



**Chesapeake Bay Program's (CBP)
Scientific and Technical Advisory Committee (STAC)
December 7, 2021 Quarterly Meeting Minutes
Webinar Meeting**

Tuesday, December 7th

Attendance:

Members: Andy Miller, Ben Hayes, Bill Dennison, Brandon Jones, Chanceé Lundy, Chris Brosch, Craig Beyroudy, Deidre Gibson, Ellen Gilinsky, Eric Smith, Erin Letavic, Greg Noe, Hamid Karimi, Jason Hubbard, Jay Stauffer, Jeremy Testa, Katherine Bunting-Howarth, Kathy Boomer, Kenny Rose, Kirk Havens, Lara Fowler, Larry Sanford, Leah Palm-Forster, Lee Blaney, Leonard Shabman, Mark Monaco, Mike Runge, Shirley Clark, Tess Thompson, Tom Ihde, Tom Johnson, Weixing Zhu, Zach Easton

Guests: Adam Ortiz (EPA), Alexander Gunnerson (CRC), Alison Santoro (UCSB), Amy Goldfisher (CRC), Breck Sullivan (USGS), Daniel Read (UMCES), Erica Deale (The Mariner's Museum and Park), Gary Shenk (USGS), Guido Yactayo (MDE), Harry Zhang (WRF), Jackie Pickford (CRC), Jeni Keisman (USGS), Jennifer Starr (Alliance), Jess Blackburn (Alliance), John Clune (USGS), JK Bohlke (USGS), Karl Blankenship (Bay Journal), Katie Brownson (USFS), KC Fillippino (HR PDC), Kristin Saunders (UMCES), Lee McDonnell (EPA), Lew Linker (EPA), Loretta Collins (UMD), Marjie Zeff (AECOM), Mary Sketch (Virginia Soil Health Coalition), Melissa Fagan (CRC), Michele Drostin (American Sailing Association), Michelle Price-Fay (EPA), Nicole Cai (VIMS), Patrick Thompson (LCDR), Qian Zhang (UMCES), Rachel Felver (Alliance), Rebecca Murphy (UMCES), Sarah Benish (EPA), Scott Knoche (Morgan State), Sophie Waterman (CRC), Vanessa Van Note (EPA)

Administration: Meg Cole, Annabelle Harvey, Denice Wardrop

Call to Order, Announcements—Kathy Boomer (STAC Chair – FFAR)

Kathy Boomer (FFAR) called the meeting to order at 9:00 am. At the start of the Quarterly, Boomer acknowledged and welcomed new STAC Members Leon Tillman (USDA-NRCS), Brandon Jones (NSF), Shirley Clark (PSU), Erin Letavic (Herbert, Rowland & Grubic, Inc.), and Ben Hayes (Bucknell), to their first STAC Quarterly Meeting. Following this Membership announcement, Boomer requested a motion to approve the September 2021 Quarterly Meeting Minutes and the November 2021 Executive Board Meeting Minutes. After a recap of the minutes and with no discussion of comments, both documents were approved.

Regarding STAC announcements, Lara Fowler (PSU) briefed Membership on the ongoing Chesapeake Bay and Baltic Sea collaborations. From August 2019 to May 2020, Fowler lived in Sweden as a visiting scholar at Uppsala University on a Fulbright Scholarship. As part of this, she focused on how people were finding success on both water quality and quantity goals, including in the Baltic. This past October, Fowler helped lead the [2021 Baltic Sea Science Congress](#)

including a joint discussion about Baltic and Chesapeake Bay related issues such as nutrient dynamics, impacts of climate change, living resources and fisheries, and governance.

The STAC 2021 letter to the CBP Executive Council (EC) was submitted on December 1st, 2021. Boomer provided Membership and meeting participants with a brief overview of the letter, starting with a synthesis of project highlights including four FY2021 workshops, six published workshop reports, and a scientific review of the Bay Program's TMDL framework. STAC closed the letter with outlining recommendations and STAC commitments through FY2023.

