



THE ABSTRACT

A Monthly Update from the Scientific and Technical Advisory Committee

April 2017

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Recent STAC News

March 2017 STAC Quarterly Meeting

March 14, 2017

Remote Meeting via Webinar

STAC hosted its final quarterly meeting of FY2016 on March 14, 2017. Due to inclement weather, the meeting was held via webinar and the agenda was reduced. The meeting featured several presentations around a theme of uncertainty and adaptive management: Lee Currey (MDE) updated STAC on the status of the decision-making approach for addressing the additional load reductions due to infill of the Conowingo reservoir; Chesapeake Bay Program (CBP) Director, Nicholas DiPasquale updated STAC on Midpoint Assessment progress, the biennial strategy review system (SRS), and the current budget for the EPA's CBP; Randy Dymond (VT) and Marcus Aguilar (VT) presented their research on the performance uncertainty of stormwater best management practices (BMPs); and Tom Richard (PSU) discussed creating a better system of incentives to achieve water quality goals, with a focus on bioenergy.

The March meeting also included a discussion of the results of the request for proposal (RFP) cycle for FY2017 workshops. One proposal, *'Integrating Recent Findings to Explain Water Quality Change: Support for the Midpoint Assessment and Beyond'*, was submitted in place of one of the requested peer

reviews for the Midpoint Assessment. All five proposals (see below) that were submitted were approved for funding, pending STAC Staff's confirmation whether STAC review funds could cover the cost of the review-replacement workshop. If we cannot use review funding, the STAC Executive Board (EB) will determine how our available workshop funds should be allocated in order to support each of the approved workshop proposals. This may mean a small percentage decrease in total requested funds for each of the workshops.

STAC agreed to support the following five workshops in FY17:

- Consideration of BMP Performance Uncertainty in Chesapeake Bay Program Implementation
- Integrating Recent Findings to Explain Water Quality Change: Support for the Mid-Point Assessment and Beyond
- Reassessing Habitat Conditions in Sub-estuaries of the Chesapeake Bay and Responses to Resource Management
- Monitoring and Assessing Impacts of Changes in Weather Patterns and Extreme Events on BMP Siting and Design
- Factors Influencing the Mainstem, Tidal, and Non-Tidal Fish Habitat Function in the Chesapeake Bay Watershed: Application to Restoration and Management Decisions

Please direct any STAC quarterly meeting questions or inquiries to STAC Staff, Elaine Hinrichs, hinrichse@chesapeake.org, or visit the [March 2017 STAC quarterly meeting webpage](#) for more information.

2017 STAC Quarterly Meetings Dates

- June 13-14
- September 12-13
- December 5-6

Activity Updates

STAC FY16 Workshops

STAC hosted a two day workshop on March 29-30, 2017 on ***Quantifying Ecosystem Services and Co-Benefits of Nutrient and Sediment Reducing Best Management Practices (BMPs)***. The objectives of this workshop were to develop the design of a Partnership framework for assembling information that allows for translation of a suite of eco-services (flood attenuation, recreational values, storm buffering capacity, open-space access and wildlife habitat) that can be considered alongside water quality in decision-making when implementing best management practices (BMPs). Results would be used by the jurisdictions in the development of their Phase 3 Watershed Implementation Plans (WIPs) to optimize achievement of nutrient/sediment load reductions while enhancing progress toward related outcomes in the 2014 Bay Watershed Agreement. Presentations and more information can be found [here](#).

The following three workshops will be held over the next month:

- 1) ***Legacy Sediment, Riparian Corridors, and Total Maximum Daily Loads (TMDLs) - April 24-25, 2017***
- 2) ***An Analytical Framework for Aligning Chesapeake Bay Program (CBP) Monitoring Efforts to Support Climate Change***
 - a) Blue Crab - Held March 28, 2017 at the University of Maryland Center for Environmental Sciences-Chesapeake Biological Lab, Solomons MD. More information can be found [here](#).
 - b) ***Submerged Aquatic Vegetation - April 25, 2017***
 - c) ***Oyster - April 26, 2017***
- 3) ***Understanding and Explaining 30+ Years of Water Clarity Trends in the Bay's Tidal Waters – Part II - May 2-3, 2017***

Part I of this workshop was held on February 6-7th at the University of Maryland Center for Environmental Science (UMCES) Chesapeake Biological Laboratory. Additional information can be found at the meeting webpage [here](#).

For more information on these workshops, contact STAC Coordinator, Rachel Dixon (CRC) at dixonr@chesapeake.org.

