



THE ABSTRACT

A Monthly Update from the Scientific and Technical Advisory Committee

May 2015

Recent STAC News

June 2015 STAC Quarterly Meeting

June 9-10, 2015

STAC is happy to announce that the location for the June 2015 STAC quarterly meeting will be Williamsburg, VA. STAC Staff went to Williamsburg, VA this week touring potential locations for the quarterly meeting. STAC will receive the draft agenda and all hotel information to prepare for this event on Monday, May 11th.

Comparison of Shallow Water Models for Use in Supporting Chesapeake Bay Management Decision-making

May 20, 2015

Virginia Institute of Marine Science (VIMS)

STAC is supporting one more workshop prior to the end of its fiscal year (May 31, 2015). The objectives of the workshop are (1) to assess the relative skill of multiple linked hydrodynamic/water quality models in terms of their ability to reproduce observations of multiple variables at select shallow water sites in the Bay; (2) to compare the modeled Submerged Aquatic Vegetation (SAV) computed from an empirical SAV model for each participating hydrodynamic/water quality model; and (3) to compare results of nutrient reduction strategies applied to these multiple estuarine models at these select sites. Ultimately this work, to be conducted for multiple specified shallow water sites within the Bay, will enable more effective adaptive management and accountability, and build increased scientific, management, and stakeholder community confidence in the tools used to support and inform collaborative decision-making.

You can find out more details about the workshop by following this link:

http://www.chesapeake.org/stac/workshop.php?activity_id=244

Results of STAC FY15 Workshop Proposals

At the March 2015 STAC quarterly meeting, STAC discussed the twelve workshop proposals submitted to STAC for support in FY15. STAC agreed to support the following workshops, in ranked order: (1) Assessing Uncertainty in the CBP Modeling System, (2) Conowingo Infill Influence on Chesapeake Water Quality, (3) The Development of Standardized Climate Projections for Use in Chesapeake Bay Program Assessments, (4) Comparison of Shallow Water Models for Use in Supporting Chesapeake Bay Management Decision-making, (5) Optimization for TMDL Implementation Planning, (6) Enhancing Capacity to Support the Chesapeake Agreement Outcome through Increased Integration of Regional Science and Management Efforts, and (7) Integrating and Leveraging Monitoring Networks to Support the Assessment of Outcomes in the New Bay Agreement. STAC Chair and staff plan to coordinate with proposers and CBP managers to see how STAC sponsored FY15 reviews and workshops can be coordinated in order to have the most impact moving forward, while also utilizing time most efficiently.

Upcoming STAC Events:

- **Shallow Water Modeling Workshop**
 - **Location:** VIMS, Gloucester Point, VA
 - **When:** May 20th, 2015
 - **Details:** http://www.chesapeake.org/stac/workshop.php?activity_id=244

- **June 2015 STAC Quarterly Meeting**
 - **Location:** Williamsburg, VA
 - **When:** June 9-10, 2015
 - **Details:** http://www.chesapeake.org/stac/meeting.php?activity_id=240

Future STAC Discussion Issues

STAC Staff would like to hear from you on emerging scientific issues for (1) inclusion in the newsletter, (2) discussion at future STAC meetings, or (3) other CBP-related meetings.

The issues below, identified by STAC members include:

- **Microplastics in the Chesapeake Bay**
 - The EB is supportive of the Microplastics activity (“Pursuing Pollution Prevention in the Chesapeake Bay: The Emerging Impact of Microplastics on the Ecosystem & Human Health”) being removed from the workshop category and is instead being supported by STAC as a state-of-the-science review/white paper, with the possibility of a follow-up workshop to present the results with policy makers.

- **Management Strategies (MS)**
 - STAC will invite the GIT Chairs and Carin Bisland (EPA) to the June STAC quarterly meeting to discuss lessons learned in the management strategy development process.

- STAC Chair asks that members review the drafts to determine if members are willing and able to help GITs in developing future workplans and appropriate monitoring and data analysis. Monitoring and analysis to detect a reaction, or absence of a reaction to a specific management action and the underlying uncertainty associated with the action is something in which STAC can help provide guidance.
- Management Strategies expected to be completed by June 30.
- **Future STAC Suggested Topics for Quarterly Meetings**
 - Stream Restoration Effectiveness
 - Coastal Acidification
 - Engagement in BMP Verification Activities
 - Conowingo Research Discussion

On the Horizon

- **Reports**
 - **Estimating Land Management Effects on Water Quality Status and Trends**
 - Embargoed copy released Friday, May 1st
 - Final report released and posted on the STAC website Friday, May 8th
 - Designing Sustainable Stream Restoration Projects in the Chesapeake Bay
 - Exploring Applications of Behavioral Economics Research to Environmental Policy-making in the Chesapeake Bay Watershed
 - Re-plumbing the Chesapeake Bay Watershed: Improving Roadside Ditch Management to Meet TMDL Water Quality Goals
 - Assessing the Chesapeake Bay Forage Base: Existing Data and Research Priorities

Please submit additional suggestions to STAC Staff Renee Kelly (KellyR@si.edu) in the coming weeks.

