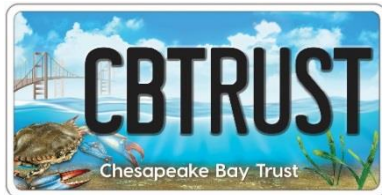


Pooled Monitoring Initiative's Restoration Research Award Program

Pools resources to support scientists who answer your key restoration questions and then provides those answers back to you to use in your programs



Jana Davis, Ph.D., Executive Director & Sadie Drescher, Director of Restoration Programs
Chesapeake Bay Trust

Chesapeake Bay Trust

award maker, barrier buster, capacity builder, and more!



The **MISSION** of the Chesapeake Bay Trust is to promote public awareness and public participation in the protection and restoration of the Chesapeake Bay and its rivers and streams.

Our **GOAL** is to increase stewardship through grant programs, special initiatives, and partnerships that support environmental education, demonstration-based restoration, and community engagement activities.

More online at <https://cbtrust.org/>



Pooled Monitoring Initiative is Needed

- ▶ Program Need: Stream restoration projects were stalled due to questions that the regulatory community had about their effectiveness, safety, and ability to “succeed”
- ▶ Problems:
 - ▶ Chesapeake Bay Trust funds were stalled
 - ▶ Restoration progress slowed down
 - ▶ Monitoring requirements made on single restoration project without replication or control / reference (i.e. could not answer any question other than that site’s conditions) and with a price tag (\$)



Monitoring stream banks in Carroll County, MD, to see if they recover after restoration

Pooled Monitoring Initiative Provides Solutions

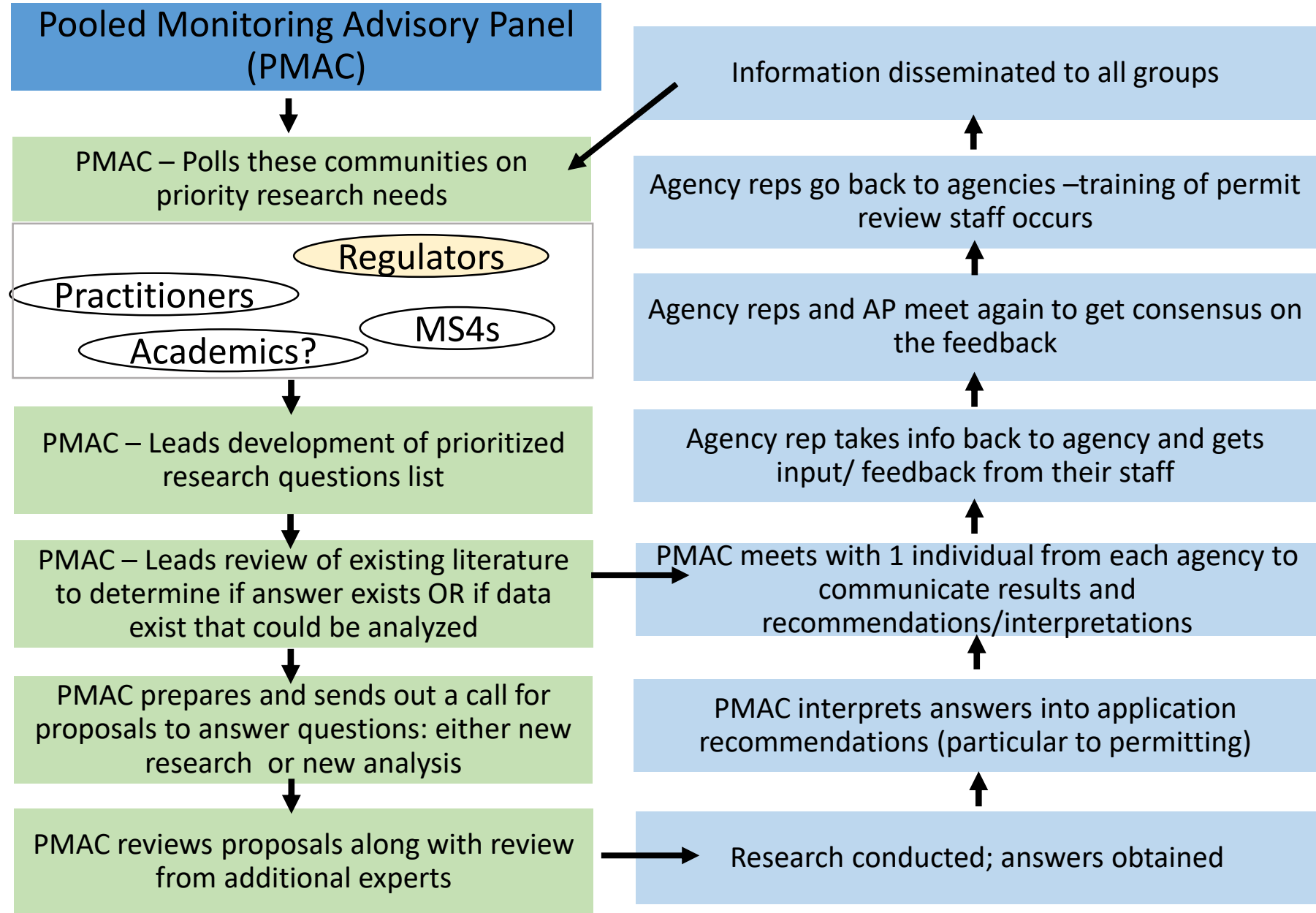
- ▶ Regulators prioritized their concerns
- ▶ Funders “pooled” resources
- ▶ Top restoration questions issued in the Restoration Research Request for Proposals (RFP) in FY15 and led by the Chesapeake Bay Trust
- ▶ Scientific teams research these questions and deliver answers back to the regulators
- ▶ RFP open to any organization – looking for best groups to answer your questions
- ▶ Results used in decisions, policy, practices, etc.



