and compile State Agencies goals centered around preserving and enhancing the health of Lake Erie and its surrounding watershed. For SFY 2025 and 2026 SFY, the Plan will guide the Commission's work, funding priorities, and alignment between State Agencies and their specific initiatives for Lake Erie.

Funds generated from the sales of all four of the different Lake Erie specialty plates go directly to the Lake Erie Protection Fund. The money raised through the sale of the plates is used to support projects that address water quality, shoreline restoration, wildlife preservation, and research about Lake Erie.





2023 Life on Lake Erie photo Submission by Daryl Mummey

THE LAKE ERIE PROTECTION FUND

est.1992

IMPACT

Since 1992

The Lake Erie Protection Fund supports research and initiatives aligned with the Lake Erie Protection & Restoration Plan. It is primarily funded by Ohio citizens through the purchase of the Commission's specialty license plates.

The fund also accepts memorial and direct donations, which are tax-deductible, and can be made online or by check payable to the "Lake Erie Protection Fund."

$13M
IN FUNDING ISSUED

600
PROJECTS AWARDED

LAKE ERIE

license plates

The license plate program debuted in 1993 with the Marblehead Lighthouse design. Additional plate designs now include the Toledo Harbor Lighthouse, Lake Erie Life Preserver, and Life on Lake Erie/Kayak plate.

Life on Lake Erie/Kayak

Lake Erie Life Preserver

Toledo Harbor Lighthouse

Marblehead Lighthouse

GREAT LAKES WATER QUALITY AGREEMENT

The Great Lakes Water Quality Agreement (GLWQA) is a cornerstone binational partnership between the United States and Canada, aimed at protecting and improving the water quality and ecological health of the Great Lakes. First signed in 1972 and updated over the years, the Agreement addresses key environmental challenges including pollution reduction, habitat restoration, and invasive species prevention. Its collaborative approach ensures the lakes remain sustainable for generations to come.

Ohio is active in this coordination across the Great Lakes states, Ontario, and Canadian provincial governments under the GLWQA framework. Working together on shared priorities outlined in the GLWQA plays a critical role in the health and protection of Lake Erie. The Ohio Lake Erie Commission leads Ohio's work in various Annexes, including:

- **Annex 1:** Areas of Concern, focusing on addressing regions with significant environmental degradation.
- **Annex 2:** Lake Erie Lakewide Action and Management Plan, aiming to reduce nutrient pollution and improve water quality.
- **Annex 4**: Ohio Domestic Action Plan, which supports state-specific actions and goals for the protection of Lake Erie.
- **Annex 10**: Science, which ensures research and data inform ongoing restoration and management efforts.

The Commission also facilitates collaboration between state and federal partners on Great Lakes funding. Since 2019, approximately $150 million has been invested in Ohio through the Great Lakes Restoration Initiative (GLRI) to support the protection and restoration of Lake Erie. Federal investments in Ohio accelerate and augment the priorities of Ohio agencies outlined in this plan. The Commission coordinates between federal and state agency partners to ensure that the latest Lake Erie data, challenges, and priorities outlined in the Lake Erie Protection and Restoration Plan are shared during GLRI and GLWQA planning, decision-making, and in materials.

ACCOMPLISHMENTS & PROGRESS

Nutrient Pollution Reduction

Ohio Department of Natural Resources (ODNR)

- Through H2Ohio, ODNR completed 94 wetland projects with 7,705 acres, in the Lake Erie Basin, have been completed.
- OLEC provided funding to ODNR to continue to improve the estimates of nutrient load reduction for wetland projects.

Ohio Department of Agriculture (ODA)

- ODA completed the expansion of H2Ohio to include the entire Ohio Lake Erie basin.
- Within the Maumee watershed, producers increased the acres enrolled and under approved nutrient management plans by 30%.
- In 2023, ODA simplified H2Ohio practices in order to increase the rates at which producers were implementing these practices on the farm without compromising on the scientific and conservation integrity of these practices. Cover Crops in 2022-2023 had an implementation rate at about 66%, and for 2024 contracts, the implementation was around 90%.
- ODA implemented H2Ohio nutrient management plans efficiently through new software starting in September 2023.
- A new project is underway to determine the best field scale model to use to improve the edge of field nutrient reduction estimates for farm-based BMPs.
- ODA completed first edition regional watershed plans in 2023, which will help inform necessary conservation work, including H2Ohio implementation.

Ohio Environmental Protection Agency (Ohio EPA)

- In the Lake Erie Basin, 142 total Non-Point Source Implementation Strategies (NPS-IS) have been approved with 19 more in development.
- Ottawa and Lucas SWCDs identified new projects focused on stream restoration to increase water capacity and reduce erosion while continuing to implement projects from NPS-IS plans. Mercer, Williams, Fulton, and Defiance SWCDs have pressed forward with project development along with NPS-IS development and updates. This has resulted in numerous §319 and GLRI grants and sub-awards for implementation.
- The Maumee Watershed Nutrient TMDL was approved by US EPA in September 2023 and the first Biennial Report was published in December 2024.
- The Ohio Domestic Action Plan (DAP) was reissued in January 2024.
- The stream monitoring network was included in the Ohio DAP, Maumee Watershed Nutrient TMDL, and the GLWQA Annex 4 Subcommittee Adaptive Management Framework.
- Demonstration projects for five H2Ohio Technology Assessment Program (TAP) projects began in 2024. A second round of TAP funding also initiated in 2024.