Key Events

- **May 2015 Water Quality Goal Implementation Team Conference Call**
Date: May 11, 2015
Time: 1:30 p.m. – 3:30 p.m.
Details: <http://www.chesapeakebay.net/S=0/calendar/event/22316/>
- **May 2015 Toxic Contaminants Full Workgroup Meeting**
Date: May 13, 2015
Time: 1:30 p.m. – 3:30 p.m.
Details: <http://www.chesapeakebay.net/S=0/calendar/event/22294/>
- **May 2015 Sustainable Fisheries GIT Executive Committee Call**

Date: May 18, 2015

Time: 1:00 p.m. – 3:00 p.m.

Details: <http://www.chesapeakebay.net/S=0/calendar/event/22471/>

- **May 2015 Urban Stormwater Workgroup Conference Call**

Date: May 19, 2015

Time: 10:00 a.m. – 12:00 p.m.

Details: <http://www.chesapeakebay.net/S=0/calendar/event/22420/>

- **May 2015 Trading and Offsets Workgroup Conference Call**

Date: May 20, 2015

Time: 10:00 a.m. – 12:00 p.m.

Details: <http://www.chesapeakebay.net/S=0/calendar/event/22341/>

- **May 2015 Local Government Advisory Committee Quarterly Meeting**

Date: May 20, 2015

Time: 6:00 p.m. – 8:00 p.m.

Details: <http://www.chesapeakebay.net/S=0/calendar/event/22440/>

- **May 2015 Local Government Advisory Committee Quarterly Meeting (Day 2)**

Date: May 21, 2015

Time: 8:00 a.m. – 4:00 p.m.

Details: <http://www.chesapeakebay.net/S=0/calendar/event/22440/>

- **May 2015 Agriculture Workgroup Conference Call**

Date: May 21, 2015

Time: 10:00 a.m. - 12:00 p.m.

Details: <http://www.chesapeakebay.net/S=0/calendar/event/22595/>

- **May 2015 Citizens Advisory Committee Quarterly Meeting**

Date: May 21, 2015

Time: 11:00 a.m. – 5:30 p.m.

Details: <http://www.chesapeakebay.net/S=0/calendar/event/22436/>

- **May 2015 Citizens Advisory Committee Quarterly Meeting (Day 2)**

Date: May 22, 2015

Time: 8:00 a.m. – 12:30 p.m.

Details: <http://www.chesapeakebay.net/S=0/calendar/event/22436/>

- **May 2015 Goal Implementation Team Chairs Meeting**

Date: May 26, 2015

Time: 1:00 p.m. – 3:00 p.m.

Details: <http://www.chesapeakebay.net/S=0/calendar/event/22365/>

- **May 2015 Land Use Workgroup Conference Call**

Date: May 28, 2015

Time: 10:00 a.m. – 12:00 p.m.

Details: <http://www.chesapeakebay.net/S=0/calendar/event/22601/>

- **May 2015 Scientific, Technical Assessment and Reporting (STAR) Team Meeting**

Date: May 28, 2015

Time: 10:00 a.m. – 1:00 p.m.

Details: <http://www.chesapeakebay.net/S=0/calendar/event/21559/>

- **May 2015 Management Board Meeting**

Date: May 28, 2015

Time: 10:00 a.m. – 3:00 p.m.

Details: <http://www.chesapeakebay.net/S=0/calendar/event/22166/>

*Please see the Chesapeake Bay Program Calendar for more specific event times and CBP conference line information: <http://www.chesapeakebay.net/calendar>.

STAR Updates

The Scientific Technical Assessment and Reporting (STAR) Team held a meeting on April 30th. STAR decided to provide more information to the Communications Workgroup in the future, so upcoming publications and projects can be provided during the monthly communications calls. The meeting also covered the Phase 6 Land Use dataset and a discussion of the opportunities and limitations of applying land cover data, change analysis, and forecasts to address Goal Team Outcomes.

