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

June 16, 2014

RE: STAC 2014 EC Report

Governor Martin O'Malley, Chair, Chesapeake Bay Program Executive Council
State of Maryland
100 State Circle
Annapolis, Maryland 21401

Dear Honorable Members of the Chesapeake Bay Partnership Executive Council,

Your independent Scientific and Technical Advisory Committee is committed to providing you with robust scientific guidance in your efforts to restore and sustain the water quality and living resources of the Chesapeake Bay. With our 38 independent scientists from over a dozen universities, scientific organizations, and agencies, we welcome the opportunity to provide our scientific and technical expertise and to connect you to the most relevant and up-to-date information and resources that are available to inform decisions.

You are preparing to sign a new agreement that will chart the course of management and restoration for the Chesapeake Bay watershed over the next decade. It is critical for the success of the program that this new plan be fully informed by the available science. Our ability to achieve our goals requires a sound technical rationale for choosing management efforts and careful monitoring of management effectiveness. In other words, "Do we have a good reason for doing this?" and "Can we show evidence that we should keep doing this?"

STAC recommends that the focus of accountability for the new agreement be on the direction of change that we desire to see in the Bay restoration efforts rather than on particular quantitative endpoints. Bay scientists recognize that restoration efforts typically generate an uneven trajectory towards a goal and that the responses of complex systems, such as the Bay's coupled watershed-estuary system, are highly uncertain. Because surprises – both positive and negative – are inevitable during Bay restoration, an appropriate course of action is to identify the direction we would like to head and continually monitor and adjust the management actions in order to continually increase the confidence in those actions over time.

STAC is committed to assisting your respective staffs and the Goal Implementation Teams in achieving your expressed goals using an iterative, evidence-based management process. Toward that end, STAC anticipates increasing requests for assistance as the management and monitoring

strategies are developed and as we approach the 2017 mid-point assessment. We hope the Executive Council will reaffirm its support of STAC's efforts to provide sound science that reflects adaptive management principles and serves to inform effective management strategies.

In conclusion, STAC will be pleased to support this renewed commitment to Bay restoration and is available to address your requests for scientific or technical synthesis and information, including briefing you or your staff on emerging issues. In addition, STAC's social scientists, including economists, psychologists, and communicators, are available to engage in developing strategies to incentivize or otherwise promote actions that achieve restoration goals.

We look forward to continued service in providing you and the citizens of the region with independent, objective, scientific and technical guidance.

Sincerely yours,

Kirk Havens
Chair, Scientific and Technical Advisory Committee

Existing STAC 2014 Workshops, technical reviews, and ad hoc workgroup activities

(as of June 2014)

- **CBP Bay Agreement -** assist GITs in management and monitoring strategy development, including additional workshops and reviews resulting from their needs; assist in establishment of meaningful adaptive management and accountability, review state of science in restoration activities.
- **Monitoring -** process for indicator and monitoring linkage to management strategies, outcomes, and goals of new agreement.
- **Behavioral Economics -** exploring applications of behavioral economics research to environmental policy-making in the Chesapeake Bay watershed.
- **Shallow Water Modeling -** model code and comparisons for shallow depths for oyster and SAV habitats to support Chesapeake Bay management decision-making.
- **Conowingo -** review of and guidance for the Lower Susquehanna River Watershed Assessment.
- **Forage Fish -** examination of existing data and research priorities.
- **Roadside Ditches -** improving roadside ditch management to meet TMDL water quality goals.
- **BMPs -** examination of the use of best professional judgment in effectiveness estimates and procedures for expert panel BMP efficiency estimates.
- **Phosphorus -** improving phosphorus management and modeling.
- **Monitoring -** BASIN long-term monitoring needs, Phase III.
- **STAR Indicators -** identify gaps related to new agreement.
- **Blue Catfish -** review of the feasibility of recommendations.
- **BMP Verification -** review of verification framework/protocols.
- **Multiple Model Technical Report -** protocols for meaningful multiple model comparisons and inclusion in the CBP regulatory framework.
- **State of Science -** evaluate and inform on the use of science in restoration decision-making and support adaptive management with the goal to promote transparency and critical, constructive analysis.
- **Modeling -** investigate ways to improve modeling accuracy and address uncertainty.
- **Social Science -** investigate how all the social sciences can help in restoration of the Bay including review of economic analyses and market-based programs.
- **Land-based effects on the Watershed -** assist in review of CBP policy and programs related to land use practices.