



Chesapeake Bay Program's (CBP)
Scientific and Technical Advisory Committee (STAC)
Workshop – May 11, 2022

**Advancing Monitoring Approaches to Enhance Tidal Chesapeake Bay
Habitat Assessment on Dissolved Oxygen Assessment**

Virtual Meeting

[Workshop webpage](#)

Wednesday, May 11th

[Register in advance](#)

****Exact Times Are Subject to Change****

- 9:00 am** **Welcome, Introduction and Overview of Workshop Goals** – *Peter Tango (Chair, USGS)*
- 9:05 am** **Overview of Workshop Content and Goals** – *Peter Tango (USGS)*
- 9:30 am** **Existing Dissolved Oxygen Criteria Assessment for Chesapeake Bay** –
Richard Tian (UMCES), Qian Zhang (UMCES), Peter Tango (USGS)
Tian, Zhang, and Tango will present the dissolved oxygen criteria assessment methods and example output.
- 10:00am** **Future Criteria Assessment Protocol Framework Addressing All Time Scales of Chesapeake Bay Dissolved Oxygen Criteria** – *Gary Shenk (USGS)*
Shenk will provide a framework that recognizes the new high temporal frequency dissolved oxygen data inputs of the evolving hypoxia monitoring network and the process for application to evaluate water quality criteria attainment with output from the 4-D interpolator.
- 10:20 am** **Options for Assessing Dissolved Oxygen Criteria** – *Dong Liang (UMCES)*
Dong has been working on a spatial sampling method to improve assessment efficiency based on numerical simulations, this approach may be applicable to dissolved oxygen criteria assessment to address the full range of time duration criteria.
- 10:40 am** **Group Discussion**
Participants will discuss preferred methods, research needs, monitoring support suggestions, and management and policy requests.
- 11:00 am** **Break**
- 11:10 am** **4D Interpolator: Design Considerations and background** – *Rebecca Murphy (UMCES)*
Murphy will describe the requirements for a new interpolator and give a brief introduction to the approach being tested for interpolating daily DO in space and time.
- 11:20am** **Advances in the Development a New 4D water quality Interpolator for Chesapeake Bay** – *Elgin Perry (UMD)*
- 11:50 am** **Group Discussion**
Participants will examine considerations regarding progress and next steps for research

needs, monitoring needs, management and policy needs for adopting and implementing the 4D interpolator.

12:10 pm **Lunch**

12:40 pm **Investment in New Hypoxia Monitoring Network —**
Peter Tango (USGS), Bruce Vogt (NOAA), Jay Lazaar (NOAA), Kevin Shabow (NOAA)
Hypoxia Collaborative Team members will speak to supporting short duration criteria assessment and discuss the two current open water stations and eight new proposed stations.

1:00 pm **Prediction of Dissolved Oxygen Concentration in the Chesapeake Bay Using Deep Learning –** *Guangming Zheng (NOAA)*

1:30 pm **Breakout Discussions on Monitoring, 4D and Criteria Assessment**
Participants will meet in small groups to discuss workshop recommendation development on needs for research, monitoring, management and policy.

2:00 pm **Breakout Group Report-out**

2:10 pm **Adjourn**