

# Lake Erie Protection and Restoration Plan

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## 2020



**Ohio**

**Lake Erie  
Commission**

# Ohio Lake Erie Commission

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# About the Ohio Lake Erie Commission

Established in 1990, the Ohio Lake Erie Commission is a state commission that coordinates state agency efforts to protect and restore Lake Erie, participates in federal and international Great Lakes policies and programs, and engages with local communities and other stakeholders for outreach about Lake Erie resources.

The Commission is comprised of the directors of six state agencies including the Ohio Environmental Protection Agency, and the departments of Natural Resources, Health, Agriculture, Transportation, and Development Services. There are five additional members appointed by the governor and two board members of the Great Lakes Protection Fund who serve as ex-officio members of the Ohio Lake Erie Commission.

The Ohio Lake Erie Commission staff advises the Governor and the Commission on the development, implementation, and coordination of Lake Erie programs and policies; provides representation of the interests of Ohio in regional, national, and international forums pertaining to the resources of the Great Lakes; assists in the implementation of the Great Lakes Restoration Initiative; facilitates compliance with the Great Lakes Water Quality Agreement and the Great Lakes Toxic Substances Control Agreement; manages the distribution of money from the Lake Erie Protection Fund; and administers programs of the Ohio Lake Erie Commission to advance the priorities in the Lake Erie Protection and Restoration Plan.

The Ohio Lake Erie Commission provides a forum for the variety of agencies whose work touches Lake Erie to come together and coordinate across programs to improve program effectiveness outcomes for Lake Erie. The Commission's work is focused in five main categories.

- Ensure the coordination of funding and monitoring of federal, state, and local policies, programs, and priorities pertaining to Lake Erie. Primary program areas include nutrient-related water quality, beneficial use of dredge material, and Areas of Concern.
- Administer the Lake Erie Protection Fund for projects that help implement the objectives of the Commission's Lake Erie Protection and Restoration Plan through the Lake Erie license plate program and other donations and contributions.
- Coordinate and represent the interests of Ohio in state, regional, national, and international forums and related agreements pertaining to Lake Erie and the Lake Erie basin, primarily the Great Lakes Water Quality Agreement and Great Lakes Restoration Initiative.
- Increase awareness of the benefits and concerns of Lake Erie through marketing and education. A signature annual event is the Commission's "Life on Lake Erie" photo contest, designed to engage Ohioans and promote one of Ohio's great natural resources through existing venues of TourismOhio.
- Prepare and implement the Lake Erie Protection and Restoration Plan that sets the State's strategic direction for Lake Erie and its watershed. This work is implemented by Ohio Lake Erie Commission staff and through its member agencies and partners.

# Our Great Lake

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Lake Erie is a signature feature to the landscape in Ohio and was formed by glacial ice over thousands of years. Lake Erie is the front porch to eight coastal counties and gateway to 35 counties in its watershed with more than a thousand miles of rivers and streams. More than five million residents live within the drainage basin in Ohio.

Lake Erie is one of five Great Lakes that together hold more than 20 percent of the world's fresh surface water. Lake Erie itself stretches 271 miles long and 57 miles wide. Its coastline extends 312 miles from Michigan to Pennsylvania with depths of the basin itself ranging from two to 60 feet from nearshore to open waters.

Lake Erie is the warmest and most shallow of the Great Lakes, which enhances biologic productivity. Lake Erie is one of the signature fishery environments for the United States and is home to a wide diversity of plants, fish, animals, and habitats. The Lake is an asset for local communities and stronger economies.

These assets provide significant resource opportunities, but also bring many challenges. Ohio needs to develop the best mechanisms to protect and restore Lake Erie for years to come. The 2020 Lake Erie Protection and Restoration Plan (LEPR) sets forth actions by the State to meet these challenges and opportunities for improving and maintaining the environmental, economic, and recreational qualities of Ohio's Great Lake.



# About the Ohio Lake Erie Protection and Restoration Plan

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The Lake Erie Protection and Restoration Plan (LEPR) is administered by the Ohio Lake Erie Commission, as authorized by Ohio Revised Code (ORC 1506.21).