Habitat & Species

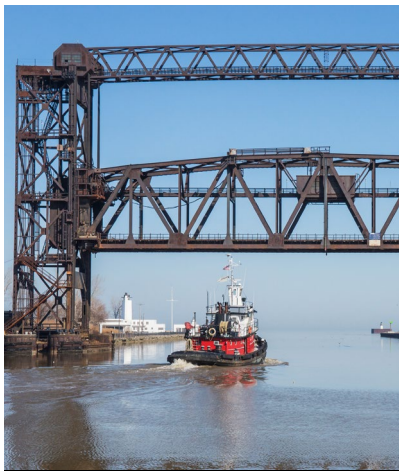
Ohio Department of Natural Resources (ODNR)

- Currently, 94 H2Ohio projects with 7,705 acres in the Lake Erie Basin have been completed with more multi-year projects underway.
- Began funding projects focused on restoration along rivers, created Healthy Rivers Livery Grants program to target litter in rivers, enhanced targeted tire cleanups along rivers and upland habitat.
- ODNR DOW collected bathymetry and sidescan data for nearshore reef areas in the Central Basin as part of work to assess whether species such as walleye, lake trout, and whitefish use these reefs for spawning.
- ODNR DOW conducted more than 260 trawls and 60 nights of gill netting to sample 161,100 fish in 2023 and 132,252 fish in 2024 to continue long-term assessments of Lake Erie fish populations use of critical habitats.
- ODNR DOW continues to be committed to using acoustic telemetry tag data to inform fisheries management decisions. During 2023 and 2024: 572 walleye were tagged that resulted in 3.3 million detections, 281 smallmouth bass were tagged that resulted in 856,000 detections, 231 yellow perch were tagged that resulted in 850,000 detections, and 157 stocked lake sturgeon were tagged.
- ODNR completed annual stocking in the Maumee River of juvenile lake sturgeon.
- ODNR completed a 2024 pilot stocking of juvenile lake sturgeon in Cuyahoga River.
- The Ohio Coastal Training Program offered a second Nature-based Shoreline certification course in 2024.

Invasive Species

- ODNR continued to implement actions to close the Little Killbuck Creek connection to prevent bighead and siler carp from entering Lake Erie. The project is being phased by level of risk and Phase 1 will be completed in early 2025.
- ODNR DOW coordinated grass carp removal efforts through the Grass Carp Advisory Committee (GCAC) and collaborated with US FWS to ensure sea lamprey control efforts, standardized AIS sampling, and eDNA collection for invasive carps were conducted in high-priority tributaries and harbors of Lake Erie.
- ODNR DOW captured 202 grass carp in 2023 and 265 grass carp in 2024 through the use of electrofishing and netting.
- ODNR DOW conducted over 260 trawls and 60 nights of gill netting and coordinated in excess of 1000 hours of AIS-targeted electrofishing annually.
- ODNR DOW continued to monitor for sea lamprey in Ohio's Lake Erie tributaries and on control activities in the Grand and Conneaut Rivers.

Dredged Material Management & Maritime Infrastructure



- The Sandusky Bay Initiative Cedar Point Causeway Wetland Project was constructed and received 280,000 cubic yards of dredged sediment.
- Ashtabula Harbor dredged sediment is being beneficially used to create approximately 16 acres of submerged aquatic habitat along the east breakwater.
- The Dredge Research and Innovation in Farming Team (DRIFT) continues to meet semi-annually. Two multi-year farm field dredge soil amendment field demonstration projects have been implemented, along with dredge as a soil amendment greenhouse study.
- Harbor Sediment Authorizations for Conneaut and Fairport Harbor were issued by Ohio EPA.

Areas of Concern


Photo Credit: Coldwater Consulting LLC

- OLEC and Ohio EPA completed one Management Action in the Black River, two in the Cuyahoga River, and three in the Maumee AOC. All Management Actions in the Black River AOC are complete.
- OLEC and Ohio EPA removed six Benefical Use Impairments in Ohio AOCs.
- OLEC and Ohio EPA continued work with US EPA towards remedial action implementation in Ohio's AOCs. Remedial action agreements between federal, state, and local partners were signed to address legacy sediment contaimination.

Toxic Pollutants

- Ohio EPA has awarded 31 grants for chloride reduction projects in the Lake Erie watershed. Those grants totaled nearly $1.7 million and funded upgrades to facilities and equipment that will help communities reduce road salt applications and runoff.
- Ohio EPA H2Ohio program funded PFAS sampling in large river systems that was completed in 2023/2024. A GLRI grant was secured to fund PFAS analysis in Lake Erie fish tissue samples.

