

Great Lakes

Specific Regional Priorities

Pennsylvania is fortunate to be a part of the Great Lakes region. The Great Lakes are the largest surface freshwater system in the world, contain the equivalent of 90% of North America's annual supply of freshwater, provide vital habitat to native species, and support diverse ecosystems and robust biodiversity. It provides drinking water to 40 million people in the U.S. and Canada and sustains a thriving \$6 trillion regional economy. Lake Erie directly connects northwestern Pennsylvania to this resource, underpinning the social identity of the region and fueling the tourism, recreation, port, and maritime sectors of its economy. Also, the headwaters of the Genesee River flow through the forests and agricultural lands of northern Potter County into New York on their way to Lake Ontario. Many demands are placed upon the waters of the Great Lakes which require thoughtful protections to assure sustainability for future generations. Pennsylvania works diligently with the other U.S. states, Canadian provinces, and the two federal governments to eliminate the possibility of major diversions of water outside of the Great Lakes basin, improve water quality, enhance biodiversity and ecosystems, and provide cooperative, sturdy governance mechanisms for the resource.

Protect Water Quality and Quantity in the Basin

The Great Lakes are vitally important to the prosperity of northwestern Pennsylvania, serving regional domestic, commercial, agricultural, and industrial needs. They supply power, offer world-class recreational opportunities, and provide domestic and international transportation and trade access across the entire Great Lakes – St. Lawrence Seaway. As a result, the committee believes that Pennsylvania should not only maintain current participation in interstate and international governance, but also play a larger role in federal legislation and other policy measures that may impact Lake Erie and Lake Ontario such as invasive species control, pollution reduction, agricultural practices, and stormwater management. In addition, northwestern Pennsylvania should have a larger role in state legislation that impacts Lake Erie and Lake Ontario.

One of the best ways to protect the water quantity of the Great Lakes is by coordinating with the other states and provinces to uphold the interstate compact and international agreement that prohibit the diversion of water out of the basin, regulate water withdrawals and consumptive use, and encourage increased conservation and efficiency measures across many jurisdictions.

Additionally, the committee recognizes that the region is not composed solely of Lake Erie and Lake Ontario, so efforts must be made to protect water quality throughout the larger regional watersheds. This can be accomplished by assessing biology, identifying potential contaminants including on-lot sewage treatment systems, evaluating the impacts of stormwater management, and assessing agricultural best management practices on a regional scale. This will also help inform how Pennsylvania and Great Lakes communities can build resiliency to the impacts of a changing climate in these unique watersheds.

Coordinate with Partners

One effective way to achieve the larger goals of the committee is for the commonwealth to actively engage with partners across multiple political strata. This includes other states, provinces, federal government agencies, and other stakeholders including governmental and non-governmental. The

committee believes that bidirectional lines of communication between these diverse stakeholders, from locally focused to internationally focused agencies and interests, is critical. On a local level, counties and municipalities should collaborate toward regional approaches to water challenges with support from the Pennsylvania Department of Environmental Protection (DEP), whose role would be to encourage open and continual communication and incentivize cooperation through grant funding. Coordination should begin with education and outreach to communicate the impacts of land use choices to property owners and implement best management practices to better maintain the hydrologic integrity of the region.

Region's Uniqueness

What are the Great Lakes region's unique characteristics that are important considerations in the state's water planning?

- Lake Erie has a large, but not unlimited supply of water.
- Despite their relatively small land areas, Pennsylvania's Lake Erie and Lake Ontario watersheds are vital assets to the Commonwealth.
- The quality and quantity of water in Lake Erie is impacted by Canada and other U.S. states which bordering the Great Lakes.
- The Great Lakes are utilized as navigational waters by international business and industry. Ship traffic from other parts of the world can potentially lead to the introduction and distribution of invasive species, which can impact the health and viability of native species and the efficiency of nutrient cycle processes.
- Agriculture, especially vineyards, play an important role in the northwest Pennsylvania economy.
- Localized sources of nutrients and nonpoint source pollutants can negatively impact the Great Lakes tributaries and open waters, and contribute to harmful algal blooms.

Stormwater and Flood Management

What are the region's concerns and recommendations for stormwater and flood management to preserve water quality?

- Municipal stormwater management is critical due to its beneficial impacts on water quality and the potential to reduce bluff recession and ravine erosion in the coastal zone. Best management practices will help control the volume, flow, and quality of stormwater coming from developed areas.
- Evaluate [Act 167](#) stormwater management plans to determine their long-term feasibility. Consider potential funding sources for counties to update Act 167 plans, and for large and small municipalities to update stormwater management ordinances. These activities should include an evaluation of municipal subdivision and land development ordinances, hazard mitigation plans, and integrated water resources management.
- Encourage regional solutions such as incentivizing municipal authorities to assess and, where possible, repair/retrofit aging infrastructure for the increasing -frequency (high-magnitude) of acute severe storm events and the need for increased water quality, erosion control, and infiltration measures
- Develop asset management and capital improvement plans through digitizing municipal and private stormwater infrastructure and utilizing geographic information systems (GIS). DEP

has provided grant funding to Erie County to conduct a Municipal Separate Storm Sewer System (MS4) assistance program which could be leveraged to help digitize this data for both urban and rural communities and lead to more informed and sustainable management.

- Highlight the role of public education and outreach to achieve community support for stormwater management.
- Continue to work toward the elimination of remaining municipal combined sewer overflows (CSOs) as part of an overarching stormwater plan.

Climate Change Adaptation for Water Resources

How are water resources within the region being impacted by climate change and what could we do to adapt?

- Consider the implications of flash flooding and potential decreased groundwater recharge on waterway flow. With the risk of potentially severe droughts and flash flooding brought on by climate change, continuing to promote surface water infiltration to recharge groundwater aquifers should be a high priority, while also understanding the unique susceptibility of lake bluffs and ravine systems to groundwater inputs.
- Participate in basin wide efforts to identify regional climate stressors and plan for economic and environmental resiliency actions.
- Stakeholders should assess the implications of climate change on water supply vulnerability and availability to build resiliency.
- Stakeholders should investigate impacts of extreme Lake Erie water levels (higher or lower than normal) and the associated impact on tourism, recreational activities, navigational, commercial and industrial activities, bluff and beach erosion, and lakefront residential communities.
- Municipalities should take a regional approach to evaluate aging stormwater infrastructure and its current capacity in an effort to develop mitigation strategies for increased storm intensity and frequency due to climate change.
- Maintain focus on science and explicit data to follow demonstrable trends on climate change.