Scientific and Technical Advisory Committee
June 19-20, 2012
Quarterly Meeting Agenda
Location: DoubleTree Annapolis Hotel
Annapolis, MD
Meeting Website: http://www.chesapeake.org/stac/meeting.php?activity_id=205

June 19

Webinar Website:
https://chesapeakeresearch.webex.com/chesapeakeresearch/j.php?ED=191047092&UID=1086479112&PW=NMzUzMTQ0MjRm&RT=MiMxMQ%3D%3D
Password: doubletree
Toll-Free Number: 1-877-668-4493
Access Code: 737-349-034

9:30 am **Breakfast (Provided)**

10:00 am **Call to Order - Chris Pyke (USGBS)**

- Introductions
- Announcements
- Consent Agenda

10:15 am **Results of Data Analysis on Nitrogen, Phosphorus and Sediment Fluxes From the Susquehanna River to the Bay in Tropical Storm Lee, 2011 - Bob Hirsch (USGS)**

The water quality data collected by the USGS during Tropical Storm Lee (along with samples in other recent high flows in March, 2011 and September 2004) provide important new insight into the changing pattern of delivery of nitrogen, and especially phosphorus and sediment from the Susquehanna River to the Bay. What we observe for TN, TP, and Suspended Sediment is that for discharges in the range of about 200,000 cubic feet per second or more, the concentrations that we now observe are substantially higher than what was observed prior to about 2000. This suggests two things, a decline in the amount of deposition of particles at any given high discharge and a decrease in the critical discharge required for reservoir scour to take place. These changes have profound implications for the future trajectory of Susquehanna River inputs to the Bay unless dredging of the reservoir takes place. The issues of a full reservoir are essentially here now and are not just an issue for the future.

10:45 am **Tropical Storm Lee Effects Workshop Plan and Initial Findings - Peter Tango (USGS-CBPO)**

Tango will summarize key water quality and living resource assessment results reported by our Bay community during the April 2012 CBP-STAR Topical Meeting reviewing 2011 Storm Effects on the Watershed and Chesapeake Bay. An outline of an autumn 2012 meeting that is being planned to look at syntheses of the findings, expand the scope of presentations, and consider management implications of the findings will also be presented.

11:15 am **Chesapeake Bay Program GIT Decision Framework Update - Carl Hershner (VIMS)**

12:15 pm **Lunch (Provided)**

Water Quality Trading Panel

1:15 pm **Potential Economic Impacts of Trading on the Cost of Implementing the TMDL - George Van Houtven (RTI International)**

Nutrient credit trading offers an incentive-based approach for achieving pollution reduction goals at a lower total cost. In this study conducted for the Chesapeake Bay Commission, RTI estimated the potential costs savings from different trading scenarios when applied to the Chesapeake Bay TMDL. These scenarios include different limits on participation by pollution sources (wastewater facilities, and agricultural and urban sources) and on the geographic extent of trading (e.g., within a state, within a river basin, or throughout the entire watershed).

1:45 pm **A Regional Work In Progress: Trading Within the Chesapeake Bay Watershed - Joseph Maroon (Maroon Consulting, LLC)**

Nutrient credit trading is already here in the Bay watershed. Although the number of trades to date is small, two new drivers (the Bay TMDL and stormwater management) are likely to increase the amount of trading in the future. While there is certainly a wide range of opinions about trading, most knowledgeable persons agree that there are a number of emerging issues in existing programs that must be addressed if trading is to be successful and protective of water quality. Maroon's remarks will focus on several of the policy issues facing the Chesapeake region.

2:15 pm **Update on the EPA and CBP Trading and Offset Workgroup Work Plans - Nick DiPasquale (EPA-CBPO)**

DiPasquale will provide a short summary of EPA's review of state trading programs and the process for addressing its findings; the development and reconciliation of the Trading and Offsets Work Group (TOWG) and EPA Work Plans; the development of a comprehensive state oversight program; the establishment and use of Technical Memorandum that will serve as the basis for evaluating state Trading Baselines, Sector Growth and Offset Demonstrations, Protection of Local Water Quality, Credit Calculation Methodology, Trading Uncertainty Ratios, Net Improvement Offsets, Verification Requirements and other significant program elements.