Tourism, Jobs & Economy

- ODOT Maritime Assistance Program awarded $4.7 million to the Toledo-Lucas County Port Authority and $4.9 million to the Cleveland-Cuyahoga County Port Authority. Funding supported improvements at their general cargo facilities to upgrade environmental sustainability, speed, and efficiency of cargo handling and movement.

Water Withdrawals

ODNR Published a new Science Strategy in June 2024 and it outlines the priority action plan for the next five years. Priority actions are as follows:

- Embed Science Team in Regional Body/Compact Council Work
- Improve the Assessment of Cumulative Impacts
- Promoting Water Conservation and Efficiency
- Enhancing Organizational Collaboration
- Addressing data, monitoring, and science gaps (Research Needs)

Beach & Recreation Use

- Projects were implemented at Maumee Bay State Park to reduce bacterial runoff from wildlife at the inland beach. A boat wash was installed at Geneva State Park. Headlands Beach State Park also had improvements funded and contracted.
- ODNR completed capital improvement projects at multiple Lake Erie State Parks.
- ODNR also updated the Ohio trails app to use the free OuterSpatial app.
- ODNR and other agencies provided numerous grants to communities to improve trails, outdoor recreation and boating amenities, and public access.
- OLEC funded Ohio Sea Grant to develop case studies for marine debris capture technologies.

2025 PRIORITIES

Looking ahead

OHIO LAKE ERIE PRIORITIES

The Commission reviewed the priorities from the prior plan, coordinated with agencies, and provided opportunity for community input through public comments on the draft plan to determine the next set of two-year priorities. While the priorities for 2025-2026 remain similar, the goals have been updated to reflect emerging issues, adaptation needs, and continued progress to achieve longer-term goals for Lake Erie. Each Priority has an outline of its purpose, need and objectives that set forth the next two year Lake Erie Protection & Restoration Plan.

- **Nutrient Pollution Reduction**
- **Habitat & Species**
- **Invasive Species**
- **Dredge Material Management & Maritime Infrastructure**
- **Areas of Concern**
- **Toxic Pollutants**
- **Travel, Tourism, Jobs & Economy**
- **Water Withdrawals**
- **Beaches and Recreational Use**

2023 Life on Lake Erie photo Submission by Maria Perme

Nutrient Pollution Reduction

Department of Agriculture | Department of Natural Resources | Environmental Protection Agency | Lake Erie Commission

Over the past few years, extensive work has continued through Governor DeWine's H2Ohio Initiative to implement the most effective agricultural best management practices, water management structures, wetlands, and other actions to reduce nutrient pollution in the Lake Erie watershed, particularly in the Western Lake Erie Basin. Enrolled acres in the Maumee watershed increased 30% for ODA and ODNR completed over 7,700 acres of wetland projects in the Lake Erie Basin. Continued investment in long-term nutrient reduction efforts will reduce cost of drinking water treatment and potential loss of recreation and tourism dollars. State agencies continue to implement programs to continue to invest in water quality improvements across rural, urban, and agricultural communities in Ohio.

Better understanding of how HABs are affected by changing weather conditions and precipitation patterns and ways to increase the effectiveness and implementation rate of agricultural best management practices continue to be researched. Further actions to reduce Harmful Algae Blooms (HABs) have been identified, most notably in the Maumee Watershed Nutrient Total Maximum Daily Load (TMDL) and in the December 2024 Biennial Report. Information provided in the Western Lake Erie Tributary Water Monitoring Summary fact sheets for 2022 through 2024 indicate that some trends in nutrient levels in the tributaries continue to decline but remain higher than desired. Much more work remains to be done to continue to reduce the effects of nutrient pollution on Lake Erie.

2025-2027 *Goals*

- Continue the implementation of H2Ohio across the Lake Erie Watershed.
- Track and report out on actions of Ohio's Domestic Action Plan.
- Continue to support research funding to better understand HABs and their environmental and health impacts.
- Maintain the robust monitoring of nutrient reduction efforts and in stream conditions to adapt and improve nutrient reduction strategies if necessary.
- Continue the identification of innovative technologies for source reduction of nutrients and support research on how to scale up suitable technologies.
- Continue education efforts to agricultural producers to increase nutrient management plan adoption and implementation.
- Continue the support for local government actions that will reduce nutrient losses from community sources such as implementation of Long Term Control Plans, green infrastructure, and other storm water management actions.
- Continue the development and implementation of NPS-IS Plans, especially in the Maumee River watershed.
- Continue to support increasing the capacity for SWCDs for NPS-IS plan development, project id, and project implementation with a focus on counties and watersheds in the WLEB.
- Implement and report on the Maumee River Watershed Nutrient TMDL. Continue the implementation of other nutrient & non-point source pollutant TMDLs in the Lake Erie Basin.

