

Pooled Monitoring Initiative Restoration Research Program Overview

Connecting Bay restoration questions, applied research, and on-the-ground decision-making

The Program

The Chesapeake Bay Trust's Pooled Monitoring Initiative – Restoration Research Program (PMI-RRP) is a collaborative applied research program designed to answer critical restoration questions that matter most to the Chesapeake Bay watershed's regulatory, practitioner, and funding communities.

The program is supported by the Chesapeake Bay Trust, Maryland Department of Natural Resources, the Environmental Protection Agency's Chesapeake Bay Program Office (EPA's CBPO), Anne Arundel County, Baltimore City, Charles County, Frederick County, Harford County, Montgomery County, Prince George's County, Maryland Dept. of Transportation State Highway Administration, and other partners such as the Maryland Department of the Environment and the National Fish and Wildlife Foundation with funding from EPA CBPO (earlier funding partner).

Together, these partners pool resources to fund research that addresses priority Bay restoration questions and delivers results back to the people who can use them. The program's core goal is practical: reduce uncertainty, improve restoration outcomes, and help restoration science move more directly into planning, permitting, funding, monitoring, and implementation decisions.

Why PMI-RRP Matters

Across the Chesapeake Bay watershed, restoration practitioners, regulators, local governments, engineers, funders, and watershed organizations are working to restore streams, improve stormwater management, reduce pollutant loads, strengthen communities, and adapt restoration practices to changing environmental conditions.

However, many important questions remain:

- *How effective are specific restoration practices under different site conditions?*
- *Where and when should particular techniques be used?*
- *How should monitoring be designed to detect meaningful outcomes?*
- *How can research improve policy, permitting, funding, and implementation decisions?*
- *How can social science, tradeoff analysis, and emerging monitoring tools strengthen restoration practice?*

PMI-RRP was created to help answer these types of questions. The program supports research that addresses key restoration questions that can be barriers to watershed restoration project implementation, with the goal of increasing confidence in proposed restoration outcomes, clarifying optimal site conditions, informing policy, and guiding monitoring programs.

How the Program Works

PMI-RRP is built around a simple yet powerful model that connects the restoration questions being asked by the restoration community with the researchers best positioned to answer them. Each year, priority research questions are identified and incorporated into the program's Request for Proposals. Some questions remain active across multiple years, while others cycle off as funded projects generate findings and inform the next generation of questions.

The program funds research and literature reviews that address priority restoration topics, including stormwater and stream restoration, pollutants of emerging concern, social science, restoration tradeoffs, and monitoring design.

This structure allows the program to function as more than a traditional award program. PMI-RRP serves as a shared learning platform for the watershed restoration community: identifying knowledge gaps, funding targeted research, building a body of applied evidence, and returning findings to decision-makers and practitioners.

What the Program Funds

PMI-RRP supports applied research that responds to one or more of the key restoration questions identified in the annual RFP. Eligible applicants include nonprofit entities, academic institutions, and for-profit entities. For the 2026 funding cycle, partners allocated just over \$1.9 million for the program.

Funded projects have researched priority research topics including stormwater BMP effectiveness, watershed restoration assessment, stream restoration performance biological community restoration, changing environmental conditions, pollutants of emerging concerns, social science, monitoring approaches, and restoration tradeoffs for practices such as tree planting, soil health, and living shorelines.

A Decade of Applied Restoration Science

Over the past decade, PMI-RRP has generated more than 60 peer-reviewed studies across five major applied restoration themes: stream restoration, stormwater BMP efficiency, pollutants of emerging concern, monitoring and data optimization, and restoration tradeoffs. This body of work provides locally relevant, practitioner-informed science to support more consistent, evidence-based restoration decisions across the Chesapeake Bay watershed.

The next step is ensuring these findings are accessible, understandable, and actionable. To support that goal, the Chesapeake Bay Trust supported a contract in 2025 to synthesize and translate PMI-RRP research into decision-ready products for practitioners, regulators, funders, and local governments. The effort included stakeholder engagement, technical synthesis, and development of concise, peer-reviewed science synthesis briefing documents, interactive web products, outreach materials, and a learning session package.

This work demonstrates how PMI-RRP is expanding beyond research funding into a broader knowledge-to-action platform for the Chesapeake Bay restoration community.

Looking Ahead

PMI-RRP provides a durable model for collaborative, applied restoration science: pool resources, identify priority questions, fund high-quality research, and return findings to the people who can use them.

As restoration challenges become more complex – including changing environmental conditions, emerging contaminants, monitoring needs, biodiversity loss, social science drivers, and competing restoration objectives – the need for coordinated applied research will continue to grow. PMI-RRP helps ensure that Chesapeake Bay restoration decisions are informed by credible, locally relevant, practitioner-centered science ready to use.

Contacts

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