Pennsylvania Sea Grant

Celebrating 25 Years Supporting Pennsylvania's Ecosystems & Economies

For 25 years, the Pennsylvania Sea Grant College Program has led successful research, extension, education, and communications programs that support Pennsylvania's aquatic ecosystems and communities. Pennsylvania Sea Grant is one of 34 programs of the National Sea Grant College Program, whose mission is to enhance the practical use and conservation of natural resources, for a healthy environment, resilient communities, and strong, sustainable economies.

The Pennsylvania program launched in 1998 as a focused outreach project related to the Lake Erie coastline of Pennsylvania. Since then, with continued success, progress, and growth, program efforts and focus have expanded across the Commonwealth to include the Delaware and Susquehanna River basins.

Pennsylvania Sea Grant collaborates and develops creative outreach, education, and communications activities with a broad array of partners including academia, decision-makers, communities, and individuals. The program funds research activities rooted in scientific approaches that seek answers to timely and relevant challenges to Pennsylvania's aquatic ecosystems. Some of these challenges focus on aquatic invasive species management, coastal resiliency, ecosystem health, fisheries resources, and water quality and quantity issues.

Funding and support come from the National Oceanic and Atmospheric Administration, Penn State University, other state and federal agencies, and many partners.

Research Seeks Solutions to Today's Aquatic Ecosystem Challenges

Pennsylvania Sea Grant supports and conducts research focused on aquatic ecosystem related issues that impact Pennsylvania. The biennial research request for proposals (RFP) process is open to faculty members and researchers from Pennsylvania colleges, universities, state agencies, and not-for-profit research organizations. The proposed research must investigate timely and relevant issues that relate to Pennsylvania Sea Grant's strategic focus areas.



Pennsylvania Sea Grant funded research addresses timely water quality challenges

The Program recently awarded \$1.08 million in research funding to six projects (2022-2024). Topics include adaptation and resilience to flooding, green stormwater infrastructure, freshwater algal blooms, and aquatic invasive species. Funding from NOAA and matching funds support these efforts.

The next funding cycle will support research conducted between 2024-2026. "Research projects that encourage solution-based results, contribute to enhanced water quality, and that lead to natural resource management strategies in Pennsylvania are highly desirable," said Sean Rafferty, Ph.D., Research Director for Pennsylvania Sea Grant.



2021-2022 Operating Budget

\$2.2M Total Funding Secured by Pennsylvania Sea Grant

\$1.1M National Sea Grant Office funding

\$1.1M Other funding

Pennsylvania Sea Grant's Focus Areas



Healthy coastal ecosystems



Sustainable fisheries and aquaculture





Restoring Waterways and Conserving land

Pennsylvania Sea Grant recognizes the environmental and economic value of restoring waterways, and conserving land. Pennsylvania's 76.6-miles of Lake Erie waterfront is a treasured resource for water sports enthusiasts, bird watchers, anglers, and vacationers.

Pennsylvania Sea Grant connects landowners, local land trusts, and state agencies to conserve open space, provide increased public fishing access, and to assist with the planning and implementation of recreational improvements throughout the region. Ecosystem benefits include the preservation of priority habitats in perpetuity, increased public access and opportunities for passive, nature-based recreation, and economic benefits include revenue from passive recreation such as overnight accommodations, and spending at local eateries and bait shops. Since 2012, over 2,167 acres have been preserved through open space efforts. This includes 2.6 miles of Lake Erie shoreline and 19.59 miles of streams, now conserved and open for public access through passive recreation such as fishing and walking. In total, the economic value of the effort is over \$15 million.



A group tour to showcase restoration efforts along Seven Mile Creek in Erie, Pennsylvania. Pennsylvania Sea Grant and partners restored the degraded streambanks and established a riparian buffer using native species. The work has improved water quality, stabilized the waterway, and created aquatic habitats.

Protecting Native Species

Pennsylvania Sea Grant manages a collaborative effort to conduct annual monitoring and removal of invasive plant species within documented Natural Heritage Area sites in the Lake Erie watershed. Since efforts began in 2012 nearly 1,700 acres of important habitat have been protected.

Three priority invasive plant species that were removed in 2022 include Hydrilla, Phragmites, and Multiflora rose, and the top five 'watch list' invasive species are Hydrilla, European frog-bit, Lesser celandine, Mile-a-minute, and Japanese chaff flower.

Success By The Numbers

Each year Pennsylvania Sea Grant reflects on its efforts, accomplishments, and impacts. The number of programs, people reached, professionals trained, and other metrics are tallied and submitted to the National Sea Grant Office, as required through NOAA and the Department of Commerce. The following highlights are successes from 2021-2022:

3,243 People attended Webinars, trainings, public programs



40 Volunteers contributed 795.5 hours to preserve and improve Pennsylvania's natural resources

13 Acres of riparian forest buffer, upland forest, and meadow habitats planted





253 P-12 Students

reached through Pennsylvania Sea Grant trainings or programs

25 Undergrad & Graduate students supported through research projects, fellowships, and internships





5,418 Linear feet of stream conserved

629 Acres of land and native plant species protected from invasive species



To learn more about our programs and successes, visit us at http://seagrant.psu.edu, or on Facebook, LinkedIn, or Instagram.