Habitat & Species

Department of Natural Resources | Environmental Protection Agency

Some key wildlife species continue to grow their populations as habitat conditions improve in Ohio's portion of Lake Erie and its river systems. New bald eagle nests, sightings of nesting piping plover, and increased numbers of trumpeter swans, river otters, and various rare fish species have been documented. These improvements in wildlife populations are good signs of improved habitats in Lake Erie due to investments in increased acreage or quality of available habitat for these species.

Restoring wetland habitat helped provide nesting habitat for trumpeter swans and demonstrated long-term vision and collaboration. While still protected under the federal Migratory Bird Treaty Act, trumpeter swans were removed from the threatened species list in Ohio, after a 28-year effort led by ODNR to restore the population. Since 2019, 94 projects that cover 7,705 acres have been enhanced, restored, and/or created through the H2Ohio wetland program across the Lake Erie basin. This intentional investment in Ohio's wetlands will lead to improved wildlife habitat, recreational spaces, and phosphorus reduction.

Ohio also works with federal Lake Erie management agencies to identify critical habitats for important fish species in the Lake Erie Basin and to develop maps for future enhancement and restoration of these habitats. A survey in 2024 of anglers in the Lake Erie watershed documented that 79% targeted walleye.

2025-2027 *Goals*

- Continue to pursue opportunities to restore and/or enhance coastal wetlands.
- Continue research on wetland retention and phosphorus reductions.
- Increase the number of protective structures constructed as nature-based shoreline and other coastal habitat sensitive shoreline protections to improve coastal habitats along Ohio's Lake Erie coast.
- Support ecosystem scale habitat restoration for Ohio's Lake Erie coastal shorelines through support for project development and implementation.
- Implement H2Ohio's Rivers Initiative to expand in-water restoration in Lake Erie watersheds.
- Maintain investments for resource restoration and protection through state programs of the Clean Ohio Fund, Water Resource Restoration Sponsor Program, H2Ohio, and other state funding opportunities.
- Continue to track fish species and to define critical habitats for ecological and recreational fish species through mapping and monitoring.

2023 Life on Lake Erie photo Submission by Wendy Hess

Invasive Species

Department of Natural Resources

Preventing or minimizing the introduction and establishment of aquatic and terrestrial invasive species is a priority to protect the Lake Erie ecosystem and economy. Work to control and combat invasive species is often ongoing and long term. Some of the significant invasive species of interest include invasive carp and sea lamprey, and the proliferation of invasive plant species such as phragmites, hydrilla, Japanese knotweed, and European frogbit.

Federal and Great Lakes regional collaboration is especially important for invasive species, which is a threat across all Great Lakes because they are often mobile and spreading rapidly. Regional working groups and investments by federal partners are helping combat terrestrial and aquatic species, such as phragmites and invasive carp.

As a result of the assessment survey work conducted over the past few years, more knowledge has been gained on invasive carp activity and management. Of particular note, efforts are now underway to actively locate and remove emerging breeding populations of grass carp in tributary waters of Lake Erie and prevention work continues on Ohio's connections to waters with invasive carp. ODNR also continues to implement actions to close the Little Killbuck Creek connection to prevent bighead and silver carp from entering Lake Erie. The management and prevention of invasive species will require long-term strategies over a large geography of Lake Erie's rivers and lands.

2025-2027 *Goals*

- Continue the implementation of Ohio's Lake Erie Grass Carp Response Strategy.
- Continue to complete phases of the Little Killbuck Creek project based on invasion risk of carp and as GLRI funds allow.
- Continue participation on the Ohio Aquatic Invasive Species committee to share knowledge and technologies used to combat aquatic invasive species throughout the State.
- Continue the support and coordination with regional invasive management coordination entities.
- Implement restoration stocking of lake sturgeon in Maumee, Cuyahoga, and Sandusky Rivers.

Dredge Material Management & Maritime Infrastructure

Department of Transportation | Environmental Protection Agency | Lake Erie Commission

Maintaining Ohio's Lake Erie federal navigation channels for commerce is vital to local and regional economies. Ohio's commercial Lake Erie harbors facilitate movement of over 35 million tons of commodities, generating $25 billion in business revenue, and supporting 130,000 jobs.

To maintain these navigation channels and support the economic prosperity of Ohio's ports, regular dredging of accumulated sediment in the federal navigation channels by U.S. Army Corps of Engineers (USACE) is necessary. Managing the beneficial reuse of the sediment removed from the navigation channels is a priority for the Ohio Lake Erie Commission to protect the long-term health of Lake Erie. The USACE Chief of Engineers also set a goal to beneficially use 70% of all sediment dredged from federal navigation channels by 2030.

State, local, and federal partners have invested in beneficial use sediment processing and recycling facilities, beginning with Cleveland in 2014. In 2022, Ohio EPA awarded grants, using federal American Rescue Plan Act funds, to four Ohio communities to further establish a platform for upland sediment reuse to occur. New sediment recycling facilities were designed and constructed for Conneaut, Fairport, and Lorain Harbors, and improvements made at Toledo Harbor Facility 3. All three new sediment recycling facilities accepted dredged sediment in 2024, with plans underway for dewatered sediment being harvested and reused in 2025.