*The commission shall publish a Lake Erie protection and restoration strategy that describes the goals of the commission and prioritizes the uses of the Lake Erie protection fund and other funds for the following state fiscal year.*

The 2020 Lake Erie Protection and Restoration Plan reflects the state of Ohio's strategic priorities for the next two years to protect, preserve, and restore Lake Erie and its watershed, as well as to promote economic development associated with Lake Erie. Additionally, the Plan serves as the framework for administering the Lake Erie Protection Fund and securing federal funding to implement projects in Lake Erie.

The Lake Erie Protection and Restoration Plan (LEPR), sets in motion multiple actions by the Commission and other Ohio agencies in the coming two years. It is intended to be a comprehensive effort of the state agencies for the development of Lake Erie priorities and strategies, and ensures coordination of actions, progress reporting, and communication to stakeholders of these priorities.

## **Alignment with Great Lakes Agreements and Plans**

The Ohio Lake Erie Commission strives to work in cooperation with the federal government, other Great Lakes states and provinces, and local jurisdictions to accomplish these goals. The Lake Erie Protection and Restoration Plan aligns with many Great Lakes agreements and plans. The core of these agreements and plans include the Great Lakes Water Quality Agreement (GLWQA) and its associated Annexes, the Lake Erie Action and Management Plan (LAMP), Great Lakes Restoration Initiative Action Plan III, and the Western Basin of Lake Erie Collaborative Agreement for nutrient reduction between Ohio, Michigan, and Indiana.

Through active participation in these initiatives, the Commission serves as the primary coordinator for the state. This plan provides a framework to have an effective strategy and implementation effort associated with these agreements and plans.

## Funding for Lake Erie Protection and Restoration Plan Implementation

Funding for the Lake Erie Protection and Restoration Plan Priorities, Goals, Objectives, and Actions will be utilized through four primary funding mechanisms: H2Ohio for Lake Erie; other state funding; Great Lakes Restoration Initiative (GLRI); and partnerships with local and regional investments. Funding sources are identified in each Priority Area where applicable.

In 2019, the Governor initiated H2Ohio to embark on significant investments for improving the quality of the Lake Erie watershed over the next 10 years. The 2020 LEPR identifies priorities for H2Ohio funding in the Lake Erie Watershed under specific priorities. The Commission will work closely with state agencies and stakeholders on actions and tracking progress of these investments.

In 2019, U.S. EPA launched [Action Plan III](#) of the Great Lakes Restoration Initiative (GLRI) that outlines Great Lakes restoration priorities for the next five years. The GLRI provides funding in five focus areas of work. Leveraging GLRI funds with state and other funding sources will further make progress on milestone projects in Lake Erie. Some projects possess transformative opportunities to the quality of Lake Erie, but will require significant investments over many years to see results.

State funding through various state agency programs provide a vast network of finance options for implementation projects to achieve the goals set forth in the LEPR.

The leveraging of state investments will occur through a portfolio of funding resources that include other funding available through regional, local, and other partnerships. Innovative partnerships, existing or new, will be encouraged.

The Commission will consult with the leadership in its state agencies and through the OLEC staff to coordinate these funding mechanisms to fully realize effective progress of the LEPR goals and objectives.



## Tracking Progress

In addition to the Priority Areas of Lake Erie set forth in this plan, utilizing tools to track progress is an overall priority of the State. The State will work in the coming year to collaborate on existing tools such as ErieStat and Blue Accounting through Great Lakes efforts, evaluate the utility and relaunch of the Lake Erie Quality Index and identify other tools to track LEPR actions as they relate to investments, progress toward restoration and protection goals, and communication to stakeholders on progress of work. There will be many partners and resources that will be part of the 2020 LEPR, and the Commission will work toward coordinating this work to share the story of progress.

