



# THE ABSTRACT

*A Monthly Update from the Scientific and Technical Advisory Committee*

January 2017

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## *Recent STAC News*

### December 2016 STAC Quarterly Meeting

**December 6-7, 2016**

**Crowne Plaza - Annapolis, MD**

STAC hosted its third quarterly meeting of FY16 on December 6-7<sup>th</sup> at the Crowne Plaza hotel in Annapolis, MD. STAC Vice-Chair, Brian Benham (VT) led this meeting in the absence of STAC Chair, Lisa Wainger (UMCES). Topics addressed at this meeting included: lurking issues of toxic contaminants, long-term trends in biogeochemical cycles, the extirpation of the black rail, and discussions on strategic approaches to Chesapeake Bay research. STAC members also discussed upcoming STAC review activities, and the Request for Workshop Proposals (RFP) and process documents were reexamined, revised, and approved during this meeting.

Visit the [December 2016 STAC quarterly meeting webpage](#) for more information.

### 2017 STAC Quarterly Meetings Dates

- **2017 STAC Quarterly Meeting Dates**
  - March 14-15<sup>th</sup>
  - June 13-14<sup>th</sup>
  - September 12-13<sup>th</sup>
  - December 5-6<sup>th</sup>

## **Other Activity Updates**

*The RFP for FY2017 STAC workshops was distributed on December 14, 2016. The RFP can be found online [here](#). Proposals are due to STAC Staff by January 25, 2017.*

### **STAC FY16 Workshops**

Planning is underway for the following four workshops to be held in spring 2017.

- 1) *Understanding and Explaining 30+ Years of Water Clarity Trends in the Bay's Tidal Waters – February 6-7, 2017 (Part 1)*
- 2) *Quantifying Ecosystem Services and Co-Benefits of Nutrient and Sediment Reducing Best Management Practices (BMPs)*
- 3) *Legacy Sediment, Riparian Corridors, and Total Maximum Daily Loads (TMDLs)*
- 4) *An Analytical Framework for Aligning Chesapeake Bay Program (CBP) Monitoring Efforts to Support Climate Change*

For more information on these workshops, contact STAC Staff, Renee Kelly (CRC) at [kellyr@chesapeake.org](mailto:kellyr@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](mailto:dixonr@chesapeake.org).

### **Update on STAC Peer Reviews**

STAC has five review activities currently in progress.

#### ***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. The review panel is in the process of working with the CBP to produce a new and improved document incorporating the panel's comments.

### ***Phase 6 Chesapeake Bay Watershed Model***

The panel has 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.

### ***General Additive Models (GAMs) Approach on Tidal Trends***

The panel completed their review in mid-December. The final report is currently under review by STAC membership and will be distributed to the Partnership in the next couple weeks.

### ***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 (WQSTM) in late November. STAC Staff is currently working with CBP Staff to finalize the review questions and documentation while a panel is assembled. Once the request is finalized it will be put forth for formal STAC approval; if approved the review will take place over the next two months.

### ***Boat Wake Wave Impacts on Shoreline Erosion***

STAC approved the Chesapeake Bay Commission (CBC) request for a STAC technical review of potential impacts of boat generated waves on shoreline stability and attendant ecosystem properties, and provide advice on available policy actions to minimize adverse effects. The panel completed their requested review in late October and have assembled a draft report of their recommendations. The report has been sent out for external review, and the panel aims to incorporate feedback and finalize the report over the next few months.

### **Upcoming Reviews**

STAC is working closely with CBP representatives to plan for approximately three additional STAC-sponsored independent scientific peer reviews between now and May 2017. These STAC reviews will help inform the Partnership's 2017 Midpoint Assessment (MPA).

- 1) ***Application of WRTDS to watershed WQ trend analysis and explanations***
- 2) ***Approach being taken to factor climate change considerations into the 2017 Chesapeake Bay TMDL MPA***
- 3) ***Phase 6 Land Use Hind Cast Methodology***

For additional information regarding the reviews above, contact STAC Coordinator, Rachel Dixon at [dixonr@chesapeake.org](mailto: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 held a meeting on December 1<sup>st</sup>, which focused on a discussion of Goal Implementation Team (GIT) needs from STAR. STAR took this information to discuss with Workgroup chairs in order to have these activities in their respective 2017 workplans. The meeting also included a STAC workshop theme brainstorming session to continue generating ideas regarding what GITs want to see addressed by a STAC workshop.