Today a team of partners are turning sediment into a true commodity and recognizing sediment as a valuable resource for marketable soils, agriculture, wetlands and habitat creation and restoration, and other innovative uses. State, local, and federal partners will continue to plan for innovative solutions to beneficially use sediment in the future.

2025-2027 *Goals*

- Continue to assist in the development of alternatives for open lake placement including long term, 20-year Dredge Material Management Plans (DMMPs) for each Ohio Lake Erie harbor in coordination with USACE, State Agencies, and local stakeholders.
- Complete Toledo Port Authority Facility 3 improvements. Continue reusing sediment, and increasing capacity, at Port of Cleveland's Recycling Facility.
- Continue research on the beneficial use of dredge material from the Maumee River as a farm field amendment (DRIFT).
- Continue support for the Cleveland Harbor Eastern Embayment Resilience Strategy for dredge beneficial use through discussions on the Cleveland Harbor DMMP.
- Continue issuing individual beneficial use permits and harbor sediment authorizations to encourage ongoing dredge sediment beneficial use.
- Continue beneficial use of Ashtabula Harbor dredged sediment to complete aquatic ecosystem restoration project.
- Provide technical assistance and support to ports with dredging projects outside of federal navigation channels.
- Evaluate National Multimodal Freight Network and National Highway System intermodal connector designations to key maritime facilities and advance designation to promote increased connectivity.
- Make investments to address safety, capacity, and pavement and bridge condition issues on first-/last-mile connections to ports.

Areas of Concern

Ohio Environmental Protection Agency | Lake Erie Commission

As part of the Great Lakes Water Quality Agreement, Areas of Concern (AOCs) were designated in Ohio in 1987 where highly degraded river systems and harbors existed as a result of industrial and urban land uses. These AOCs are making significant progress with federal and local partners to address each AOC's remaining Beneficial Use Impairments (BUIs) and upon removal of these BUIs, their delisting.

With the Ashtabula River AOC delisting in 2021, three designated AOCs in Ohio remain—the Maumee, Black, and Cuyahoga Rivers. Ohio's AOCs have identified all restoration projects needed to remove their remaining BUIs. To date, 40 projects have been completed, helping restore 22 of the original 34 BUIs. There are numerous additional projects underway or proposed, consisting of habitat restoration, fish barrier removal, and sediment remediation projects.

Maumee and Cuyahoga River AOC legacy contaminated sediment projects through the federal Great Lakes Legacy Act (GLLA) program continue to be a priority. These projects include the Cuyahoga Gorge Remedial Action and Dam Removal project, along with the Cuyahoga River Old Channel project. Contaminated sediment projects in the lower Maumee River and Swan Creek in the Maumee AOC continue to refine remedial design plans. These projects will advance work towards the removal of legacy contaminated sediments under GLLA and accelerate the return to healthy river systems in the coming years.

2025-2027 *Goals*

- Complete up to 10 Management Actions in the Cuyahoga and Maumee Areas of Concern.
- Undertake 2 - 3 BUI evaluations in preparation for proposed BUI removals in the AOCs.
- With US EPA support, remove 3 BUIs (2 in Black, 1 in Maumee).
- Implement sediment removal at the Gorge Dam with federal partners and funding.
- Complete planning and coordination for Gorge Dam removal.
- Complete Focused Feasibility Study and initiate Remedial Design for Swan Creek GLLA Project.
- Complete Remedial Design and initiate Remedial Action of the Lower Maumee River and Ottawa River GLLA projects.

Photo Credit: NEORSD

Toxic Pollutants

Department of Development | Department of Health | Environmental Protection Agency

Pollutants within the Lake Erie watershed can affect the conditions and use of Lake Erie in a variety of hard to see ways, such as fish consumption restrictions, land use impacts, or human health concerns.

Progress to address waterways that have legacy contaminated sediments continues through state and federal investments, including the Areas of Concern and brownfields programs. Legacy pollutants, PFAS, and other emerging toxic compounds will continue to be evaluated to determine trends, and future measures for control and cleanup will be explored based on trends and data. Strong brownfields and land-based remediation programs exist in Ohio to bring properties back into productive economic use and limit their legacy impacts on the environment.

Toxic pollutants can affect both human health and wildlife health. Fish tissue monitoring in support of consumption advisories shows that while conditions are improving, residual and emerging contaminants of concern are still circulating in areas. The H2Ohio program, through Ohio EPA, has focused on chloride reduction grants to protect groundwater, fish, and aquatic macroinvertebrates in freshwater systems.

Multiple agencies in Ohio continue to monitor, investigate, and address emerging and legacy toxic pollutants.

2025-2027 *Goals*

- Maintain Inter-Agency Sport Fish Tissue Monitoring Committee to identify areas of focus for fish consumption advisory trends and determine actions to address conditions where applicable.
- Invest in cleanup of brownfield sites in the Lake Erie watershed to provide cleaner land for uses that align with local community long-term visions and planning.
- Reduce the amount and impact of road salt on Ohio's water resources.
- Implement Ohio EPA's PFAS Action Plan 2.0.