## Progress of Work from 2016 Plan

A key driver of the 2020 LEPR is to move priorities forward effectively to protect and restore Lake Erie. To ensure priorities, goals, and objectives are effective in 2020, efforts since the 2016 LEPR were reviewed. Since the 2016 LEPR was published, the State has worked toward achieving the 51 objectives that were identified to meet the goals of the Plan. Some highlights of those accomplishments include:

- Initiated the first State Domestic Action Plan and initial implementation actions.
- Initiated the Sandusky Bay Initiative that includes initial project evaluation, design, and engineering for coastal restoration projects.
- Removed five Beneficial Use Impairments from the four Lake Erie Ohio Areas of Concern.
- Launched an updated Beach and HABs Advisories system.
- Initiated projects to manage and prevent aquatic invasive species.
- Implemented \$18 million to reduce, repair, and replace home sewage treatment systems in 27 counties of the Lake Erie Basin.
- Initiated investments of \$1 million into the Dredge Material Management Program through the Healthy Lake Erie Fund with eight beneficial use projects identified for implementation.
- Local investments in coastal towns and cities for redevelopment, roads, parks, and trails through the leverage of state funding with local funding.
- Published two Nutrient Mass Balance studies by Ohio EPA to characterize loading of nutrients in key watershed basins.
- Expanded the Lakeside Daisy Preserve, opened North Bass Lake House, and dedicated Lake Erie water trails by the Ohio Department of Natural Resources (ODNR).
- Implemented the Ohio Working Lands Hay Buffer and Small Grains programs, components of the Soil and Water Phosphorus Program established in SB299 through soil and water conservation districts. During the first sign-up period established in 2018, 4,075 acres and 39,226 acres were enrolled in the programs, respectively, in the Western Lake Erie Basin to assist with nutrient management.

# 2020 Lake Erie Priorities

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The 2020 LEPR outlines nine priorities in which investments, policies, and programs will be focused by the Commission. Each priority has an overall goal and strategic objectives to carry out the goal. In addition, the 2020 LEPR outlines under each priority five supplemental activities to support attainment of the goals and objectives listed on this page.

## **Nutrient Pollution Reduction**

### **Habitat and Species**

### **Invasive Species**

### **Dredge Material Management and Maritime Infrastructure**

### **Areas of Concern**

### **Toxic Pollutants**

### **Beach and Recreational Use**

### **Tourism, Jobs, and Economy**

### **Water Withdrawals**

## Activities to support attaining Priority Goals and Objectives

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### **Monitoring, Measuring, and Research**

### **Coordination and Partnerships**

### **Technology and Infrastructure**

### **Resiliency and Adaptation**

### **Funding**

# Priority Area: Nutrient Pollution Reduction

**Goal:** Reduce excess nutrient loads from point and nonpoint sources to Lake Erie and its tributaries to achieve state and Great Lakes targets.

## Strategic Objectives

**Objective:** Implement H2Ohio Lake Erie Initiative for Nutrient Reduction

**Objective:** Implement Ohio's Domestic Action Plan for Lake Erie through the OLEC, Ohio EPA, ODA, ODNR, and local partners. A focus will be the development and implementation of 9-element watershed plan compliant Nonpoint Source Implementation Strategies (NPS-IS) through soil and water conservation districts and other local entities.

**Objective:** Coordinate and implement point source and storm water management programs.

Nutrient pollution continues to affect Lake Erie particularly in the nearshore waters and the Western Basin by supporting the excessive growth of Harmful Algal Blooms (HABs).

Phosphorus, particularly its dissolved reactive phosphorus (DRP) form, continues to be the most problematic nutrient in the system. Nutrient pollution reduction is being addressed with specific best management practices for agriculture, wetlands restoration, and other actions to reduce phosphorus from running off land. Focus on key contributing geographic areas and increased monitoring and modeling are also strategies being used. Research continues on the effectiveness of specific practices that have been designed to reduce phosphorus transport.

The State's work on nutrient pollution reduction is coordinated in conjunction with the Great Lakes Water Quality Agreement. This includes the [Ohio Domestic Action Plan](#) and the basin-wide goal to work toward nutrient reduction targets determined by the Annex 4 Subcommittee of the Great Lakes Executive Committee.

Ohio EPA, ODA, and ODNR lead efforts for this priority.

# Activities to support attaining Priority Goals and Objectives

**Monitoring, Measuring, and Research:** Lead efforts for 1) Lake Erie assessment activities through the National Coastal Condition Assessment and 303(d) Lake Erie assessment designations and 2) maintaining tributary monitoring programs through Ohio EPA and its partners that supports nutrient reduction targets. Track progress toward nutrient reduction targets using Annual Water Monitoring summary report, and ErieStat.

**Coordination and Partnerships:** Utilize the plans such as Ohio's Domestic Action Plan and [NPS-IS](#) to coordinate funding, partners, and implementation actions effectively.

