



Pennsylvania State Water Plan Great Lakes Regional Committee

DEP Office of the Great Lakes

“Working with binational, interstate, and local partners toward effective management of the Great Lakes.”

July 2020

DEP Great Lakes Program

- Located at the Tom Ridge Environmental Center at Presque Isle State Park.
- Co-located with DEP Northwest Region Waterways and Wetlands technical staff covering an array of environmental technical and policy areas.
- A focus on Great Lakes water quality and linking the community with the resource.
- Forming community partnerships to encourage municipal and county cooperation and protect the environment.



Photo Credit: Pennsylvania DCNR

Meeting Regional Commitments



Photo Credit: NASA -Taken by astronaut Drew Feustel on the ISS on May 3, 2018. From Wikimedia Commons.

- Coordinate with United States and Canadian federal agencies, other states and provinces to address water use and quality challenges.
- Work within the Great Lakes governance structures to assure Pennsylvania has a strong voice.
- Develop water and land protection programs and prioritizing funding.
- Fulfill a role in the continued development of stronger communities both now and in the future.

The Great Lakes Basin and PA

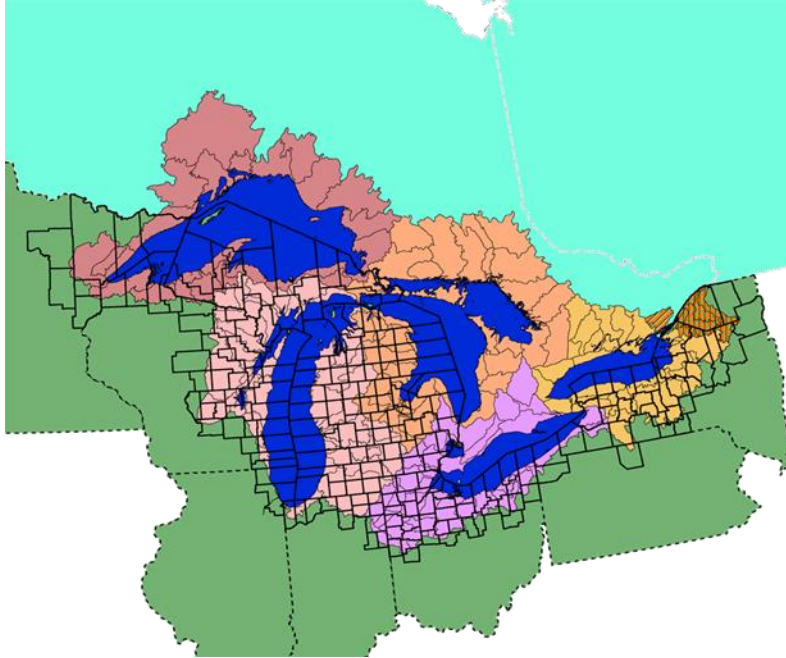


Photo Credit: United States Environmental Protection Agency

- 511 square miles of watershed.
- 77 miles of coastline.

