Criteria Assessment Protocol Workgroup (CAP) Meeting

Thursday, July 6, 2023
10:00 AM – 12:00 PM

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Meeting Materials
This meeting will be recorded for internal use to assure the accuracy of meeting notes.
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AGENDA

10:00 AM **Welcome, Introductions & Announcements – Peter Tango** (USGS), Chair

Upcoming Conferences, Meetings, Workshops and Webinars

- Chesapeake Studies Conference – September 15-16, 2023, Salisbury University, Salisbury, MD.
- Potomac Conference – September 21, 2023, Lorton, VA.
- Virginia Water Monitoring Conference – September 26, 2023, Henrico, VA.
- Chesapeake Watershed Forum – November 3-5, 2023, Shepherdstown, VA. Session proposals were due June 11. Poster proposals are due July 28.
- CERF 2023 Conference: Resilience & Recovery – November 12-16, 2023, Portland, Oregon.
- National Conference on Ecosystem Restoration – April 14-19, 2024, Albuquerque, New Mexico. Abstracts are due September 1, 2023.

10:10 AM Considerations on creating temperature-adjusted dissolved oxygen criteria – *Peter Tango (USGS)*

Rehabilitating dissolved oxygen levels in the bay has been a management target for bay health. Goals were set for the TMDL such that sufficient management practices would be implemented to affect bay water quality to meet published criteria for supporting the survival, growth and

reproduction of living resources. In the last decade it is clear that the bay is experiencing rising temperatures. Warmer waters hold less oxygen than cooler waters. Therefore, there is a question about giving consideration to adapting the criteria to be temperature-corrected or temperature adjusted. However, methods of deriving dissolved oxygen criteria have historically landed on the sensitivities of the 4 most sensitive fish and or shellfish species in the system. Technically, unless one of those species goes extinct in our bay, we have no living resource basis to change the criteria. However, more than one consideration may be given behind criteria setting. Our discussion is to consider what analysis, and what product the CAP WG might put together (e.g., "white paper") supporting recommendations to keep existing criteria while acknowledging warming temperatures that are slowing bay response to management, or, offer an alternative involving updating the dissolved oxygen criteria with an accounting of temperature effects.

10:40 AM Beyond 2025 – Considerations for retaining or revising the Water Quality Monitoring and Assessment Outcome language of the 2014 Watershed Agreement – *Peter Tango (USGS)*

Peter will lead a discussion of revising the language for the WQSAM Outcome in the 2014 Watershed Agreement, in consideration of the Beyond 2025 efforts and potential to update Goal and Outcome language.

11:20 AM Developing decision rules on dissolved oxygen criteria attainment using 4-D interpolator output – *Peter Tango (USGS)*

Existing decisions rules for assessing the dissolved oxygen 30-day mean criterion attainment use the CFD with a 10% allowable exceedance curve compared with a 3-year assessment curve. The assessment is based on monthly means using 1-2 samples per month and one or more stations per segment per designated use. The new hypoxia monitoring network is starting to deliver water column data at 10 minute intervals for 144 data points per day per depth increment (e.g., per meter), and in a perfect world we get 4320 data points per meter every 30 days. However, these new data streams will also serve to assess the 7-day mean, 1 day mean and instantaneous minimum criteria. There are no assessment curves available for assessing the 7-day and 1-day means, and there will be thousands of IM comparisons. Further, we may consider again rolling assessments on hourly or daily time steps compared with 30-day time steps. The 4D interpolator is being designed to use simulations to develop statements on probability of attaining a criterion. USEPA (2017) included this concept for conditional probability of attainment, though the method has not been adopted to date. Early discussions are needed here to set the stage and consider developing a proposal regarding the use of, and values for, probability thresholds that decide attainment/nonattainment for our criteria attainment assessments.