Versar, Inc. scientist visiting Red Hill Branch to measure tree/vegetation “trade-offs” for stream restoration

Process is Inclusive and Transparent

This is how the Pooled Monitoring Initiative works - integrating the key partners, stakeholders, users, scientists, etc. throughout the process to share information and guide the feedback loop



Restoration Research Award Program

- ▶ Supported 24 projects over last 5 years at \$4M
- ▶ Guided by the Pooled Monitoring Advisory Committee
- ▶ Uses scientific reviewers across the world to vet applications
- ▶ Runs all applications through a “management review”
- ▶ Projects are managed as contracts
- ▶ Questions are cycled off/on RFP each year
- ▶ All awards, progress, and program products are online at: <https://cbtrust.org/grants/restoration-research/>



Claire Welty (UMBC)
monitoring stream
restoration sites in
Baltimore County, MD

Similar Model in Washington State

- ▶ Dept. of Ecology manages the Regional Monitoring Program to see if things are getting better, what is working, what is not working, and what is more cost effective
- ▶ Stormwater Work Group Established in 2008
- ▶ Recommended to establish a Regional Stormwater Monitoring Program in 2010 (\$10.5M in first permit cycle)
 - ▶ Status and trends
 - ▶ Effectiveness studies
 - ▶ Source identification
- ▶ Permit Required Monitoring in 2013
 - ▶ Permittee either pays into the collective fund or conducts individual monitoring
 - ▶ Costs allocated by population

“Local governments in Western Washington spend hundreds of millions of dollars each year implementing the requirements of municipal stormwater National Pollutant Discharge Elimination System (NPDES) permits. How do we know if the permits are working?” Washington State Dept. of Ecology

(source:
<https://ecology.wa.gov/About-us/Our-role-in-the-community/Partnerships-committees/Stormwater-Work-Group>,
retrieved 10/22/19)

Pooled Monitoring Initiative Gains Support & Research is Valued

- Gained funding partners over the years demonstrating the value of the research program and buy-in from restoration community
- Held four annual forums at Maryland Department of the Environment bringing together regulators, practitioners, and scientists to hear the research results
- Part of the EPA Chesapeake Bay Program Office's Stream Health Work Plan (Habitat Goal Implementation Team)
- Demonstrates buy-in from Maryland Department of the Environment who will allow permittees to “pool” resources vs. conducting site specific monitoring in new MS4 (municipal separate storm sewer system) permit
- Continues to attract potential funding partners



Stream Restoration

Pooled Monitoring Initiative Continues to Ask Researchers the Key Questions “Bugging” Regulators

- ▶ FY20 RFP includes ten research questions, organized into four themes:
 - ▶ Effectiveness of restoration programs at the watershed/catchment scale
 - ▶ Effectiveness of restoration practices at the project scale
 - ▶ Emerging pollutants – thermal, toxics, fecal
 - ▶ Climate
 - ▶ Impacts of construction activities on natural resources
 - ▶ Trade-offs in resource improvements incurred by restoration practices and creating net ecological uplift



Kelsey (UMD student) measuring groundwater to test impact of stream restoration

Pooled Monitoring Initiative Fills a Gap

- ▶ Answers questions about best management practice (BMP) performance for
 - ▶ Regulators who permit projects
 - ▶ Practitioners who build projects
 - ▶ Local governments that need projects to succeed
 - ▶ Funders who pay for projects
- ▶ Can verify and inform the development of efficiencies used in the Bay Model and for “credits” to reduce pollution
- ▶ Can answer some of your questions
- ▶ See <https://cbtrust.org/grants/restoration-research> for more information, including past projects awarded and final products



Assessing Vegetation of Restoration Site to determine the trade-off value of trees in stream restoration

Pooled Monitoring Initiative expansion will answer more of your questions

- ➔ Other organizations can join us to pool funds and answer “burning” questions
- ➔ Draft Maryland MDE permit offers a “pooled monitoring” option
- ➔ What other ideas do you have for the Pooled Monitoring Initiative’s use of information, questions to ask, sites to monitor, expansion of funding partners, etc.?

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