Chesapeake Bay Program
SCIENTIFIC AND TECHNICAL ADVISORY COMMITTEE
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http://www.chesapeake.org/stac/

September 23, 2013

RE: STAC Oyster Aquaculture Review Report

Nicholas DiPasquale, Director, Chesapeake Bay Program (CBP)
U.S. Environmental Protection Agency
410 Severn Avenue, Suite 109
Annapolis, MD 21403

Cc: Management Board; Sustainable Fisheries; Communications Workgroup; BMP Verification Committee.

Dear Mr. DiPasquale,

Please see the attached STAC review report requested by the CBP Management Board entitled, "Evaluation of the Use of Shellfish as a Method of Nutrient Reduction in the Chesapeake Bay." This report provides a summary of a review of a recent study by Mann and Newell (2012), as well as other relevant information on the potential use of shellfish as a method of nutrient reduction in Chesapeake Bay. The report also includes specific results identified by the review panel. The results of STAC's review are summarized in six findings.

1. Nitrogen content of oyster soft tissue and shell can reasonably be estimated as 8.2% and 0.2% of dry weight, respectively.
2. Phosphorus content of oyster soft tissue and shell can reasonably be estimated as 1.07% and 0.06% of dry weight, respectively.
3. High variability in predicting oyster growth and survival in aquaculture necessitates that estimates of nutrient removal be based on actual harvest data (oyster dry weight) multiplied by the nutrient percentages above.
4. Burial rates for nutrients associated with biodeposits are not currently known.
5. Measured denitrification rates associated with oyster aquaculture have not revealed any enhancement above background levels.
6. Denitrification rates associated with oyster reefs typically exceed background levels, but are highly variable among locations and seasons.

The primary implications of these findings for the development of best management practices (BMPs) in oyster aquaculture related to nutrient reduction is the need for additional information related to practices or conditions that can lead to enhanced denitrification. Although enhanced denitrification has been observed in association with oyster reefs, the effect has been highly

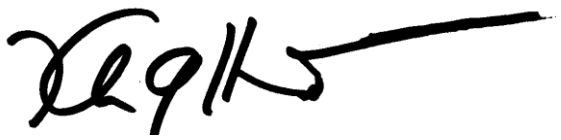
variable and it currently is not possible to provide reliable rates for inclusion in the TMDL implementation process without direct measurements on individual reefs.

STAC respectfully requests a written response to the above specific findings from the CBP Management Board Chair by Monday, November 25, 2013.

Please direct any questions you may have about this report and its recommendations to Natalie Gardner, the Chesapeake Bay Program's Scientific and Technical Advisory Committee Coordinator, and lead review panel member Dr. Mark Luckenbach of the Virginia Institute of Marine Science.

On behalf of the entire STAC, thank you again for considering these findings, and we look forward to working with you closely on this in the future.

Sincerely,



Kirk Havens
Chair, Chesapeake Bay Program's Scientific and Technical Advisory Committee