**Technology and Infrastructure:** Identify new technologies for real-time monitoring and other tools associated with tracking progress. Identify opportunities for new technologies and infrastructure improvements that can address nutrient nonpoint source pollution.

**Resiliency and Adaptation:** Identify long-term effectiveness of nutrient reduction measures and their adaptation to varying Lake Erie conditions including weather patterns, water level variability, and landscape changes.

**Funding:** Through the development of the plans, identify a pipeline of project priorities to address nutrient reduction and associated funding (state, federal, or other) for investments specifically under [H2Ohio](#) and GLRI.



The H2Ohio Fund will be invested in targeted solutions to ensure safe and clean water across Ohio. A portion of the funding over 10 years will be utilized for the Western Basin of Lake Erie.

# Priority Area: Habitat and Species

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The Lake Erie watershed encompasses a variety of landscapes that drive species diversity and ecosystem processes that are unique and valuable in sustaining its health. Protection and restoration of these habitats is critical to maintain a healthy Lake Erie and its natural assets.

Wetlands were a historically notable feature on the Lake Erie watershed landscape. Over time, wetlands have diminished in size, diversity, and function. Over the next two years, it will be a priority for Ohio to protect, restore, and enhance wetland habitats of both coastal and inland areas. This work will aim to regain the benefits of wetland functions such as improve water quality, increase spawning habitat, and provide greater ecological resilience for changing Lake Erie conditions. While the Black Swamp may not return to its original state, wetlands recovery toward a degree of the past can have benefits to the Lake Erie watershed.

ODNR and Ohio EPA programs lead the efforts for this priority.

**Goal:** Protect, restore, and reintroduce native flora, fauna, and fish that will contribute to the overall health of Lake Erie.

## Strategic Objectives

**Objective:** Support the protection, creation, enhancement, and restoration of coastal and riparian wetland habitats. This includes the development of in-water wetlands within nearshore and bay areas where feasible.

**Objective:** Maintain and enhance habitat diversity for signature Lake Erie habitats (coastal wetlands, riparian corridors, swamp forests, fish spawning and nursery areas, wildlife areas).

**Objective:** Increase connectivity of Lake Erie landscapes that will improve habitat and functions for water quality, wildlife and their resilience to changing Lake Erie conditions.

**Objective:** Increase areas of nature-based shoreline to improve nearshore habitat conditions.

# Activities to support attaining Priority Goals and Objectives

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**Monitoring, Measuring, and Research:** Establish expanded monitoring of wetlands and habitat improvements and their role in improving habitat and other associated benefits.

**Coordination and Partnerships:** Identify project implementers and long-term stewards to sustain habitats. Continue coordination with Great Lakes networks including the Coastal Assembly and other management partnerships.

**Technology and Infrastructure:** Identify tools necessary to evaluate wetland restoration effectiveness.

**Resiliency and Adaptation:** Establish design principles that will assist in habitat restoration and protection measures that adapt to changing conditions, such as flow regimes, water levels, and other input conditions.

**Funding:** Advance investments through [H2Ohio](#), GLRI, and other state and federal funding mechanisms for the restoration, protection, and long-term stewardship of critical habitat areas in the Lake Erie Watershed.



# Priority Area: Dredge Material Management and Maritime Infrastructure

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Ohio's eight federal commercial Lake Erie harbors facilitate billions of dollars in business revenue and support thousands of jobs. Like all infrastructure, these harbors require regular maintenance. To remain deep enough for navigation, naturally accumulated sediment is routinely removed from these harbors in a process called dredging. Each year, the U.S. Army Corps of Engineers (Army Corps) dredges two million tons of material from Ohio's harbors. Historically, the Corps has disposed of most of that dredged material into Lake Erie. In 2015, Ohio prohibited the practice of open lake disposal, effective July 1, 2020.

Harbors will still need to be dredged beyond 2020, and for the past few years, Ohio has worked closely with the Army Corps and local stakeholders to develop projects to beneficially use the dredged material as an alternative to open lake disposal. The goal is to implement projects where the dredge material adds value to local communities. With support from Ohio and federal partners, local managers are developing and implementing projects for each of Ohio's federal commercial harbors on Lake Erie.