STAR is supporting the Cross-GIT Mapping project, utilizing monthly meetings to solicit feedback on mapping priorities from the GITs and next steps. On November 29<sup>th</sup>, the STAR Geographic Information System (GIS) team presented their initial versions of maps for restoration and conservation priority areas. The GITs provided feedback and discussed next steps for the project with STAR. STAR is also playing an active role in presenting indicator options for GITs in Outcomes of the Chesapeake Bay Agreement.

In November, the Citizen-Based and Nontraditional monitoring project group (aka the Chesapeake Monitoring Consortium (CMC)) reviewed their progress on the prioritization report, following up on findings of their Prioritization Workshop held October 13<sup>th</sup>. The CMC prioritization report was due to CBP on December 31<sup>st</sup>. Workgroup Coordinator, Peter Tango (USGS) provided a presentation on conceptual models that integrate the context for coordination of work with multiple Outcomes and driving the 2017 workplan elements.

The Climate Resiliency Workgroup (CRWG) completed several tasks related to the integration of climate effects in the MPA modeling and decision-making process. The CRWG developed a [briefing paper](#) outlining a list of possible options for incorporating climate considerations in Phase III Watershed Implementation Plans (WIPs), and also provided feedback on the climate data variables and scenarios for input into the Chesapeake Bay watershed and estuarine modeling efforts. Presentations on the climate modeling and policy options were provided to the Water Quality GIT (WQGIT), the Management Board (MB), and the Citizen Advisory Committee (CAC).

The Status and Trends Workgroup will use the [Indicators Framework](#) to evaluate how existing indicators support GIT needs under the new Agreement, identify gaps, assist in developing new indicators, and ensure there are updated indicators for all of the Partnership products. Workgroup members reviewed a final version of the [workplan](#) for the group, and discussed adding leads to workplan action items for 2017. The direction of the Diversity Indicator was also discussed, with plans to work with the Communications Workgroup to best visualize this information on Chesapeake Progress.

The Criteria Assessment Protocols Workgroup (CAP WG) completed the CBP requested 2016 CAP WG Chlorophyll Criteria Protocol Review in November 2016. The Virginia Department of Environmental Quality Regulatory Advisory Panel (VADEQ RAP) met on December 14<sup>th</sup>, to address the issue of James River chlorophyll criteria rule-making.

Development of the Phase 6 Beta 4 version of the Watershed Model is ongoing. The documentation for Beta 3 has been updated and can be found on the Modeling Workgroup's [website](#). The date for an upcoming webinar that will further explain changes to the Beta 3 version of the Watershed model is still to be determined.

If you have any questions regarding STAR activities, please contact STAR Coordinator, Peter Tango at [ptango@chesapeakebay.net](mailto: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 Sustainable Fisheries GIT hosted their [biannual full goal team meeting](#) on December 6<sup>th</sup> at the Chesapeake Bay Foundation's (CBF) Philip Merrill Environmental Center and December 7<sup>th</sup> at the CBP Fish Shack in Annapolis, MD. Meeting topics focused on oyster restoration, ecosystem services, and research in the Chesapeake Bay, such as the blue crab status, habitat and forage breakouts, and an update on Atlantic States Marine Fisheries Commission.

The CBP approved two Fisheries [GIT-funded projects](#), which are set to be awarded to bidders this month. These two projects include a study on oyster shell/habitat loss dynamics in the Bay and an evaluation of ecosystem factors on the blue crab population. In addition, the Fisheries GIT collaborated with the Habitat GIT for a project on citizen monitoring of SAV beds, which includes a pilot study component to test forage sampling gear.

