



Chesapeake Bay Program's (CBP)
Scientific and Technical Advisory Committee (STAC)
STAC Topical Meeting | Virtual
April 30, 2026

***AI and Machine Learning for Chesapeake Bay Science and Management:
Opportunities, Constraints, and Next Steps***
[Meeting Webpage](#) | [RSVP](#)

Thursday, April 30th

- 1:00 pm** **Meeting Introduction** – *STAC Chair Bill Dennison (UMCES), Vice Chair Erin Letavic (HRG)*
- 1:05 pm** **Setting the Stage** – *STAC Vice Chair Erin Letavic (HRG); Facilitator, Lara Fowler (PSU)*
Provide background on the current landscape of AI/ML in environmental science and management and set the discussion in the context of STAC's advisory role to the Chesapeake Bay Program. *Where can AI/ML be meaningfully and responsibly implemented to support Chesapeake Bay decision-making, management, monitoring, and communication, and what conditions need to be in place for that implementation to be useful and credible?*
- 1:10 pm** **Expert Panel 1: Current and emerging AI applications in Chesapeake Bay science & management**
A panel of speakers working at the intersection of environmental science, monitoring, modeling, and management to highlight where AI/ML is already being applied, where it appears most promising, and where its value for Chesapeake Bay work is still uncertain.
- Recap of 2025 STAC AI/ML Workshop Recommendations – Qian Zhang (UMCES-CBPO)
 - Land Cover/Land Use Monitoring and AI – Sarah McDonald (USGS-CBPO)
 - Emerging AI/ML Applications in Chesapeake Bay Science and Modeling – Victoria Coles (UMCES)
- 1:35 pm** **Panel Q&A**
- 1:50 pm** **AI for Identifying BMP Opportunities on Farms** – *Alex Echols (Campbell Foundation) and John Dawes (The Commons)*
- 2:15 pm** **10-minute Break**
- 2:25 pm** **Expert Panel 2: Using AI responsibly in practice: opportunities, tradeoffs, and guardrails**
This panel looks at how AI may be used in real-world environmental and agency settings, alongside the risks, limits, and conditions that should shape its use. Discussion will include operational applications, public-facing decision processes, stakeholder needs, and the guardrails needed to support responsible implementation.
- Bay in the Balance Reflections: AI, Technology, and Data Management – Matt Royer (Penn State Agriculture and Environment Center)
 - AI and Public Comments: Concerns, Hopes, and Current Uses – Brian Erickson (Oregon State University)
 - Implementation of Digital Water at HRSD – Charles Bott (HRSD)
- 2:50 pm** **Panel Q&A**
- 3:00 pm** **Breakout Groups**

Participants will break out into small discussion groups.

3:30 pm

Breakout Group Report-out & Synthesis

Each breakout group will briefly report key points from its discussion. Meeting facilitator will synthesize common themes across groups and note areas of convergence or unresolved tension.

Facilitated Plenary Discussion

Full-group discussion to reflect on key takeaways from the panels and breakout groups and consider what practical, near-term actions may be most valuable.

3:55 pm

Wrap-Up and Next Steps – *STAC Chair Bill Dennison (UMCES)*

4:00 pm

Adjourn