Ohio EPA and ODNR lead the efforts for this priority.

**Goal:** Implement beneficial use of dredge material projects for each Ohio Harbor in time for July 1, 2020 ban on open lake disposal.

**Goal:** Identify and invest in maritime infrastructure areas for Ohio's Lake Erie harbors and ports to sustain and prepare for existing and emerging port activities.

## Strategic Objectives

**Objective:** Work with harbors and stakeholders to implement the currently identified alternatives for open lake disposal for each harbor.

**Objective:** Work with harbors and stakeholders to identify future beneficial use of dredged material projects and contingency plans.

**Objective:** Institute rules and permitting processes for dredging reuse activities including harbor sediment authorizations and general permits where applicable.

**Objective:** Work with harbors and ports to maintain and update maritime infrastructure.

**Objective:** Coordinate with federal and local entities for infrastructure or operational improvements for the navigational channels.

# Activities to support attaining Priority Goals and Objectives

**Monitoring, Measuring, and Research:** Measure the geophysical and chemical properties of dredge material for suitability with various end use applications.

**Coordination and Partnerships:** Continue working with federal partners, ports, and stakeholders on maintaining a safe and efficient maritime system. Continue working with communities on advancing projects that support local initiatives with the use of dredged material.

**Technology and Infrastructure:** Continue to explore innovative ways to effectively dewater dredged material and ways to construct habitat with dredged material. Continue evaluating the agronomic benefits of applying dredged material to farm fields.

**Resiliency and Adaptation:** Identify opportunities to reduce harbor sedimentation, such as sediment capture and preventing erosion. Expand the capacity and improve the efficiency of existing projects. Develop contingency plans and additional projects for each harbor.

**Funding:** Continue the utilization of various funding sources for implementation including: Healthy Lake Erie Fund; Harbor Maintenance Trust Fund; USACE CAP 204 fund; Great Lakes Restoration Initiative; Ohio Maritime Assistance Fund, and Great Lakes Protection Fund.



# Priority Area: Invasive Species

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Both terrestrial and aquatic invasive species continue to proliferate Ohio's portion of Lake Erie on land and in the water. Invasive species can destroy habitat for more desirable species such as sport fish, waterfowl, and native plants. Management and actions that will prevent and control invasive species will continue to be a priority.

ODNR, in partnership with many agencies, leads state efforts to address invasive species in Ohio.

**Goal:** Minimize the potential for invasive species to negatively affect native plants and animals and their habitat.

## Strategic Objectives

**Objective:** Implement Ohio's State Management Plan for Aquatic Invasive Species and Rapid Response Plan.

**Objective:** Implement Ohio's Lake Erie Grass Carp Response Strategy.

**Objective:** Continue partnerships for invasive plant management and control with particular focus on hydrilla and phragmites.

**Objective:** Continue implementation and development of outreach and education to landowners, boat users, and lake carriers on measures to prevent introduction of invasive species.

# Activities to support attaining Priority Goals and Objectives

**Monitoring, Measuring, and Research:** Maintain measures of progress in conjunction with associated plans and Great Lakes committees to evaluate status of conditions including the [State's Grass Carp Response Strategy](#) and associated plans with the Great Lakes Fishery Commission and associated surveys for fish population, invasive plant surveys, and other priority invasive activities for the State.

**Coordination and Partnerships:** Maintain coordination and partnerships with Great Lakes committees on invasive species related issues. Maintain and identify additional partnerships for outreach and education on invasive species preventative measures, including the Phragmites Collaborative, Lake Erie Committee of the Great Lakes Fishery Commission

**Technology and Infrastructure:** Continue to explore innovative technologies to effectively prevent, control, and manage the introduction and spread of invasive species in Lake Erie.

**Resiliency and Adaptation:** Identify adaptive measures needed that may influence the implementation of established strategies as Lake Erie conditions change.

**Funding:** Through the Commission and ODNR, coordinate with GLRI Action Plan funding and other associated funding.



# Priority Area: Areas of Concern

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Ohio contains four Areas of Concern that are identified through Annex 1 of the Great Lakes Water Quality Agreement. Areas of Concern (AOC) are designated based upon 14 beneficial use impairments as defined by the International Joint Commission as “a change in the chemical, physical, or biological integrity to cause significant environmental degradation.”