The Indicator Assessment (IA) Team meets with Management Strategy (MS) leads to review the monitoring and assessment strategy for tracking status and progress towards outcomes and determine what needs can be met through STAR support. After meeting with about half of MS leads, monitoring program development has varied. Some MS outcomes have well established monitoring while others only have plans, but lack indicators. The IA team plans to continue meetings with MS leads recording data gaps, monitoring progress plans and indicators. The IA Team plans to meet with GIT chairs to prioritize needs and determine how to best assist the Goals Teams moving forward.

The Integrated Trends Analysis Team (ITAT) plans to have its next meeting the first week of June, 2015. Some of the topics covered, and progress made to date are as follows: update provided on progress in the development and refinement of novel statistical methods to advance the explanation of trends in water quality, preliminary results providing confidence intervals around the latest estimates of trends in nitrogen, phosphorus, and sediment loads from the river input monitoring (RIM) stations to the Bay were presented, a survey was conducted that solicited input from meeting participants on key topics to be addressed by the ITAT, and contacts have been generated and information was exchanged, resulting in new collaborations among several groups of researchers from different participating organizations.

If you have any questions regarding the BASIN process, or other STAR activities, please contact STAR Coordinator Peter Tango at ptango@chesapeakebay.net.

GIT Updates

***The following updates are provided by the Chesapeake Bay Program. Some GITs do not have recent updates to provide at this time.**

Sustainable Fisheries Goal Implementation Team (GIT 1)

The Fisheries Goal Implementation Team convened in mid-April to review public comments and make necessary edits to the draft management strategies. The GIT staff and Executive Committee are planning the next semiannual full Fisheries GIT meeting for June 1 – 2, 2015 at the Chesapeake Bay Foundation's Brock Center in Virginia Beach. The meeting is scheduled to cover multiple topics including but not limited to: climate change impacts on fish species, updates on EPA-GIT funding projects, and the 2015 Blue Crab Advisory Report. The Chesapeake Bay Stock Assessment Committee (CBSAC) and the blue crab management jurisdictions are working to finalize the draft terms of reference (TORs) that will guide the next blue crab benchmark stock assessment, scheduled to be complete in late 2016/early 2017. These final TORs are going to affect how much spending will be necessary to complete the assessment. The STAC Forage workshop chairs Tom Ihde (NCBO) and Ed Houde (UMCES) have finalized the workshop report and recommendations, and are waiting for the final review by STAC. Finally, the Fisheries GIT Executive Committee is scheduled to have their next monthly conference call on Monday, May 18th.

Habitat Goal Implementation Team (GIT 2)

The Habitat Goal Implementation Team, as well as the Fisheries and Watershed teams had a meeting April 21-23 titled, "Input Session for Strategies to Protect and Restore Chesapeake Fish, Wildlife, Habitats & Watersheds." This meeting was an informal, informational poster session which provided an opportunity to others to learn about the key components of the Chesapeake Bay Watershed Agreement Outcomes' Management Strategies. The focus was primarily on the strategies related to fishers, habitat, and healthy watersheds. This was also an opportunity for guests to provide feedback directly to Bay Program staff.

Water Quality Goal Implementation Team: WQGIT (GIT 3)

The Water Quality Goal Implementation Team (WQGIT) has approved the recommended updates to the land segments in the Watershed Model based on improved line work and precipitation data. The WQGIT have also received an update on the efforts to acquire a high resolution land cover data set for the Chesapeake Bay Watershed. The team began to discuss proposed revisions to the BMP Panel Protocol document. The WQGIT received a briefing of action and decision items that resulted from the March Agriculture Workgroup meeting. Five of the new Agriculture BMP panels approved official panel charges. UMCES provided the

WQGIT with an update on the new maps developed to show water quality trends in tidal waters. The WQGIT also received a briefing on a conceptual approach for integrating multiple sources of information to investigate drivers of water quality changes present by USGS. The WQGIT also held their full-day interim meeting on April 13th where Lucinda Power (EPA) discussed BMP Protocol revisions, members approved the formation of an Oyster BMP Expert Panel, and the Poultry Litter Subcommittee report was approved. Members also approved a list of agriculture land uses, while accepting the caveat that the pervious and impervious farmstead land uses may not be used if the imagery is not available to support them.