Travel, Tourism, Jobs & Economy

Department of Development | **Department of Natural Resources** | **Department of Transportation**

In 2023, visitors to Ohio's Lake Erie region, across two of eight coastal counties, helped generate $3.1 billion in tourism sales, a 17% increase from the 2021 study according to a study conducted by Tourism Economics. This growth demonstrates that the shores of Lake Erie continue to be a destination for a variety of experiences. Birding and lighthouse viewing are a huge draw for visitors. For instance, Marblehead Lighthouse is the oldest lighthouse in continuous operation on the Great Lakes and is one of Lake Erie's most photographed lighthouses. Travel and tourism are a cornerstone to many coastal communities along Lake Erie shorelines. An economic evaluation for the Great Lakes Fishery Commission estimated that sportfishing on Ohio's waters of Lake Erie creates a total economic output of $992.5M annually. Hunters, anglers, wildlife watchers, and target shooters also bring tremendous benefit to Ohio's economy. These activities generated $12.5 billion of overall economic activity in 2022. Research shows that 1.7 million adult Ohioans fish, 500,000 adult Ohioans hunt, 4.1 million adults participate in wildlife viewing, and 1.1 million adults engage in target shooting. Investments in public access, new and existing businesses, transportation, and associated infrastructure continue to maintain and grow the vibrant travel and tourism economy on the North Coast.

State programs will continue to provide advice and resources to local government for how to plan development in ways that will best utilize Lake Erie and local waters. Ohio Department of Transportation, Ohio Lake Erie Commission, Ports, local governments and others have developed a shared Ohio Maritime Strategy, outlining actions to take to invest in maritime infrastructure and showing how interlinked commerce, transportation, and infrastructure are with Lake Erie. Infrastructure investments through state programs will maintain and improve transportation systems, recreational boating assets, and travel and tourism resources necessary for supporting recreational and maritime based economic activity across the Lake Erie shoreline.

2025-2027 *Goals*

- Administer grant funding through state programs to enhance travel and tourism experiences for transportation, infrastructure, public access and economic development with lakeshore communities.
- Support the marketing of Lake Erie through ODOT Scenic Byways and Ohio Tourism programs.
- Continue state promotion for Biggest Week in Birding and recreational fishing along Lake Erie to encourage tourism and economic activity in shoreline communities.
- Identify job growth, job retention and asset investments through state programs to economic sectors in the Lake Erie watershed.
- Maintain JobsOhio activities for future economic development collaboration opportunities in the Lake Erie watershed for sustainable economic vitality.
- Support national maritime workforce initiatives being led by MARAD, US Coast Guard, US ACE, We Work the Waterways, and others.
- Administer Maritime Assistance Grants for improvements and moderization to Ohio's Lake Erie port facilities and operations.

2023 Life on Lake Erie photo Submission by Molly Dresser

Water Withdrawals

Department of Natural Resources | Environmental Protection Agency

Lake Erie water withdrawals are governed by the Great Lakes-St. Lawrence River Basin Water Resources Water Compact. The Great Lakes Compact, developed through the Council of Great Lakes Governors, details how the states will manage and protect the waters and related natural resources of the Great Lakes Basin and provides a framework for each state to enact measures for this protection. Ohio has enacted additional legislation to implement commitments made in the Compact. This is in the Ohio Revised Code - Chapter 1522 - Great Lakes-St. Lawrence River Basing Water Resources Compact.

Ohio agencies also continue to develop more online tools for reporting and mapping of water withdrawals. In addition, Ohio agencies are developing mapping tools focused on areas with growing housing and development and the needs for adequate and efficient use and reuse of water.

