

Assessment of Navigation Needs and The Means for Restoration, Development, and Improvement of Transportation by Water

Introduction

Pennsylvania's commercial and recreational navigation assets provide significant economic benefit to the Commonwealth. Navigational commerce offers direct employment and supports thriving businesses that depend on the availability of commercial ports and accessible waterways. Because commercial port activities on the Delaware Estuary, Lake Erie, and on the Allegheny, Monongahela and Ohio Rivers are vital to the economy of surrounding regions, the workgroup focused its recommendations on these corridors.

Many Pennsylvanians and visitors to the Commonwealth enjoy a diversity of recreational boating, fishing opportunities, and other water sports that further contribute to the economic strength and quality of life in Pennsylvania.

Commercial shipping is an environmentally conscious option, as compared to road or air travel, for the movement of goods. While improvements can be made to an aging fleet, it should be noted that within the Great Lakes System a seaway vessel loaded at 30,000 tons carries the equivalent of 301 rail cars or 963 trucks. A 1,000 foot laker carrying 62,000 tons of cargo carries in that one vessel what would take 564 railcars or 2,340 trucks.

The Commonwealth has a legal obligation to preserve public rights in submerged lands of the Commonwealth and navigation. Pennsylvania's water resource management decisions should support both commercial and recreational navigation opportunities but must also carefully consider public trust responsibilities as well as economic benefits, the needs of water-dependent uses, wetland and aquatic resources preservation, and private property rights.

Institutionally, there are numerous public and private organizations and programs that collectively manage and support commercial and recreational navigation. Examples include:

- Port authorities
- Private sector interests in shipping and support services
- U.S. Army Corps of Engineers' divisions and districts – dredging, infrastructure construction related to reservoir management, locks and dams and port facilities, and public access areas
- U.S. Department of Homeland Security
- Coast Guard districts and sectors, aids to navigation, ice breaking, and recreational boating safety program funding to states
- Water quality monitoring, ballast water management, and emergency response systems
- Interstate compact commissions and international treaty organizations

- State agencies, including the Departments of Environmental Protection, Conservation and Natural Resources, Transportation and the Fish and Boat Commission
- U.S. and Pennsylvania Geological Surveys, U.S. Environmental Protection Agency, and the National Park Service
- Marina and other access owners and operators
- U.S. Department of Commerce, National Oceanic and Atmospheric Administration – charting, weather services and planning support, coastal resources management and Sea Grant programs through state partnerships
- Pennsylvania Water Trail Partnership

Challenges

The environmental risks and impacts of commercial and recreational navigation differ by region in the Commonwealth. Infrastructure needs also vary widely, extending from locks and dams, flood protection and flow management, navigational aids, reservoir operations, and control structures to Great Lakes water management measures affecting lake levels and ice conditions. Dredging equipment and dredged material disposal facilities, applied technological solutions for preventing the introduction and spread of invasive species (including ballast water discharge controls), short sea shipping, ferry boat support facilities and special structures related to tidal estuary, and marine shipping requirements present additional challenges. Vessel types capable of operating globally and using regional infrastructure vary broadly, as do sanitation needs for marine or freshwater environments. In addition, flow management, flooding, water quantity protection, and monitoring strategies are not regionally or internationally consistent.

Commercial shipping, international trade and maintenance of federal navigation channels and recreational boating harbors raise multifaceted management issues related to aquatic habitats and dredged material disposal.

Because of the importance of commercial and recreational navigation to the Commonwealth, specific steps are needed to address these challenges.

Recommendations

1. Hydrology and channel configuration create the fundamental conditions for navigation in Pennsylvania's waters. Where appropriate, the Commonwealth should build on prior efforts related to infrastructure construction, shipping channel maintenance, security, adequate flow management, and water quality protection to support commercial and recreational navigation. Also crucial are related mapping and dredging activities to allow safe passage. The Commonwealth should work closely with the United States Army Corps of Engineers and other operators of dams and impoundments to maximize the benefits of multiple use management. The Commonwealth should support bathymetric mapping of waterways used for navigation currently being conducted by the United States Geological Survey and the Pennsylvania Department of Conservation and Natural Resources. The federal Water Resources Development Act of 2020 provides special budgetary treatment for amounts appropriated from the Harbor Maintenance Trust Fund – up to a cap defined in law. This provision is meant to eliminate budget constraints and allow full use of Harbor Maintenance Tax revenue.
2. Safe and effective management of dredged material is important to navigation on rivers and lakes. The Commonwealth, and other resource regulators and operators, should manage dredging and

dredged material for multiple purposes such as enhanced navigation, beneficial uses, protection of watercourses and wetlands, and beach formation.

3. The Commonwealth should advance and encourage the efforts of the Pennsylvania Department of Transportation, Bureau of Rail, Freight, Ports, and Waterways, with the support of several federal agencies, through regional port authorities to develop strategic plans for supporting and managing commercial navigation in Pennsylvania. The Commonwealth should continue to promote the competitive position of the Ports of Philadelphia, Pittsburgh, and Erie.
4. The Commonwealth should continue to address navigation-related water quality and quantity issues such as ballast water management, wastewater and trash disposal from commercial and recreational vessels, monitoring systems, emergency response, and security management.
5. The Commonwealth should continue to manage public natural resources in the beds of navigable waterways, subject to the permitting and submerged lands license or legislative lease process provided under the Dam Safety and Encroachments Act, as well as the requirements of the Fish and Boat Code.
6. The Commonwealth should continuously evaluate infrastructure needs for locks and dams, dockwalls, shorepower, reservoirs, and intermodal transportation facilities. Where appropriate, the Pennsylvania Fish and Boat Commission should continue to fund or endorse dam removals where the dams no longer serve a useful purpose, thereby improving migratory fish passage and eliminating obstructions to recreational navigation. The Commonwealth should periodically re-examine its institutional arrangements for evaluating infrastructure needs and their adequacy for achieving the Commonwealth's goals.
7. The Commonwealth should continue to participate in regional institutional efforts to manage water quantities, flows and flooding, which all affect navigation. Institutional arrangements and agencies that support Pennsylvania's navigation interests such as the Great Lakes Water Management Agreements, the interstate river basin compact commissions and the International Joint Commission, Council of Great Lakes Governors and Premiers, American Ports Association, American Great Lakes Ports Association, Inland Rivers, and Ports & Terminals Inc. should be continued and encouraged.
8. Where appropriate, the Pennsylvania Fish and Boat Commission and other agencies should encourage the development and improvement of boat launches, public access, transient boating facilities, and associated facilities that enhance recreational boating opportunities. A diversity of recreational boating facilities should be facilitated to accommodate the increase in non-powered watercraft use (i.e., kayaks, standup paddleboards, and canoes) to enhance safety and reduce congestion and user conflict on waterways. Diverse considerations may apply for different types of watercraft.
9. To enhance the reliability of the shipping system, attract new cargoes and foster employment in the maritime sector, the United States and Canada should harmonize the Seaway's opening and closing dates with those of the Soo Locks in northern Michigan. Doing so would establish a fixed navigation season for the entire Great Lakes navigation system from March 25th – January 15th. The Commonwealth should advance and encourage these efforts.