Over $1 Million Announced to Support Stream Restoration

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The Chesapeake Bay Trust, in partnership with the Maryland Department of Natural Resources, the Maryland Department of Transportation’s State Highway Administration (MDOT SHA), Montgomery County Department of Environmental Protection (Montgomery DEP), and with input from the Maryland Department of the Environment, U.S. Fish and Wildlife Service, and other agency and technical partners on the Restoration Research Advisory Committee, announce six recipients of the collaborative Restoration Research Award Program.

Efforts to restore the Chesapeake Bay and its tributaries call for a significant increase in the number of watershed restoration projects intended to improve both water quality and habitat. Questions about the performance and function of some of these practices persist in the regulatory community as well as the restoration practitioner community. Answering these questions will ultimately lead to increased confidence in outcomes of restoration projects, identification of cheaper ways and better places to build projects, and information useful to regulatory agencies in project permitting.

“The health of Chesapeake Bay depends on the quality of the water flowing from the streams and tributaries in our backyards and communities,” said Mark Belton, secretary of the Maryland Department of Natural Resources. “This program will provide more in-depth scientific data and measurable results to help local stream restoration activities and efforts that seek to mitigate the amount of sediment and nutrients entering our waterways.”

In the third year of this award program, two new funding partners have been added to the program: MDOT SHA and Montgomery DEP. Additional partners are expected in future years.

“We are excited to contribute to this body of work,” said Sonal Ram, P.E., Director of the MDOT SHA Office of Environmental Design, which is responsible for treating the stormwater that flows from thousands of acres of impervious road surfaces with restoration practices. “We plan to use the results that come out of these studies directly to shape how and where we spend Maryland’s resources on restoration practices to get the biggest bang for the buck.”

Montgomery County, as well, is required to treat thousands of acres of impervious surface as part of its Municipal Separate Storm Sewer System (MS4) permit. “We want to employ the most cost-effective approaches to retrofitting impervious surfaces,” said Lisa Feldt, Director of the Montgomery County Department of Environmental Protection. “We take our responsibility with public dollars and our responsibility to improve waterways in our communities very seriously, and improving our understanding of how practices such as urban trees treat stormwater will help us maximize outcomes.”

The Chesapeake Bay Trust, established by the State of Maryland to serve a convening and collaborating grant-making role, manages the awards made through the partnership and ensures that what is learned is translated back to the regulatory and practitioner communities.

“At the Chesapeake Bay Trust, we want to invest our resources in watershed restoration projects that are placed in the best spots, can be done as quickly and cost-effectively as possible, and are the best at their goals of improving water quality and habitat,” said Jana Davis, executive director of the Chesapeake Bay Trust. “We are still learning a lot about what works and what doesn’t, and we want to share what we learn with those similarly responsible for getting projects in the ground.”

Recent projects funded in the Restoration Research Award Program include:

South River Federation, $199,990 for “Assessing Watershed-scale Restoration Effectiveness: Treatment Impacts and Monitoring Requirements”

The South River Federation and Smithsonian Environmental Research Center will evaluate the cumulative performance of multiple Best Management Practices (BMPs) at a subwatershed scale. The research team will compare watershed-level discharges of sediment and nutrient pollutants from seven interconnected, restored subwatersheds of Church Creek.

Center for Watershed Protection, Inc., $200,000 for “Using a Novel Research Framework to Assess Water Quality Impacts of Urban Trees”

This research team will quantify the stormwater treatment value of trees across urban forest types. The project will identify urban forest characteristics that influence the water and ecosystems and determine whether more complex urban forest types result in greater runoff volume reduction.

University of Maryland Center for Environmental Science (UMCES), $199,314 for “Long-term impacts of living shorelines to Sub Aquatic Vegetation (SAV) habitats in the Chesapeake Bay”

This project will assess the long-term performance of living shorelines, a practice of using natural shoreline habitat to prevent erosion rather than hard shoreline armor, as well as their potential impacts to adjacent seagrass beds.

University of Maryland College Park, $198,332 for “Tree Trade-Offs in Stream Restoration Projects: Impact on Riparian Groundwater Quality”

Predicting the impact of tree removal associated with stream restoration on riparian water quality remains a challenge. This project will quantify the effects of riparian deforestation on groundwater quality across urban restored, degraded, and forested reference sites.

Virginia Polytechnic Institute and State University, $217,322, “Improving the Success of Stream Restoration Practices”

This project will improve our understanding of the conditions under which stream restoration practices “fail,” with the long term goal of improving the overall application, design, and review of stream restoration projects. Information from this study will provide guidance on factors that indicate the risk of project failure, such as watershed size or impervious land use or channel specific stream power or relative floodplain width.

Versar, Inc., $180,408 for “An Evaluation of Forest Impacts as Compared to Benefits Associated with Stream Restoration”

The goal of this project is to better understand the impacts of stream restoration on forest resources. The research team will inventory trees, understory vegetation, and reptiles and amphibians to determine whether there are any potentially negative impacts as a result of positive stream restoration practices.