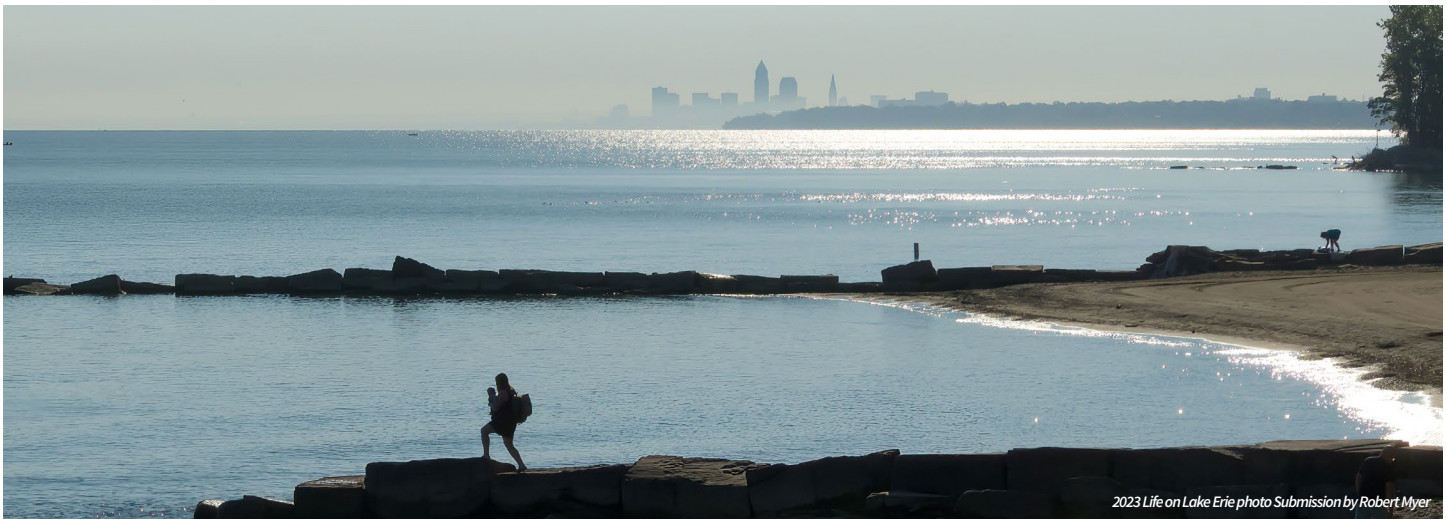
As redevelopment or new development continues to be introduced in the Lake Erie watershed, the State will continue to provide the stewardship necessary to maintain the integrity of Lake Erie water resources for all Ohioans.

2025-2027 *Goals*

- Continue participation in the Great Lakes Compact Regional Body/Compact Council Meetings.
- Continue agency participation and leadership in the collaborative, jurisdiction-led Science Strategy.

Beach & Recreation

Department of Health | Department of Natural Resources | Environmental Protection Agency



2023 Life on Lake Erie photo Submission by Robert Myer

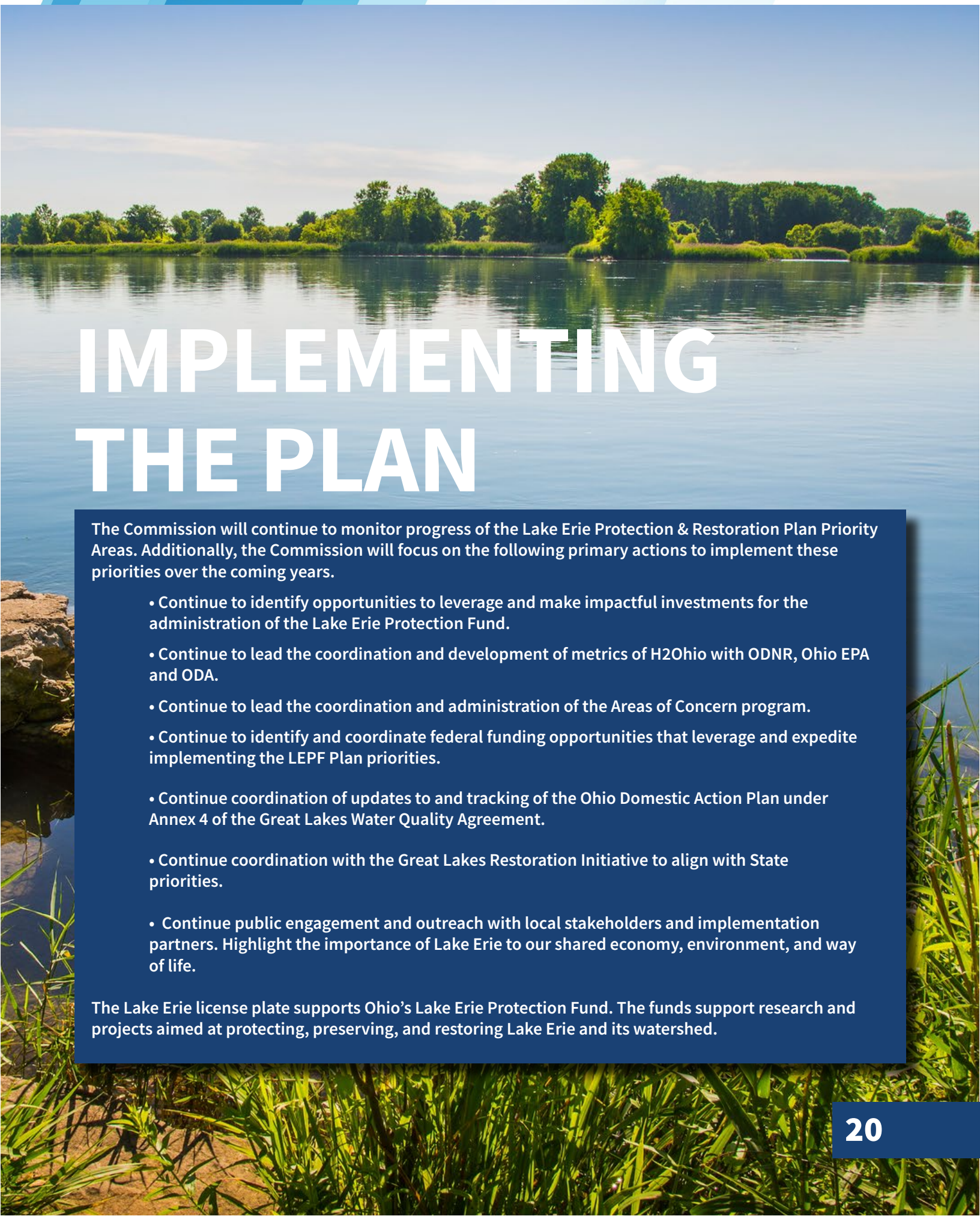
Lake Erie in Ohio boasts a robust economy through the variety of experiences the North Coast offers to its many residents and visitors annually. Investments in new and updated facilities at state parks benefit local communities and access to Lake Erie and beaches. The Ohio Coastal Management Program and Ohio Lake Erie Commission provided grants to local communities for shoreline engineering and protection, restoration, and stabilization efforts as water levels and ice events continue to fluctuate, eroding beaches and safe public access areas while threatening infrastructure and homes along the lakeshore.