2:45 pm **Panel Discussion**

3:15 pm **Break (Provided)**

Social Science Research Relevant to Chesapeake Bay Restoration

3:30 pm **Update from CBP's Social Science Action Team - Lucinda Power (EPA-CBPO)**

On May 9, 2012, the Chesapeake Bay Program Partnership's Management Board approved the creation of a Social Science Action Team to identify, evaluate, and develop opportunities for applying social science methods and research findings into the Chesapeake Bay Program Partnership. The overarching goals of this Action Team are to increase the awareness and demonstrate the value of the social science disciplines to the Partnership, and integrate social science principles and research findings into Bay Program priorities and policies.

4:00 pm **Understanding the Psychology of Bay Restoration Efforts- Poornima Madhavan (ODU)**

4:30 pm **Discussion of Social Science Integration into Restoration Approaches**

5:00 pm **Recess**

June 20

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https://chesapeakeresearch.webex.com/chesapeakeresearch/j.php?ED=191047602&UID=1086481787&PW=NOGMxZGJjNTli&RT=MiMxMQ%3D%3D
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Access Code: 739-188-633

8:00 am **Breakfast (Provided)**

Modeling Panel

Following multiple conversations with STAC leadership and staff, CBP managers are now beginning a Bay Program-wide consideration of the role of multiple models in the CBP. The EPA is currently examining the potential to fund a few prototype shallow water models this year, and has requested STAC's assistance in implementing a prototype multiple modeling strategy. Specifically, STAC has been asked to conduct workshops to help the CBP: (1) define elements that should be included in such a pilot project (i.e., model qualifications, outcomes, skill assessment) and (2) begin a discussion of the benefits and challenges of using multiple models in a regulatory environment. Friedrichs and Weller will discuss the two STAC workshop related to multiple models.

8:30 am **M3.1 Workshop Update: Using Multiple Models for Management in the Chesapeake Bay - A Shallow Water Pilot Project - Marjy Friedrichs (VIMS)**

8:50 am **M3.2 Workshop Update: Using Multiple Models for Management in the Chesapeake Bay - Implications for Regulatory Decisions - Don Weller (SERC)**

9:10 am **CCMP Activities - Raleigh Hood (UMCES)**

9: 30 am **Policy Implications of Using Multiple Models - Eileen McLellan (EDF)**

Multiple models are appealing to scientists because when they converge, they reduce uncertainty, and when they diverge they indicate model issues that need to be resolved. From the policy perspective, however, multiple models increase the difficulty of science communication, increase the perception of uncertainty, and provide a convenient framework for stakeholder demands to postpone action until uncertainty is resolved. Examples of the challenges posed by multiple models in an array of environmental science applications will be presented, and recommendations for improving the credibility of modeling in the Chesapeake Bay presented.

9:50 am **Break**

10:00 am **Weight of Evidence and Environmental Models - Pasky Pascual (EPA)**

When can it be said that the weight of scientific evidence supports a regulatory decision? Federal law requires that all regulatory decisions be based on rationality, even as most environmental laws demand that these decisions be based on science. When using models to rationally establish weight of evidence, regulators must demonstrate the following: (1) the modeling methods were appropriate to the system being modeled; and (2) the methods lead transparently and coherently to the inferences being proposed.

10:20 am **CBP Perspective on Multiple Models - Gary Shenk (EPA-CBPO)**

Shenk will briefly remind STAC members of the CBP's response letter to STAC's modeling letters from earlier in 2012, and will provide a short description of how multiple models might be useful in the watershed.

10: 40 am **Multiple Model Panel Discussion**

11:30 am **Proactive STAC Workgroup Discussions**

12:00 pm **Committee Discussion Period**

Workgroups will report back to the Committee what was discussed in their private sessions. The Committee will also consider ways to improve the workgroup format and structure.

12:30 pm **Lunch (Provided)**

1:00 pm **Adjourn**