FY15 Workshop Reports

STAC is working to finalize five reports from the following FY15 workshops. The workshop steering committees are in the process of drafting reports that will be distributed to the Partnership over the next few months. Information regarding each workshop – including agendas, presentations, and reports (as available) – can be found on the [STAC workshop webpage](#).

- 1) ***Linking Wetland Workplan Goals to Enhance Capacity, Increase Implementation***
- 2) ***Assessing Uncertainty in the CBP Modeling System***
- 3) ***Cracking the WIP: Designing an Optimization Engine to Guide Efficient Bay Implementation***
- 4) ***Integrating and Leveraging Monitoring Networks to Support the Assessment of Outcomes in the New Bay Agreement***
- 5) ***Comparison of Shallow Water Models for Use in Supporting Chesapeake Bay Management Decision-making (Part I and II)***

For more information on the above reports, contact STAC Coordinator, Rachel Dixon (CRC) at dixonr@chesapeake.org.

Update on STAC Peer Reviews

STAC has four review activities currently in progress - arranged here in order of anticipated completion. All review reports (as available) can be found at: http://www.chesapeake.org/stac/stac_pubs.php.

Boat Wake Wave Impacts on Shoreline Erosion

The final report is currently under review by STAC membership and will be distributed to the Partnership in mid-April.

Chesapeake Bay Water Quality Criteria Addendum

The STAC Criteria Addendum review panel is still finalizing its review of the 2015 Chesapeake Bay Water Quality Criteria Addendum. The review panel suggested a clarifying re-write of the addendum and then requested additional revisions to the updated document. The CBP has provided a new and improved document and the panel is working to formally complete their review over the next month.

Follow-up Review: James River Chlorophyll a Criteria Re-evaluation

STAC completed the review request from CBP for a review of the James River Chlorophyll a Criteria Re-evaluation in October 2016. The review panel has been re-assembled to assess how well their findings and recommendations have been implemented in the revised chlorophyll criteria assessment methodology. The review will take place over the next month.

Phase 6 Chesapeake Bay Watershed Model

The panel have completed their review of the requested documentation and finalized a report of their recommendations. The panel is currently awaiting the remaining documentation on the approach to climate change and Conowingo infill from the Modeling Workgroup to complete their review.

Chesapeake Bay Water Quality/Sediment Transport Model (WQSTM)

STAC received the official review request from STAR's Modeling Workgroup on the Water Quality Sediment Transport Model in late November. STAC Staff are currently working with the CBPO to finalize the review approach, questions, and documentation by mid-May.

Upcoming Reviews

STAC is working closely with CBP representatives to plan for one additional STAC-sponsored independent scientific peer review between now and May 2017, to help inform the Partnership's 2017 Midpoint Assessment (MPA)

- 1) ***Approach being taken to factor climate change considerations into the 2017 Chesapeake Bay TMDL MPA***

For additional information regarding the reviews above, contact STAC Coordinator, Rachel Dixon at dixonr@chesapeake.org or visit the [STAC review webpage](#).

Key Events

There are a number of relevant conference calls and meetings to which STAC members should pay special attention. All upcoming CBP related events can be found on the [CBP meeting calendar](#). Each listing provides logistical information and meeting materials, when available.

STAR Updates

STAR, in coordination with the GITs, conducted an in-depth analysis of science needs of workplans for the Bay Agreement Outcomes. The science needs of the CBP GITs have expanded over the past 2 years to address the 2014 Agreement outcomes. The STAR team worked with the GITs to determine which needs can be met and identify remaining gaps. Some initial results include:

- The GITs are benefiting from several Federal Partners focusing support on selected outcomes.
- New partners have been involved to help address science needs, including the Eastern Brook Trout and Black Duck Joint Ventures.
- GIT funding provided by the CBP has also helped to address specific needs.
- The CBP Office resources have supported the needs of the 2017 MPA with the GIS Team also supporting the cross-goal team mapping project.

The STAR team will summarize the remaining needs and work through the Management Board (MB) on ways to address the remaining gaps. STAR will also become a forum for GIT preparation for the SRS Biennial Review, with dedicated meetings occurring two months prior to the SRS quarterly grouping meetings.

