



You're Getting Warmer: Taking the Temperature of Maryland's Waters

**Location: USGS Water Science Center
5522 Research Park Drive, Catonsville, MD 21228**

Virtual: [Microsoft Teams - Temperature Workshop](#)

Date: April 15, 2026

Time: 9:00 am – 4:30 pm

8:30 – 9:00 Check in

9:00 – 9:05 Welcome and Introductions

Byron Madigan, Chair, Maryland Water Monitoring Council (MWMC)

9:05 – 9:15 Overview of USGS Water Science Center

*Matthew Pajerowski, Supervisory Hydrologist, US Geological Survey (USGS),
Maryland-Delaware-DC Water Science Center*

Session 1: Current Monitoring Data & Observations

- *Federal, State and Local Observations - Monitoring of Surface and Tidal Water Temperatures*

9:15 – 9:35 Tracking Changes in Temperature Through Analyses of Sensor and Stream Macroinvertebrate Data at Regional Monitoring Network (RMN) Sites

Erik Leppo, Data Scientist, Tetra Tech

9:35 – 9:55 Jennings Randolph Lake: Monitoring and Operations

Sarah Pedrick (virtual), Water Quality Program Manager, U.S. Army Corps of Engineers, Baltimore District

9:55 – 10:15 Historical Drivers of Chesapeake Bay Warming Trends

Kyle Hinson, Postdoctoral Research Associate, Pacific Northwest National Laboratory (PNNL)

10:15 – 10:35 Warming Waters, Blooming Threats: Climate Change and the Rise of Harmful Algae

Cathy Wazniak, Program Manager, Resource Assessment Service, MD Department of Natural Resources (MD DNR)

- 10:35 – 10:55 History of Maryland Brook Trout Populations
Matt Lawrence, Coldwater Fisheries Biologist, Fishing and Boating Services, Maryland Department of Natural Resources (MD DNR)
- 10:55 – 11:15 Analysis of Stream Temperature and Potential Changes Over Time in Maryland Biological Stream Survey Rounds Four and Five
Lindsay Powers, Maryland Department of Natural Resources (MD DNR)
- 11:15 – 11:35 UT Big Pipe Creek Watershed Assessment
Neal Eshelman, Freshwater Fisheries Biologist, Fishing and Boating Services, Maryland Department of Natural Resources (MD DNR)
- 11:35 – 11:55 Summer Temperature Monitoring within Streams in Baltimore County, MD
Morgan Kaumeyer, Natural Resource Specialist, Baltimore County Dept. of Environmental Protection and Sustainability
- 11:55 – 12:55 Lunch (Networking)**

Session 2: Regulatory Update

- *Aquatic Life Assessment of Cold-Water Resources*

- 12:55 – 1:35 Keeping it Cool: Protecting, Assessing, and Managing Maryland's Cold Waters
Melinda Cutler, Water Quality Standards Lead, and Sophia Grossweiler, Senior Regulatory Compliance Engineer, Maryland Department of the Environment (MDE)

Session 3: Temperature Case Studies

- *Built Environment – Fate & Transport from Urban and Rural Impacts. Innovative Design & Monitoring*

- 1:35 – 1:55 Thermal profiles from SHA stormwater BMPs
Bob Hilderbrand, University of Maryland Center for Environmental Science (UMCES) Appalachian Laboratory
- 1:55 – 2:15 Engineered Aeration as an Approach to Mitigate Oxygen Depletion in a Changing World
Jeremy Testa (Virtual), Professor, Chesapeake Biological Laboratory, University of Maryland Center for Environmental Science (UMCES)
- 2:15 – 2:35 Impacts of Summer Storms on Stream Thermal Regime at the Watershed Scale
Claire Welty, Director, Center for Urban Environmental Research and Education Professor of Chemical, Biochemical, and Environmental Engineering, UMBC
- 2:35 – 2:50 Break**

- 2:50 – 3:10 Carroll County Wet Pond Gravel Lens - Impact of Design Modifications to Buffer Stream Temperatures in Urbanized Watersheds
Byron Madigan, Water Resources Manager, Resource Management Division, Carroll County Government
- 3:10 – 3:30 Can We Just Cool It? Stream Restoration and Water Temperature
Dennis Genito, Technical Lead, Baltimore County Department of Environmental Protection & Sustainability Watershed Restoration Section
- 3:30 – 3:50 Evaluating and Mitigating Thermal Impact of Small Ponds in Maryland Trout Watersheds
Jason Cessna, Natural Resource Biologist, Freshwater Fisheries Program, Fishing and Boating Services, Department of Natural Resources, UMCES Appalachian Laboratory
- 3:50 – 4:00 Research, Modeling, and Testing of a New Temperature BMP in Maryland
Martha Stauss, Senior Engineer, Maryland Environmental Service (MES)

Session 4: Community Science & Citizen Resources

- *Monitoring and Resources for Community Volunteers and Citizen Scientists*

- 4:00 – 4:20 ACWA Volunteer Monitoring and Community Science
Susan Simonson, President, Antietam Conococheague Watershed Alliance (ACWA)
- 4:20 – 4:30 Closing remarks/Happy hour