Ohio's Clean Marinas program focuses on increasing designated clean marinas that instill best practices in protecting Lake Erie and the robust boating community. Clean Marina pilot demonstration sites showcase clean marina best practices at work while maintaining a marina network that continues to be actively used by boaters.

Through the ODH's and ODNR's Beach Guard website, more information was shared, and more frequently, to educate beach users on daily conditions for safe recreational use. Beach conditions in the Black River and Cuyahoga River Areas of Concern are now comparable to other beaches throughout Lake Erie's central basin, allowing for the removal of the Beach Closings Beneficial Use Impairment and continued routine monitoring through Beach Guard and local partners.

2025-2027 *Goals*

- Continue to provide State grants to local governments and others to improve public access and encourage recreation along Lake Erie, including bike and pedestrian connections to key destination areas.
- Work with coastal communities near designated State Water Trails to fund updates to maps, brochures and signage, and continue to support community interests in designation of new water trails.
- Maintain the online Beach Guard System.
- Maintain fish consumption information in multiple languages for Lake Erie fishing activities.
- Develop Clean Marina case studies for NPS reduction strategies and continue education and outreach. Continue to encourage adoption of Clean Marina's BMPs, including utilizing the new stormwater toolkit.



IMPLEMENTING THE PLAN

The Commission will continue to monitor progress of the Lake Erie Protection & Restoration Plan Priority Areas. Additionally, the Commission will focus on the following primary actions to implement these priorities over the coming years.

- Continue to identify opportunities to leverage and make impactful investments for the administration of the Lake Erie Protection Fund.
- Continue to lead the coordination and development of metrics of H2Ohio with ODNR, Ohio EPA and ODA.
- Continue to lead the coordination and administration of the Areas of Concern program.
- Continue to identify and coordinate federal funding opportunities that leverage and expedite implementing the LEPF Plan priorities.
- Continue coordination of updates to and tracking of the Ohio Domestic Action Plan under Annex 4 of the Great Lakes Water Quality Agreement.
- Continue coordination with the Great Lakes Restoration Initiative to align with State priorities.
- Continue public engagement and outreach with local stakeholders and implementation partners. Highlight the importance of Lake Erie to our shared economy, environment, and way of life.

The Lake Erie license plate supports Ohio's Lake Erie Protection Fund. The funds support research and projects aimed at protecting, preserving, and restoring Lake Erie and its watershed.

Glossary

AIS: Aquatic Invasive Species
AOC: Areas of Concern
BUI: Beneficial Use Impairment
CMAG: Coastal Management Assistance Grant
DAP: Domestic Action Plan
DRIFT: Dredge Research and Innovation in Farming Team
DMMP: Dredge Material Management Plan
HABs: Harmful Algal Blooms
GLLA: Great Lakes Legacy Act
GLMRIS: Great Lakes and Mississippi River Interbasin Study
GLRI: Great Lakes Restoration Initiative
GLWQA: Great Lakes Water Quality Agreement
HSTS: Home Sewage Treatment Systems
LAMP: Lakewide Area Management Plan
LEPF: Lake Erie Protection Fund
LEARN: Lake Erie and Aquatic Research Network
LEQI: Lake Erie Quality Index
MARAD: Maritime Administration
MS4: Municipal Separate Storm Sewer Systems
NPDES: National Pollutant Discharge Elimination Systems
NPS-IS: Nonpoint Source Implementation Strategies
Ohio EPA: Ohio Environmental Protection Agency
ODNR: Ohio Department of Natural Resources
ODA: Ohio Department of Agriculture
ODOT: Ohio Department of Transportation
DOD: Department of Development
ODH: Ohio Department of Health
OLEC: Ohio Lake Erie Commission
PFAS: Per-and Polyfluorinated Substances
TAP: Technology Assessment Program
TMDL: Total Maximum Daily Load
SWCD: Soil and Water Conservation District
SFY: State Fiscal Year
VIDA: Vessel Incidental Discharge Act