Phase I of the climate change monitoring needs analysis for the Stream Health, Fish Habitat, and Forage Fish Workgroups and the Black Duck Action Team is complete. The purpose of the project is to identify needs, priorities and solutions to address climate monitoring gaps for individual workgroups (see process document [here](#)). The Chesapeake Bay Trust (CBT) awarded the contract for the GIT funded project “Development of Climate Change Indicators and Metrics for the Chesapeake Bay Program” to the Eastern Research Group in January 2017. The project will be the first step in the process to develop a suite of indicators, which can be implemented over time, to measure and assess trends or “factors influencing” (i.e., physical climate drivers); ecological and societal response (i.e., impacts); and, programmatic progress toward building an effective response (i.e., adaptation).

The Status and Trends Workgroup (STWG) will use the Indicators Framework to evaluate how our existing indicators support our needs under the new Agreement, identify gaps, assist in developing new indicators, and ensure we have updated indicators for all of our Partnership products. At the last STWG meeting, the role of the workgroup in the newly begun SRS Biennial Review was discussed. There is an opportunity for the STWG to engage the work of other teams or committees such as STAC, specifically regarding the factors influencing indicators and how they could be used. Also, the STWG reviewed current CBP indicators that do not fit directly with the CBP Indicator’s framework or the Agreement

outcome, and how they will be presented on a new iteration of the chesapeakebay.net website. In summary, one indicator will no longer be tracked, five indicators will be placed in a parent indicator's data file, and seven indicators will be incorporated into an existing webpage. Click here for more information.

Development of the Watershed Model Phase 6 final version to be released for fatal flaws review on May 1 was reviewed at the February 14-15 Quarterly Review. Plans are also underway to help finalize STAC reviews of pieces of the modeling framework including the approach to simulation of the Conowingo and climate change.

If you have any questions regarding STAR activities, please contact STAR Coordinator, Peter Tango at ptango@chesapeakebay.net or visit [STAR's webpage](#).

GIT Updates

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

Sustainable Fisheries Goal Implementation Team (GIT 1)

The Fish Habitat Action Team developed a workshop proposal for STAC's recent RFP. The proposed workshop aims to evaluate factors influencing fish habitat function to develop qualitative criteria for prioritizing mitigation techniques and improving restoration and conservation efforts throughout the Chesapeake Bay Watershed. In addition, the Fish Habitat Action Team is working to prepare for the first SRS meeting where they will be presenting in May.

The Forage Action Team meeting met in February to learn about Maryland Department of Natural Resource's research and development of striped bass indicators and to hear an update on the GIT-funded study by University of Maryland Center for Environmental Science Chesapeake Biological Laboratory to investigate the drivers of forage action and provided input to improve the strategy.

The Invasive Catfish Task Force reconvened to assess the latest research on population, diet and fish movement in the Chesapeake Bay and to plan for an invasive catfish workshop later in the year to communicate these findings with managers and interested parties. The Chesapeake Bay Stock Assessment Committee held their quarterly conference call to consider additional analysis regarding this year's advisory report. Members are preparing for the Winter Dredge Survey results analysis and review in late April.

For more information on the Fisheries GIT, contact Kara Skipper (CRC) at kara.skipper@noaa.gov or visit the [Sustainable Fisheries GIT webpage](#).

Habitat Goal Implementation Team (GIT 2)

The Habitat GIT will hold their spring 2017 meeting on May 9 in Harrisburg, Pennsylvania. The meeting will focus on progress towards workplan actions, as well as updating members and partners on the application of regional tools for habitat demonstration projects. The Habitat GIT is working closely with the North Atlantic Landscape Conservation Cooperative (NALCC) to utilize Regional Conservation Opportunity Areas (RCOA) suite of decision-making tools to help inform conservation and restoration projects taking place with partner organizations.

The Wetland Workgroup is collaborating with the CBP's Communications Workgroup to refine the project scope of a GIT Funded project "Increasing landowner participation in wetland restoration programs - information access and program cross-training," with plans for the CBT to re-release the RFP in coming months.

The Submerged Aquatic Vegetation (SAV) Workgroup's GIT Funded project "Watershed group and citizen monitoring of fish habitat" is in the process of scheduling trainings for watershed groups to monitor SAV and forage fish. An existing citizen science app, Water Reporter, is being updated to include SAV and forage monitoring capabilities. The SAV Workgroup hosted a workshop on March 29 at the Chesapeake Bay Foundation focused on the SAV Survey and potential changes in design to help ensure continued monitoring under uncertain funding. Data users have been surveyed and an outcome of the workshop will be consensus on a path forward to continue SAV data collection in the Chesapeake.

For more information regarding the Habitat GIT, please contact Kyle Runion (CRC) at Runion.Kyle@epa.gov or visit the [Habitat GIT webpage](#).

