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**Webinar #2: A Whole Watershed Approach**

**Deb Caraco, Water Resource Engineer, CWP**

Deb has been a CWP employee since 1996, and currently works for CWP remotely from Ithaca, New York. Her areas of focus include IDDE, pollutant modeling, watershed research, stormwater design and data analysis. Deb is the developer of the Watershed Treatment Model, a primary author on CWP’s nationwide guidance on Illicit Discharge Detection and Elimination. In recent years, Deb has served as a technical lead on several CWP research initiatives including upcoming CWP research on adapting stormwater standards to climate change. She has a Master of Engineering in Biological and Environmental Engineering from Cornell University, and a Master of Applied Statistics from Penn State.

**Sara Love, Maryland House of Delegates**

Sara Love first was elected to the Maryland House of Delegates in November 2018. She serves on the Environment & Transportation Committee, and two of its subcommittees, Motor Vehicles & Transportation, which she chairs, and Environment. For the last four years she has chaired the Montgomery County House Delegation Land Use, Transportation and Public Safety Committee. Sara has serves on the Chesapeake Bay Commission, the Joint Committee on the Chesapeake and Atlantic Coastal Bays Critical Area, and the Zero-Emission and Electric Vehicle Infrastructure Council.

On Thursday, June 13, Sara will be sworn in as the Senator for District 16.

Prior to her election to the Maryland House, Sara was the Public Policy Director for the ACLU of Maryland, where she led their policy and legislative work. During that time, she worked on many issues including reproductive rights, racial justice, public funding for public schools, policing reform, criminal justice reform, saner drug policies, technology and privacy, the First Amendment, open government, and voting rights.

Before working for the ACLU, Sara served as the General Counsel and Legal Director of NARAL Pro-Choice America where she worked on federal reproductive rights policy and led a staff to support affiliates across the country working on state policy. She also spent several years out of the workforce, raising her two children.

Sara graduated from Princeton University and Northwestern University School of Law.

**Byron Madigan, Carroll County Waters Resources Division**

Byron Madigan has been with Carroll County for the past 16 years and is the Supervisor for the Water Resources Division within the County’s Bureau of Resource Management. In this role, he oversees the groundwater, surface water, Army Corps and MS4 monitoring programs and requirements for the County. Additionally, Byron serves as a Board of Director for Maryland’s Water Monitoring Council and recently assumed the role as chairman for the Board’s Monitoring and Assessment Subcommittee.

**Lisa Fraley- McNeal, Senior Watershed & Stormwater Research Specialist, CWP**

Lisa Fraley-McNeal is a Senior Watershed and Stormwater Research Specialist at the Center for Watershed Protection with over 17 years of experience. Her areas of expertise include GIS and field methods for watershed assessment, watershed planning, stream restoration, Chesapeake Bay TMDL crediting, and applied research on topics related to watershed and stormwater management. She served as one of the Sediment and Stream Corridor Restoration Coordinators for the Chesapeake Bay Program and helped with development of the Stream Restoration Expert Panel Recommendations and subsequent workgroup updates. She has a B.S. degree in Geography and Environmental Systems, with a writing minor and cartography certificate from the University of Maryland, Baltimore County. Lisa also has a M.S. degree from the University of Maryland, Baltimore County in Marine and Estuarine Environmental Science and is currently working on her graduate GIS Certification at NC State University.

**Erik Michelsen, Deputy Director Anne Arundel County Dept of Public Works**

Erik is a Deputy Director for Anne Arundel County’s Department of Public Works, heading its Bureau of Watershed Protection and Restoration. He works to facilitate the recovery of the Chesapeake Bay and its tributaries through supporting robust restoration projects and rigorous scientific monitoring efforts, bolstered by diverse stakeholder partnerships. Erik has worked for Anne Arundel County since 2014, guiding the County’s efforts to conduct its environmental assessments, restoration implementation, and ecological evaluation work to support the County’s clean water obligations under the Municipal Separate Storm Sewer System (MS4) permit and the Chesapeake Bay Total Maximum Daily Load (TMDL). Erik also serves as Anne Arundel County’s Senior Environmental Policy Officer.

**Tess Wynn Thompson, Associate Professor Biological Systems Engineering Virginia Tech**

Tess Wynn Thompson is an associate professor in biological systems engineering at Virginia Tech.  Prior to pursuing her PhD she worked as an engineer in state government and private consulting.  Her research in stream and wetland restoration focuses on the role of vegetation in flow resistance and streambank erosion, mitigating the impacts of urban development on stream systems, and predicting the onset and rate of streambank fluvial erosion.  In addition to designing stormwater control measures (SCMs) and stream restoration projects, she has over 20 years of experience in field monitoring of SCMs, streams, and wetlands. Dr. Thompson teaches university courses in fluvial geomorphology and stream restoration. She currently serves on the Scientific and Technical Advisory Committee (STAC) for the Chesapeake Bay Program and is a fellow of the American Ecological Engineering Society.

**Bill Stack, CWP Senior Advisor**

Bill Stack is a professional engineer/ecologist who has worked in the environmental restoration field for over 40 years. He joined the Center for Watershed Protection in 2010 as the Deputy Director of Programs and helped lead the Center’s effort in developing Stream Restoration Crediting Protocols for the Chesapeake Bay Program. He is currently semi-retired assisting the Center and other organizations on a contractual basis.

Prior to coming to work with the CWP, Mr. Stack spent 30 years working for the Baltimore City Department of Public Works where he retired as Chief of the Surface Water Management Division. One of his responsibilities while at the City included the Municipal Separate Storm Sewer System Permit. Under this program, Mr. Stack was responsible for implementing 6 stream restoration projects (approximately 3 miles in total) with several more under design. Mr. Stack also co-chaired a work group under the auspices of the Maryland Water Monitoring Council and Maryland Stream Restoration Association to address the issue of quantifying the benefits of stream restoration through collaborative monitoring approaches.

Mr. Stack current stream-related work for the Center includes QA/QC Coordinator for a Chesapeake Bay Trust Grant to monitor the effectiveness of stormwater retrofits on stream stability. He is also worked on developing a monitoring design to determine the effectiveness of stream restoration and stormwater management in restoring the water quality and ecological health for Sandy Branch and Green Briar Branch in Potomac, MD.