Ohio’s AOCs include portions of the Maumee, Black, Cuyahoga, and Ashtabula Rivers and are at various stages of recovery and removal of their beneficial use impairments. A cornerstone of the AOC program is its partnerships with state and federal agencies and local advisory committees for each AOC.

The goals and objectives are set forth to align with the Great Lakes Restoration Initiative Action Plan Measures of Progress that are associated with completion of management action lists, completion of management actions, removal of beneficial use impairments, and delisting. The Great Lakes Legacy Act (GLLA) is a federal funding cost-share program focused on “accelerating sediment remediation in Areas of Concern” (U.S. EPA) and will play a key role for Ohio’s work ahead in its Areas of Concern.

The Ohio Lake Erie Commission and Ohio EPA lead the work set forth for Areas of Concern in Ohio.

**Goal:** Progress toward delisting the Maumee, Black, Cuyahoga, and Ashtabula designated areas of concern from the list of Great Lakes Areas of Concern.

## Strategic Objectives

**Objective:** Complete remaining management action lists and implement approved management actions for all Ohio AOCs set forth for the next two years. This includes progress of work on Great Lakes Legacy Act (GLLA) projects in Ohio’s Areas of Concern.

**Objective:** Remove beneficial use impairments that Ohio sets forth to U.S. EPA in the next two years for its Areas of Concerns.

**Objective:** Evaluate remaining beneficial use impairments in all Areas of Concerns and the determination of delisting of the Ashtabula River AOC.



# Activities to support attaining Priority Goals and Objectives

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**Monitoring, Measuring, Research:** Continue evaluation of progress to remove Beneficial Use Impairments and the effectiveness of associated management actions.

**Coordination and Partnerships:** Continue strong partnerships with the State, Federal agencies, and the local AOC advisory committees to mark AOC milestones and project implementation.

**Technology and Infrastructure:** Continue use of technology to gauge progress and provide information to the public.

**Resiliency and Adaptation:** Work with local partners and federal agencies for long-term stewardship of completed management actions.

**Funding:** Coordinate funding with federal, state, and local entities in conjunction with GLRI and GLLA funding annually. Prioritize AOC project funding with management actions and align with non-AOC priority areas for restoration.



# Priority Area: Toxic Pollutants

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Remediation of historically contaminated sediments during the past 35 years have reduced the quantity of persistent toxic substances, particularly polychlorinated biphenyls (PCBs), mercury, and polycyclic aromatic hydrocarbons (PAHs). Controls on the manufacture and release of toxic substances have also contributed to declining concentrations. However, air deposition, legacy sediment and biotic contamination, and emerging contaminants in point and nonpoint sources continue to contribute persistent toxic substances throughout Lake Erie.

Remediation of historic contamination will continue to be a priority for Ohio. In addition, open lake disposal of dredged sediments will be banned starting July in 2020. Continued work in site remediation, point source control, research, and fish tissue evaluation are critical components for measuring progress.

Ohio EPA and Ohio Department of Health (ODH) lead the work for this priority area.

**Goal:** Reduce persistent bioaccumulative toxic pollutants in Lake Erie.

**Goal:** Clean-up of brownfield and other toxic pollution sources to reduce toxics contribution to Lake Erie.

**Goal:** Work toward goals set forth through Annex 3 of Great Lakes Chemicals of Mutual Concern.

## Strategic Objectives

**Objective:** Support the on-going assessment of fish tissue and, when necessary, issuance of specific species consumption advisories.

**Objective:** Continued monitoring and quantification of conditions in the Lake Erie watershed that affect toxic compounds.

**Objective:** Continuing support to eliminate brownfield sites and encourage redevelopment for local communities within the coastal region of Ohio's Lake Erie watershed.

# Activities to support attaining Priority Goals and Objectives

**Monitoring, Measuring, and Research:** Continue evaluating fish tissue, clean-up activities, and toxic pollutants of concern to determine success of remediation actions.

**Coordination and Partnerships:** Participate on the Annex 3 SubCommittee for Great Lakes Chemical of Mutual Concern and associated priorities in Ohio.

**Technology and Infrastructure:** Identify and update systems to track and remediate toxic pollutants that are innovative and cost-effective.

