



Chesapeake Bay Program
SCIENTIFIC AND TECHNICAL ADVISORY COMMITTEE
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July 19, 2017

RE: STAC Review of 2017 Water Quality Criteria Technical Addendum

Nicholas DiPasquale, Chair, Chesapeake Bay Program Management Board
U.S. Environmental Protection Agency
410 Severn Avenue, Suite 109
Annapolis, MD 21403

Cc: Management Board; Scientific Technical Assessment and Reporting (STAR); STAR
Criteria Assessment Protocol Workgroup; Water Quality Goal Implementation Team

Dear Director DiPasquale,

I am pleased to provide you with the attached STAC report for your consideration: *STAC Criteria Addendum Review: Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and Its Tidal Tributaries – 2017 Technical Addendum*. This report outlines the results of the Chesapeake Bay Program (CBP)-requested and STAC-sponsored independent review of the 2017 technical addendum, which provides refinements and clarifications to the previously published Chesapeake Bay water quality criteria assessment procedures.

Since 2007, the Criteria Assessment Protocols (CAP) Workgroup under the Scientific, Technical, Assessment, and Reporting (STAR) team, has provided a forum for the Chesapeake Bay Program partnership to ensure the development and implementation of consistent Bay-wide water quality criteria assessment procedures, factor in new scientific findings, and address and resolve issues. Several addendum documents have been published since the foundation document defining Chesapeake Bay water quality criteria and recommended implementation procedures for monitoring and assessment was published by the EPA in 2003.

The STAC review panel was tasked with evaluating the latest addendum document by examining previously undocumented features of the present procedures (as well as several refinements and clarifications), through five charge questions for each chapter in the document. Specifically, the panel addressed questions regarding 1) the overall appropriateness and justification of the approach taken, 2) the clarity of the document in providing a complete set of guidance for assessing water quality standards attainment, 3) the scientific rigor of the methods used, and 4) provided recommendations to the CBP about potential future enhanced criteria-assessment procedures.

Reviewers commented on the clarity of the documentation, and provided many specific suggestions for making each chapter stronger, more defensible, and easier for future readers to

understand. Overall, the panel finds that the approaches taken in each chapter are generally appropriate and necessary, and will certainly lead to an assessment of water quality attainment that is protective of aquatic life. However, the panel was concerned that in some cases not enough detailed information was provided in the documentation to allow two independent readers to implement the procedures identically.

The panel identified key suggestions for improvement for each chapter. For example, in the chapter on dissolved oxygen criteria, the panel was concerned about the potential disincentive for collecting high frequency data, and the lack of information on time/depth bias. Additionally, definition of the three Bay zones differed within the document, with zone 3 sometimes referred to as the “Tributaries of Tributaries” zone, and other times referred to as “Isolated waters off of the mainstem Chesapeake.” In general, the contents of Chapter II seemed to conflict with Chapter IV, with different zones being used in the two different chapters. The panel’s report also identifies shortcomings of the existing benthic assessment tool. Given the poor performance of the attempted update, the panel believes other approaches should have been explored.

We hope the Management Board, Goal Implementation Teams, and various workgroups find the specific suggestions outlined in this review report to be useful, and we look forward to your feedback. STAC respectfully requests a written response from STAR’s Criteria Assessment Protocol Workgroup by October 19, 2017.

Please direct any questions you may have about this report and its recommendations to Rachel Dixon, Coordinator of the Chesapeake Bay Program’s Scientific and Technical Advisory Committee, and Marjy Friedrichs (Virginia Institute of Marine Science), chair of the review panel.

On behalf of the entire STAC, thank you again for your consideration, and we welcome any opportunity to continue to work with you on this matter.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lisa Wainger', with a stylized flourish at the end.

Lisa Wainger
Chair, Chesapeake Bay Program's Scientific and Technical Advisory Committee