Pennsylvania Lake Erie Sub-Watersheds

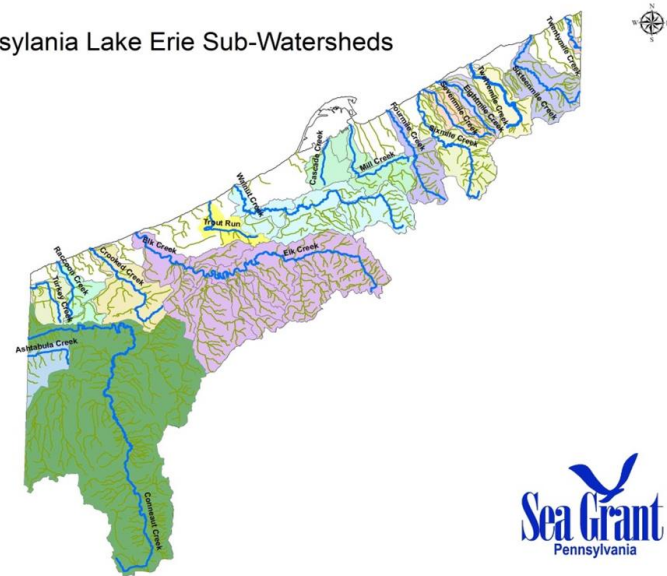


Photo Credit: Pennsylvania Sea Grant

Great Lakes Water Quality Agreement History

- ***First GLWQA signed between United States and Canada in 1972***
 - Focused on reducing algae through a coordinated approach to reducing phosphorus inputs.
 - Established basin-wide water quality goals and formed the Great Lakes Water Quality Board and Research Advisory Board.
- ***GLWQA of 1978:***
 - Reaffirmed and replaced the 1972 Agreement.
 - Focused on an “ecosystem approach” with an end goal of restoring and maintaining chemical, physical, and biological integrity of the Great Lakes.
 - Included additional emphasis on toxic substances.

GLQWA History

- **2012 Amendments:**

- Reorganized how Agreement functions and methods to address emerging issues. Organized into Articles and Annexes.
- Emphasized General and Lake Ecosystem Objectives.
- Created the Great Lakes Executive Committee to oversee progress on water quality protection and restoration efforts.

1972	1978	1983	1987	2012
<ul style="list-style-type: none">• Phosphorus loadings• Visible pollution	<ul style="list-style-type: none">• Persistent toxic substances• Ecosystem approach to management	<ul style="list-style-type: none">• Updated phosphorus reduction strategies	<ul style="list-style-type: none">• Remedial Action Plans for Areas of Concern• Lakewide Management Plans	<ul style="list-style-type: none">• Modernized• Enhanced governance• New and/or expanded issue annexes

GLWQA 2012 – Annexes



- Special section that deals with a specific topic.
- There are 10 Annexes in the 2012 Agreement.
- Aside from Areas of Concern (AOCs), the **Nutrients Annex** is a high-interest topic on the Great Lakes, with focus on Lake Erie.

Lake Erie Phosphorus Status

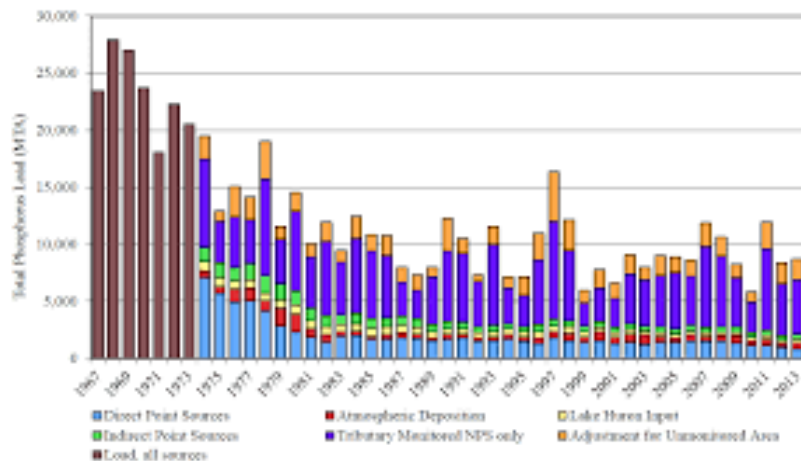
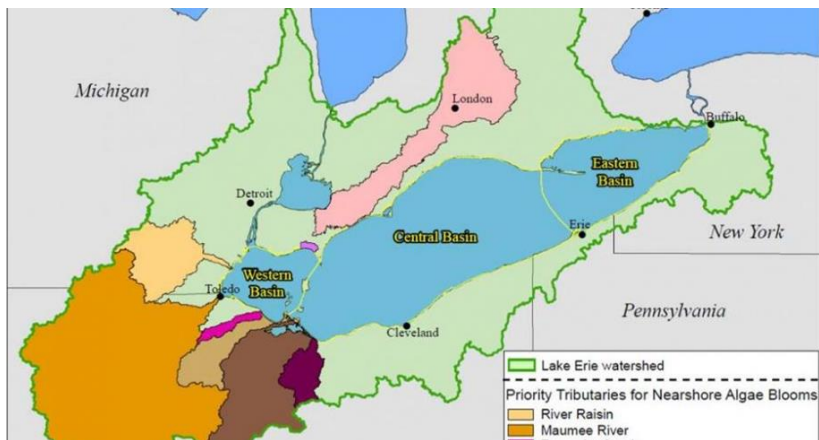