**Resiliency and Adaptation:** Evaluate and assess emerging toxic pollutants and associated measures to manage changing conditions in Lake Erie.

**Funding:** Support research, monitoring, and actions to reduce toxic pollutants and brownfields in Lake Erie and its watershed, and to understand emerging contaminants of concern in Lake Erie sediments, water, and fish.



# Priority Area: Beach and Recreational Use

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Water-based recreational use of Lake Erie is a long tradition in Ohio whether it's on a beach, on a boat, or on a paddleboard. Millions of people participate in a variety of recreational activities on Lake Erie annually, including recreational boating, swimming on one of Ohio's 37 public beaches, fishing, and participating in various water sports activities. Maintaining clean water for direct contact recreation is an important goal for the State of Ohio.

State, regional, and local governments are making investments to address combined sewer overflows and failing home sewage treatment systems that can limit recreational use of Lake Erie. Continued work to upgrade Lake Erie basin infrastructure and maintain information to the public on conditions in Lake Erie will protect and expand its recreational uses today and for future generations.

Harmful Algal Blooms (HABs), bacterial pollution, or other emerging pollutants continue to hamper the fullest potential of the recreational use of Lake Erie. Continued implementation of the Ohio Harmful Algal Bloom Recreational strategy will facilitate a consistent statewide approach to identifying HABs and provide guidance to the public on how to minimize potential exposures to cyanotoxins.

ODH, Ohio EPA, and ODNR lead efforts for this priority.

**Goal:** Maintain and improve water quality for safe and healthy recreational uses of Lake Erie.

## Strategic Objectives

**Objective:** Reduce bacterial contamination to recreational beaches through continued investments in long-term control plan implementation and reduction of failing home sewage treatment systems.

**Objective:** Oversee the bacteria and HABs monitoring program and BeachGuard for beach health and provide information to the public about conditions and advisories.

**Objective:** With local partnerships, continue to lead marine debris management and the Ohio Clean Marina Program.

**Objective:** Promote recreation safety to Lake Erie users to reduce exposure to contaminants and maintain quality experiences for all.

# Activities to support attaining Priority Goals and Objectives

**Monitoring, Measuring, and Research:** Maintain water quality monitoring to support the issuance of beach and HAB advisories for public access through [BeachGuard](#). Evaluate and continue research on recreation use activities and source tracking. Establish recreation use standards for open waters of Lake Erie to support use assessment protocols and associated monitoring program.

**Coordination and Partnerships:** Work with recreation providers and organizations to encourage use of safety information to reduce exposures to bacterial contamination and HABs and stewardship participation. Continue to maintain and implement the [Clean Marinas Program](#). Continue implementation of proper sewage system siting and installation, and local health district operation and maintenance programs to reduce poor quality home sewage discharges.

**Technology and Infrastructure:** Continue expanding the use of sensor technology to monitor and track bacterial and HAB conditions in Lake Erie and inform the public. Improve web-based tools to report beach and other recreational use conditions to the public.

**Resiliency and Adaptation:** Promote the use of measures for adapting to varying lake level conditions that include soft shoreline protection to maintain beaches and infrastructure for docks.

**Funding:** Utilize state funding through Ohio Environmental Education Fund, Coastal Management Assistance Grants, Environmental Financial Assistance, and Ohio Development Water Authority for continued local investments in infrastructure improvements and any associated federal funding such as GLRI.



# Priority Area: Tourism, Jobs, and Economy

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The Lake Erie economy continues to be part of a region that provides vital places to live, learn, work, innovate, and play. The Lake Erie coast and its watersheds continue to hold thriving economies through its breadth of diversity — whether it be tourism, agriculture, industry, or technology. Transportation in the Lake Erie Basin includes rail, road, and water-borne shipping corridors that feed across to both coasts of the United States and beyond. According to Lake Erie Shores and Islands Visitor Center, in 2018, 11 million visited Lake Erie generating nearly \$1.4 billion in the local economies.

Recommendations for model land use regulations and guidance that have been developed through the Ohio Balanced Growth Program can be used by Ohio local governments to implement land use plans and other local actions that will be more protective of the Lake Erie watershed while at the same time providing clear direction for continued development.