Additionally, an oyster indicator and dashboard are in development by the Fisheries GIT, and was presented to the full GIT at the December 6-7<sup>th</sup> meeting. The dashboard seeks to communicate progress towards the [Oyster Restoration Outcome](#) of restoring 10 tributaries by the year 2025. This dashboard names all selected tributaries, quantifies the amount of completed in-water restoration acreage and target acreage and reports the progress of each tributary. The proposed indicator is acres of in-water restoration, defined as reef construction or seeding practices in tributaries. These metrics and communication tools will be available online at [Chesapeake Progress](#).

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

### **Habitat Goal Implementation Team (GIT 2)**

The Habitat GIT held their fall 2016 meeting on November 14<sup>th</sup>. Building upon the momentum created at their spring meeting, the Habitat GIT will be moving forward by coalescing the state actions and tools shared into a watershed-wide, landscape-scale vision to further the Chesapeake Conservation Design concept. The North Atlantic Landscape Conservation Cooperative (NALCC) Regional Conservation Opportunity Areas (RCOAs) project was presented with use case scenarios aimed at answering specific habitat conservation/restoration questions. The Habitat GIT plans to utilize and showcase the tools presented by initiating a conservation/restoration project with interested partner organizations within the next year.

An extension of the Habitat GIT meeting took place on November 15-16<sup>th</sup> for members of the SAV Workgroup and the Black Duck Action Team; Tetra Tech and the Climate Resiliency Workgroup presented decision-making workshops on their Climate Resiliency Assessment and Decision-Making Matrix project. The SAV and Black Duck groups walked away with a "climate-ized" workplan and are now equipped with the thought process required for climate-smart decision-making.

The Wetland Workgroup approved the Wetland Expert Panel's Final report with noted caveats and comments that were provided during the December 13<sup>th</sup> meeting. Four categories of wetland BMPs will

be included in the latest beta calibration of the Phase 6 Watershed Model: Creation, Restoration, Rehabilitation, and Enhancement.

The Atlantic Coast Joint Venture (ACJV) recently completed a series of maps for the CBP that identify high-density forage availability for black ducks in the Chesapeake Bay Watershed. Expert opinions and observations on black duck populations and the potential loss of wetland habitat due to climate change were factored into their creation. The maps will be used to identify areas within the Chesapeake Bay Watershed best suited for restoration, enhancement, and management for wintering, breeding and migrating black ducks. The Black Duck Action Team plans to use the maps to realize the amount of wetland by area (acres or hectares) necessary to accommodate 100,000 black ducks as identified by the Outcome for a more manageable approach to restoration.

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

### **Water Quality Goal Implementation Team (GIT 3)**

The Water Quality GIT (WQGIT) held conference calls on November 14<sup>th</sup> and 28<sup>th</sup>. During these calls, the WQGIT agreed to approve the Phase 6 Nutrient Management BMP Expert Panel report, the proposed responses to the STAC review of the Phase 6 Nutrient Inputs ('Scenario Builder'), and the proposed climate change assessment procedures. Click the link to view the actions and decisions from the November [14<sup>th</sup>](#) and [28<sup>th</sup>](#) meetings.

The WQGIT also held conferences call on December 12<sup>th</sup> and 19<sup>th</sup>. Meeting topics included approval of 6 BMP expert panel reports (Oyster Aquaculture, Wetlands, Conservation Tillage, Cover Crops, Manure Incorporation/Injection, and Animal Waste Management Systems) and approval of the Local Planning goals Task Force's final recommendations. Click [here](#) to view the actions and decisions from these calls.

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

### **Maintain Healthy Watersheds Goal Implementation Team (GIT 4)**

The Healthy Watersheds GIT (HWGIT) had an in-person meeting on November 18<sup>th</sup>. Potential STAC workshops, future GIT-funded projects, and shared GIT action items were a few topics discussed at this meeting. The HWGIT presented to the Communications Workgroup how to package and distribute communication products for GIT-funded projects. The HWGIT is also working with jurisdictions to determine if updates are needed to the healthy watershed database and map, and to develop a timeline and methodology to assess the current health status of the state-identified healthy waters and watersheds recognized for their high-quality and/or high ecological value. Finally, the HWGIT is working cooperatively with STAR to utilize added capacity related to science needs toward this goal.