Photo Credits: United States Environmental Protection Agency

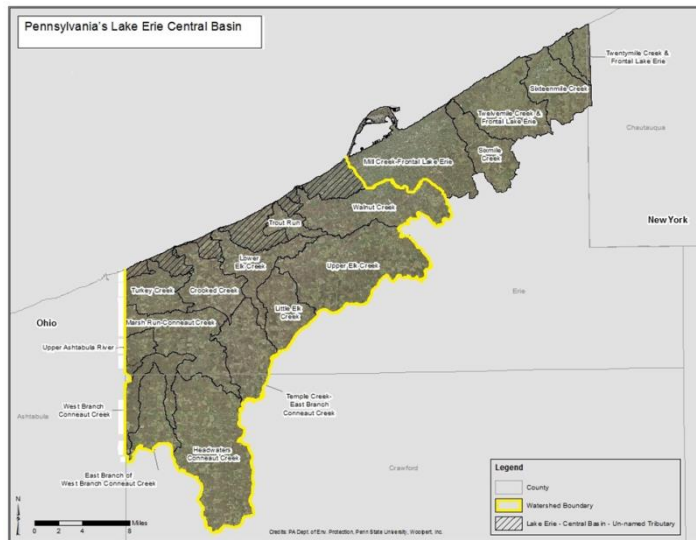
- Major sources include Maumee River Basin and other priority tributaries.
- Concerned with algal blooms in Western Basin and hypoxia (lack of oxygen) in the Central Basin.
- Loading trended downward, but is dependent on precipitation during March – June and phosphorus runoff.
- 2019 Western Basin HAB extent expected 7.5 out of 10.
- Will not affect Pennsylvania.

PA Phosphorus Reduction Domestic Action Plan

Commonwealth of Pennsylvania



Final Pennsylvania Lake Erie Phosphorus Reduction Domestic Action Plan



- Covers 375 square miles of watershed that contributes to the Lake Erie Central Basin.
- Examines tributaries, land uses, point source and non-point source loading characteristics.
- Identifies data needs/gaps.
- Identifies programs to help reduce phosphorus from Pennsylvania tributaries and sources.
- PA only contributes approximately 0.51% of the Total Phosphorus to Lake Erie Central Basin.

Great Lakes and St. Lawrence River Basin Water Resources Compact and Agreement

- Governs water use and diversions within the Great Lakes Basin. Designed to protect resource and reduce conflict between political jurisdictions.
- **Compact** is signed between the states, ratified by Congress, implemented by states.
- **Agreement** is between states AND provinces. Has same language as the compact.
- Both were formalized in 2008.

