

Environmental DNA: State of the Science and its Application in Maryland Watersheds

Presented By

The Maryland Water Monitoring Council

And Hosted By

The U.S. Geological Survey's MD-DE-DC Water Science Center

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Overview. The collection and characterization of DNA from water quality samples is a fairly widely used technique for aquatic life characterization. While methodologies continue to change and improve, monitoring protocols, implementation of QA/QC procedures, determining minimum methodological reporting requirements, and interpretation of results can be challenging. The broad objectives of this workshop are to 1) provide a basic overview of the technologies and techniques used in eDNA work and 2) show examples of how this assessment technique is and can be used in Chesapeake Bay natural resource management.

Agenda

8:30 - 9:00: Check in for Live Attendees

8:50 - 9:00: Check in for Virtual Attendees

9:00 – 9:15: Introduction and Logistics

9:15 – 10:00: [Environmental DNA Applications for Monitoring of Ecosystems.](#) *Nathaniel Marshall, Stantec, Inc.*

10:00 – 10:45: [Environmental DNA QA/QC in the Laboratory.](#) *Katy Klymus, U. S. Geological Survey.*

10:45 - 11:00: Break

11:00 - 11:45: [Planning, Sampling, and Understanding Your Results.](#) *Alison Watts, University of New Hampshire.*

11:45 - 13:00: Lunch on Your Own

13:00 - 13:30: **Assessing Vertebrate Biodiversity across the Chesapeake Bay using Environmental DNA Metabarcoding.** *Lauren Rodriguez, University of Innsbruck.*

13:30 - 14:00: [Insights into using eDNA to Sample Benthic Macroinvertebrates.](#) *Robert Hilderbrand, University of Maryland Center for Environmental Science.*

14:00 - 14:15: Afternoon Break

14:15 - 14:45: [The Chesapeake Bay Barcode Initiative and Anadromous Fish Monitoring.](#) *Matthew Ogburn, Smithsonian Environmental Research Center.*

14:45-15:30: **Roundtable Discussion and Wrap Up.** A discussion to identify data needs, methodological challenges, new applications, questions to ask when procuring these analytical services.

15:30: Adjourn

[Literature Cited by Presenters](#)