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

### **Fostering Stewardship Goal Implementation Team (GIT 5)**

The Fostering Stewardship GIT held a meeting on November 1<sup>st</sup>. The meeting included an overview of the Cross-GIT Project: Identifying Geographic Areas that Benefit Multiple CBP Outcomes, and specific stewardship-related opportunities for engagement in this project. Additional meeting topics included: a

review of the Biennial Strategy Review Process, highlights from the Fostering Stewardship Workgroups and status of workplans, including a general sense of workplan activities, and an update on the newly funded 2017 GIT projects.

The Education Workgroup held a meeting on November 10<sup>th</sup>. Meeting topics included: an overview of the Goals and Outcomes of the Education Workgroup, overview of the Stormwater on School Grounds and School Grounds for Learning Projects, and discussion of the Environmental Literacy Indicator Tool (ELIT) and its Outcomes. The Education Workgroup Leadership met on December 14-15<sup>th</sup> to discuss the following: key objectives of the Meaningful Watershed Education Experiences (MWEEs) Guide; status of sustainable school projects, discussion with state representatives on progress towards workplan actions, including lessons learned/challenges/opportunities; and review of the CBP Environmental Literacy Indicators and the ELIT.

For more information regarding the Fostering Stewardship GIT, please contact Amy Handen (NPS) at [ahanden@chESApeakebay.net](mailto: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 has been working with GITs, STAR, Advisory Committees, and other members of the Partnership to develop a Biennial Strategy Review System (SRS), for 2017. The SRS is a two-year process during which the Partnership will review progress on each Outcome, identify what is working and what is not working, consider recent developments in the scientific, fiscal, and policy areas, and make necessary changes to workplans and Strategies as appropriate to improve effectiveness and efficiency in meeting commitments to the Agreement. Draft versions of the SRS have been presented to the Management Board (MB) and the Principal's Staff Committee (PSC) for review and comment over the last several months. The MB approved the concept of holding quarterly review meetings of progress made on the SRS. They further agreed that the process for biennial reviews should be simple and charged GIT 6 to develop a meeting review template for consistency.

The Budget and Finance Workgroup is working with the Communications Workgroup to develop a series of "Financing 101" and "Bay 101" short videos. These videos will be used for education and training purposes, in an effort to foster a more complete understanding of the relationship between financing strategies and Bay Program operations. The Workgroup is also working with the wider GIT 6 to fully integrate considerations of funding and financing into the Biennial SRS process.

The Local Leadership Workgroup and EcoLogix have been participating in local and regional meetings, where they have conducted short surveys using a series of questions aimed at understanding the information needs and preferred delivery mechanisms of local elected officials in the Bay watershed. The Workgroup plans to synthesize this information, as well as engage in targeted outreach to individuals, to gather responses from a diverse set of local elected officials.

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

## **Update: Chesapeake Research Consortium (CRC) Communication Plan**



STAC Staff will be using a new email account with the suffix “@chesapeake.org”. This change is reflective of the new communication and document sharing services being developed for the CRC. As the CRC office is still located at the Smithsonian Environmental Research Center (SERC) campus, the current @si.edu accounts will remain active and viable for the foreseeable future, but will begin to forward all mail to the @chesapeake.org addresses by January 6<sup>th</sup>, 2017.

Please modify your contacts to reflect our new addresses:

**Rachel Dixon** – [dixonr@chesapeake.org](mailto:dixonr@chesapeake.org)

**Renee Kelly** – [kellyr@chesapeake.org](mailto:kellyr@chesapeake.org)

**Elaine Hinrichse** – [hinrichse@chesapeake.org](mailto:hinrichse@chesapeake.org)

**Bill Ball** – [ballw@chesapeake.org](mailto:ballw@chesapeake.org)

**Melissa Fagan** – [faganm@chesapeake.org](mailto:faganm@chesapeake.org)

In addition, the next *CRC Quarterly* will be distributed some time in early February. Please [subscribe](#) if you haven't already done so! Click [here](#) to view the first edition of CRC Quarterly.