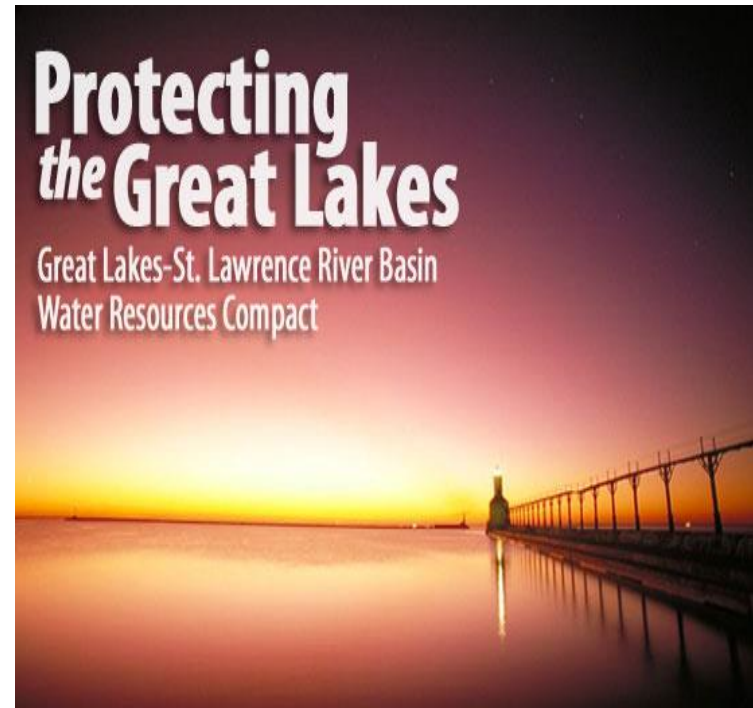


Photo Credit: Great Lakes & St. Lawrence Governors and Premiers

Compact and Agreement Provisions

- Created Water Resources Council (Compact Council) and the Regional Body.
- Pennsylvania maintains two alternates and designees of Governor Wolf.
- Each state must implement a water resources inventory, registration and reporting program.
- Each state must implement a water conservation and efficiency program.



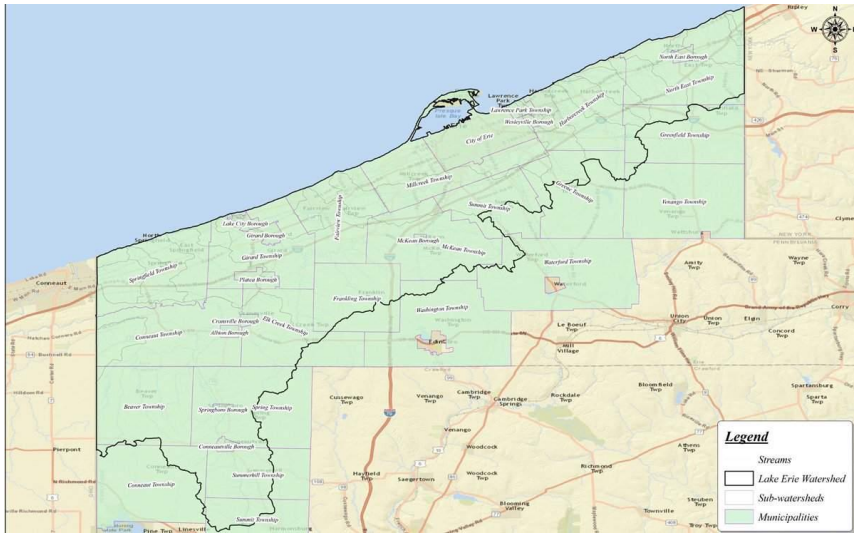
Photo Credit: Great Lakes & St. Lawrence Governors and Premiers

Great Lakes and St. Lawrence River Basin Water Resources Compact and Agreement



- All new or increased withdrawals must meet criteria.
- BAN on all new or increased diversions from the basin with exceptions:
 1. Straddling Communities
 2. Intra-Basin Transfers
 3. Straddling Counties
- Established **Regional Review** process for evaluating withdrawals and diversion exceptions.

Pennsylvania Lake Erie Basin and Water Use



- Water users in the Pennsylvania Lake Erie Basin currently use approximately 40.6 MGD.
- Erie Water Works largest public water utility - serves 221,000 customers approximately 25 MGD.
- No immediate or mid-term diversion concerns.
- Pennsylvania conducts a Water Conservation and Efficiency Program.
 - Water Operator Education
 - Children's Water Festival