Maintaining current economic sectors, examining opportunities for emerging economic sectors for jobs, enhancement of infrastructure, and enhancing Lake Erie daily experiences will be critical to the quality of life on Lake Erie.

All Commission agencies lead efforts for this priority.

**Goal:** Promote economic opportunities that sustain and advance communities and their economic sector assets associated with Lake Erie.

## Strategic Objectives

**Objective:** Promote public access and continue improvements to state parks, nature preserves, and wildlife areas, investments in local parks, and other recreational facilities for the enjoyment of all. This can include the State Water Trail program, the State Recreational Trails program, and ODOT’s Walk.Bike.Ohio Policy Plan.

**Objective:** Promote the initiatives of JobsOhio, InnovateOhio, [TourismOhio](#), and other State of Ohio programs in partnership with regional and local entities related to the Lake Erie economic sectors.

**Objective:** Promote opportunities to enhance Lake Erie tourism and travel experiences, visitor destinations, and recreational commerce for a variety of users.

**Objective:** Maintain local government access to Best Local Land Use Practice resources.

# Activities to support attaining Priority Goals and Objectives

**Monitoring, Measuring, and Research:** Continue to identify opportunities to track visitor use and patterns to plan for future improvements.

**Coordination and Partnerships:** Promote cooperation with state, regional, and local entities in the public and private sector for the Lake Erie economy.

**Technology and Infrastructure:** Promote new technologies and infrastructure design that sustains and creates new economic opportunities and improvement to the Lake Erie quality of life for communities, residents, and visitors.

**Resiliency and Adaptation:** Work with local communities on infrastructure needs to maintain economic sectors and adapt to conditions in Lake Erie.

**Funding:** Promote state funding programs for transportation, tourism, and other Lake Erie economic sectors.



# Priority Area: Water Withdrawals

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The Great Lakes Compact (Compact) through the Great Lakes Governors and Premiers serves as the binding agreement between the eight Great Lakes states for the protection and management of Great Lakes waters. The State of Ohio has established a permitting program for new or increased water withdrawals and consumptive uses within the basin. The state will continue to maintain and manage the waters of Lake Erie and its consumptive uses within Ohio's basin area.

ODNR leads the efforts for this priority.

**Goal:** Support the Great Lakes Compact.

## **Strategic Objectives**

**Objective:** Continued cooperation with the Great Lakes Governors and Premiers for the regional implementation of the Compact and associated agreements.

**Objective:** Implement and maintain the requirements for water withdrawal and diversion permits associated with the Great Lakes Compact in Ohio.

# Activities to support attaining Priority Goals and Objectives

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**Monitoring, Measuring, and Research:** Maintain tracking of any water withdrawal, diversion, and consumptive use activities in Ohio's Lake Erie watershed.

**Coordination and Partnerships:** Continue participation on the Great Lakes Governors and Premiers Council of Water Resources for Compact activities.

**Technology and Infrastructure:** Promote opportunities for tracking Compact activities in Ohio. Promote water conservation activities in the basin through the continued development of ODNR's water conservation website.

**Resiliency and Adaptation:** Work through the Compact on any updates necessary to sustain the waters of Lake Erie.

**Funding:** Maintain funding to manage any Compact activities in Ohio.





# Conclusion - Making it Happen

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The 2020 Lake Erie Protection and Restoration Plan sets the vision over the next two years for Ohio's Lake Erie and state priorities. Setting the plan is the first step to making it happen. The Commission and its staff will expedite next steps to further identify any specific actions, establish metrics, and develop or utilize tools associated with tracking progress. These include, but are not limited to, the following initial steps.

- **Coordination of H2Ohio Year 1 and 2, including tracking progress of its investments.**
- **Establishment of metrics for each priority area's strategic objectives to determine progress of actions.**
- **Identification of reporting mechanisms for both funding and implementation progress.**
- **Maintenance of stakeholder engagement through existing and emerging ways for outreach with updates to the Lake Erie Commission website.**

Ohio's Lake Erie is a critical asset to the well-being of our state and the places we live, work, and play. The 2020 LEPR works toward maintaining and restoring that asset for generations to come.

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The Lake Erie license plate supports [Ohio's Lake Erie Protection Fund \(LEPF\)](#). The funds support research and projects aimed at protecting, preserving, and restoring Lake Erie and its watershed.