Maintain Healthy Watersheds Goal Implementation Team (GIT 4)

The Healthy Watersheds Goal Implementation Team also participated in the three day poster session, held April 21-23, focusing on the key components of the Chesapeake Bay Watershed Agreement Outcomes' Management Strategies. The Watersheds GIT held their meeting on April 30th. The meeting focused on the development of the three management strategies produced. The team discussed how to move forward with the responses from the public. The team also created a small *ad hoc* group to draft refinements to the management strategies specifically calling out the critical factors influencing to the management approaches. The team also selected GIT members to serve on the Cross-GIT tracking workgroup. The meeting ended with a discussion of the biennial work plans for each management strategy to be developed by December 2015. It will include: each key action, timeline for the action, expected outcome, partners responsible for each action, and estimated resources.

Fostering Stewardship Goal Implementation Team (GIT 5)

The Citizen Stewardship Outcome Team met, Monday March 16th, to kick off the development of an index that will provide a metric(s) for the citizen stewardship outcome. The Goal Team met again April 27th. At this meeting a rough framework for an indicator was shared, including research examples from related work, and priorities to shape the Chesapeake Citizen Stewardship Indicator. The Education Workgroup Leadership Team met and discussed implementation of the Environmental Literacy Indicator Tool for the 2014 – 2015 baselines. The full education group will meet on May 8th to discuss public comments on the Environmental Literacy Management Strategy. The Land Conservation Workgroups Partnership Steering Committee convened in late March identifying priority actions for 2015 – 2016. These potential actions include developing a priority map for land conservation that reflects shared resource values, pursuing the development of a mitigation strategy to minimize the impact of infrastructure development on conserved lands, and strong advocacy for Rivers of the Chesapeake LWCF funding and other funding policies.

Enhancing Partnering, Leadership, and Management Goal Implementation Team (GIT 6)

The Enhancing Partnering, Leadership, and Management Goal Implementation Team formed an action team to develop revision recommendations to present to the Management Board. Since the Principle Staff Committee's acceptance of the Governance Document as an interim version in July 2014, the Goal Team has been collecting issues to address in the next version of the

document. The *ad hoc* Action Team developed options and recommendations for addressing these issues with the help and input from the full Goal Team, Coordinators and Staffers from the other GITs, and the GIT Chairs.

Recent Bay News

Bay Journal Article: Flurry of bills take aim at plastics that persist in local waters

The microplastics topic was featured in the Bay Journal in January 2015, and again in the April 2015 edition. April's article by Whitney Pipkin was titled, "Flurry of bills take aim at plastics that persist in local waters." This article features valuable insight into what efforts have already taken place, what describes a microplastic, and what the future looks like for microplastics in the Bay. The Chesapeake Bay Commission has taken a huge interest in this upcoming topic, which this article indicates. The article also stresses that related bills to ban or reduce microplastics have "popped up" in 25 states and it is obvious that this will become a bigger issue. Maryland, in particular, was presented with a bill that would make it illegal for manufacturers to sell hundreds of products that include microbeads starting in 2018, which would give them time to create replacement products. That bill has been progressively advancing in legislature. Not only do microplastics remain in local waterways for years, but they are also potential carriers of toxic chemicals. The article provides examples of other bans and restrictions on pollutants in the watershed, which will likely act as outlines for future microplastic policies. STAC should keep an eye out for more relevant articles and research done in the Chesapeake Bay region to help support the upcoming discussions and white-paper review of microplastics.

To read the full article, follow this link:

http://www.bayjournal.com/article/flurry_of_bills_take_aim_at_plastics_that_persist_in_local_waters

Healthy Livestock, Healthy Streams Report: Chesapeake Bay Commission

The Chesapeake Bay Commission released their livestock stream exclusion report called "Healthy Livestock, Healthy Streams: Policy Actions to Promote Livestock Stream Exclusion", aimed at further reducing pollution and health problems within the watershed. This policy report focuses on its member states of Maryland, Pennsylvania and Virginia and all stakeholders who should continuously cooperate to protect our Bay. The Chesapeake Bay watershed is composed of approximately one quarter agriculture, which makes farming practices crucial to the health of the Bay. This report features a farming practice that not only protects the Bay, but also farmers. Livestock stream exclusion keeps livestock out of the streams while also protecting the streamside vegetation naturally reducing runoff and preventing bank erosion.

States are facing requirements to reduce excessive amounts of nitrogen, phosphorous and sediment from the Bay to meet Total Maximum Daily Load (TMDL) pollution limits. In the report, Russell Redding (Pennsylvania Department of Agriculture) states, "Our Bay restoration efforts should focus on those practices that don't just improve water quality, but also make sense

for the farm. Livestock stream exclusion is one of those practices.” The report features five policy actions that the Commission will take to help reach a long term goal of getting all livestock out of the Chesapeake Bay’s tributary streams.

To read the full report, follow this link: <http://www.chesbay.us/recent.htm>