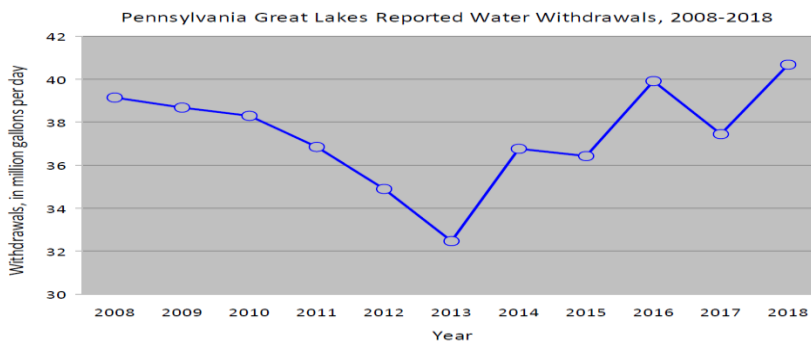


Photo Credits: PA DEP

Great Lakes Restoration Initiative (GLRI)



- Federal program administered by US EPA.
- Accelerates efforts to protect and restore the largest system of fresh surface water in the world.
- Provided over \$2 Billion to assist in restoration activities.
- Helped delist Presque Isle Bay from the Great Lakes Areas of Concern.
- Provides capacity on the state level for Great Lakes functions and programs.
- Impactful in Pennsylvania.

GLRI Partners – Erie County Conservation District



VinES PROGRAM

Pennsylvania Vested in
Environmental Sustainability

- Cooperative environmental and economic sustainability program.
- Works directly with vineyard owners and farmers to evaluate operations through an assessment workbook.
- Physical and operational improvements are identified.
- Cost-sharing of on-the-ground improvements.
- Recognition of vineyards successfully completing sustainability program.

Small Flow Treatment Facility Program



- Allows for geospatial understanding of the scope of Small Flow Treatment Facilities (SFTF) in the Lake Erie Basin.
- Provides for owner outreach and education.
- Enables inspection and sampling of SFTF outfalls into our streams.
- Helps owners identify pollution causes and fix systems to improve public health.

GLRI Partners – Erie County Department of Planning

Municipal Stormwater Assistance Program



- Increases the capacity of Municipal Separate Storm Sewer Systems (MS4s) to understand infrastructure.
- Digitizes infrastructure under common format and allows for analysis.
- Allows for meeting permit conditions through economies of scale.
- Protects water quality and provides for sustainable municipal management of infrastructure.

GLRI Partners – Regional Science Consortium

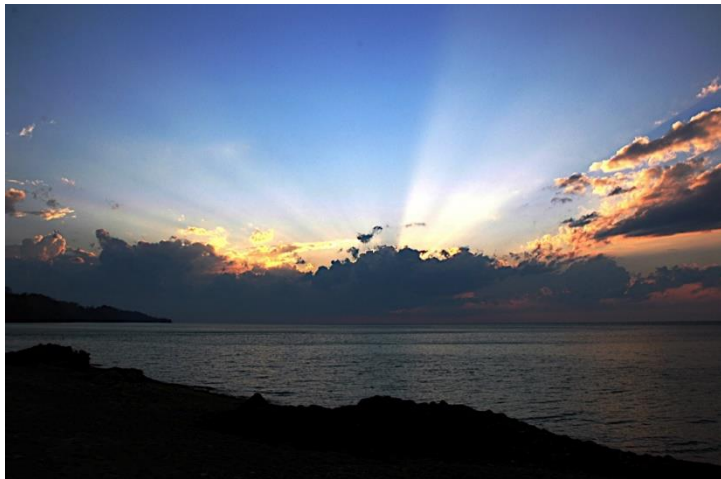
Harmful Algal Bloom Monitoring Program



- Provides for monitoring and detection of harmful algal blooms (HABs) along Pennsylvania's shores.
- Increases public awareness and public safety.
- Enhances scientific understanding of how our systems react and respond.
- Informs management actions to improve water quality.

GRLI Partners – Pennsylvania Sea Grant

Lake Erie Environmental Forum



- Opportunity to learn about public policy issues in the Great Lakes and Pennsylvania's role.
- Provide input on contemporary management issues.
- Increase awareness of actions across the Great Lakes.
- Learn about local programs and partners.
- Become involved!



pennsylvania
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