Water Quality Goal Implementation Team (GIT 3)

For more information regarding the WQGIT, please contact Lucinda Power (EPA) at power.lucinda@epa.gov or visit the [WQGIT webpage](#).

Maintain Healthy Watersheds Goal Implementation Team (GIT 4)

For more information regarding the Healthy Watersheds GIT, please contact Renee Thompson (USGS) at rthompson@chesapeakebay.net or visit the [HWGIT webpage](#).

Fostering Stewardship Goal Implementation Team (GIT 5)

For more information regarding the Fostering Stewardship GIT, please contact Amy Handen (NPS) at ahanden@chesapeakebay.net or visit the [Fostering Stewardship GIT webpage](#).

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

The Enhancing Partnering, Leadership, and Management GIT hosted the Biennial SRS Kickoff Meeting on February 8-9, 2017 in Cambridge, MD. Representatives from the MB, GITs, Workgroups, Outcome leads, and external participants were in attendance. Key themes emerging from this meeting were presented to the Principals' Staff Committee (PSC) on March 1. The GIT continues to work with the MB and GIT leadership to develop key components of the Quarterly Progress meetings, set to begin in May 2017.

The Budget and Finance Workgroup has developed a set of financing questions to be included in the next round of biennial workplan development, and is working with the GITs, Workgroups, and Outcome leads to ensure that financing considerations are fully integrated into workplans and the SRS process. The Workgroup is also considering how the GIT Funding process can potentially be modified and improved for FY2017 and beyond, as the resource landscape may be subject to change.

The Local Leadership Workgroup plans to host a meeting in early April 2017 to review the report on local elected officials' information content needs and preferred delivery mechanisms developed by EcoLogix. The workgroup will take time to review and comment on the report before a final draft is submitted. This report will be used in the third phase of the local official watershed education project "Implementation Support for Local Official Watershed Education and Capacity Building."

For more information regarding the Partnering and Leadership GIT, please contact Greg Allen (EPA) at allen.greg@epa.gov or visit the [Enhancing Partnering, Leadership, and Management GIT webpage](#).

Farewell CRC, STAC Staff: Renee Kelly



After a little more than two years with the Chesapeake Research Consortium (CRC), Renee Kelly has decided to leave her position as STAC Staff. Kelly joined CRC in January 2015 after completing her Bachelor's degree in Environmental Science: Politics and Policy from University of Maryland College Park. Earlier in life, Kelly was convinced that she was destined for a career focused on helping others. Throughout high school, she struggled with the idea of choosing the best major to pursue in college, toying with the idea of nursing, dentistry, hospitality etc., but it wasn't until an

Advanced Placement Environmental Science class in high school when she decided to take another path. According to Kelly, “That Environmental Science class changed my whole perspective on life. Suddenly, I realized that I could pursue a major/career that would not only be fulfilling, but one that could potentially help everyone and everything in the world.” All of her passion and joy for the subject reverts back to her high school years, trekking through the school’s forest, measuring submerged aquatic vegetation (SAV) growth, and identifying features on various Bay fish.

Kelly started as STAC Staff with a primary responsibility of developing and planning for the quarterly meetings. Eventually, as staff roles changed, she was promoted to the primary leader of workshop planning in late 2016. Although only one workshop was held before her departure, many more workshops that she has helped guide will be completed before the end of March. Kelly’s favorite part of planning and organizing the workshops is “really getting to know a variety of researchers on a more intimate level.” Previously she planned for quarterly meetings, which are usually much larger than many of the STAC workshops. Kelly said, “I like to stay busy, so when I realized how much really goes into planning for multiple workshops at once, I was excited. It was so fun learning about each of the steering committee’s passions and projects, while also hearing anecdotal stories at the beginning of each conference call.”



Kelly has accepted a position at the National Socio-Environmental Synthesis Center (SESYNC) as their Travel and Event Coordinator. This position offers her the opportunity to use many of the skills that she obtained as STAC Staff, but also opens the door for many more skills to be learned. Kelly is “looking forward to meeting and interacting with a whole new network of researchers, especially on an international level”. “A lot of collaboration goes on at SESYNC”, Kelly mentioned, “so I hope to see some of STAC’s familiar faces”. When asked what she would miss most about CRC/STAC, Kelly said, “the amount of passion and undoubted concern for the Bay, the world, and all of it’s inhabitants; I’ve never met a group of people who care more about the good of the planet than these (STAC) people”. Kelly also said, “I’ll really miss our team in the CRC office, we’ve developed such a wonderful working relationship and also friendship, that will forever be invaluable to me!”