Lastly, Boomer welcomed Adam Ortiz (EPA), new Region 3 Administrator, to the meeting. Ortiz requested a short meet-and-greet with STAC to introduce himself in this role and answer STAC Member questions. STAC Virginia Representative Ellen Gilinsky (Ellen Gilinsky, LLC.) appreciated Ortiz's local government-perspective, agreeing action can be most impactful on the local level. Kirk Havens (VIMS), the other STAC Virginia Representative, underscored Gilinsky's sentiment on reaching stakeholders 'on the ground' but also, the importance of packaging science for those groups to make recommendations actionable; Ortiz agreed communication is key in engaging with audiences.

DECISION: Motion approved to nominate Mike Runge (USGS) to the STAC Executive Board.
DECISION: The September 2021 Quarterly Meeting Minutes and November 2021 Executive Board Minutes are approved.

STAC Workshop Report-Out: Overcoming the Hurdle (FY20)—Loretta Collins (UMD)

Loretta Collins (UMD) reported out on the FY19 STAC Workshop titled, "[Addressing Implementation of Agricultural Best Management Practices \(BMPs\) Through a Social Science Lens](#)". The workshop convened virtually on July 13th, 14th, and 20th of 2021. The final report and recommendations are expected by early 2022. Outputs from the workshop emphasized the need to deliver resources more quickly to farms with less complexity and that all actions have an opportunity cost. Fowler, a member of the workshop Steering Committee, added identifying barriers and removing them to make the process easier for hesitant BMP-adopters is important; Gilinsky agreed and questioned if there is a solution to the paperwork farmers need to fill out as she has seen in her work in Mississippi that this additional effort can be a huge barrier to implementation. Fowler stated there needs to be a balance between accountability and efficiency – one suggestion to help close this gap might be working with trusted messengers such as local farmers, Ag-advisors, technical advisers, and others. On this point, Letavic stated she is excited to read the report and even possibly experiment with select identified outcomes as Letavic is currently working with nearly a dozen counties in Pennsylvania to implement similar action plans.

STAC Executive Secretary, Denice Wardrop (CRC), was impressed with the honest and actionable recommendations resulting from this effort and offered CRC-support and/or assistance in developing additional outreach products. Both Mike Runge (USGS) and Boomer recognized the potential for synergies in the findings and next steps coming out of this workshop and the FY19 workshop titled, "[Linking Soil and Watershed Health to In-Field and Edge-of-Field Water Management](#)."

Tributary Summaries: Current state of the science on connecting change in aquatic conditions to its drivers— *Vanessa Van Note (EPA), Breck Sullivan (USGS, STAR)*

Vanessa Van Note (EPA) presented on the Long Term Water Quality Standards (WQS) Attainment Indicator and tributary summaries including case studies in the Potomac and York tributaries. This presentation included materials that had been presented previously to the CBP Water Quality Goal Implementation Team (WQGIT) by Rebecca Murphy (UMCES/CBP), Breck Sullivan (USGS), and Jeni Keisman (USGS). Next steps include prioritizing updates to tributary summaries, introducing an “Insights on Changes” section to existing tributary summaries, and begin considering addressing climate change (i.e. rainfall duration and intensity) in tributary summary reports.

STAC Members were requested to provide feedback on prioritizing the tribute summaries and additional content helpful for contextualizing and understanding monitoring data. Sullivan invited Members to contribute the tributary summaries, especially the ‘Insights on Changes’ section. Lew Linker (EPA) discussed a plan to establish multiple tributary teams that would begin completing tributary simulations by next year to quickly study trends, management, and Bay Program progress towards 2025.

ACTION: STAC Members are requested to submit feedback on tributary summaries. You may either email STAC Staff directly with your comments and suggestions on the following questions:

- What Tributary Summary is the priority to update?
- What additional content should we include in the tributary summaries to better contextualize and understand the monitoring data and trends?

Comprehensive Evaluation of System Response (CESR)—*Denice Wardrop (CRC), Kurt Stephenson (VT)*

STAC Executive Director, Denice Wardrop (CRC), discussed the current status of the STAC Comprehensive Evaluation of System Response (CESR) report. To introduce newer STAC Members to CESR, Wardrop provided the group with a brief description of the report timeline and steps taken to this point. At this final stage, CESR is moving through the finalization process. Within two weeks of the December Quarterly Meeting, STAC Members are asked to review outline points and identify any that are not understandable in their current form, flag points that are objectionable for inclusion, and propose points for implications that appear missing. By late-March and after two versions are circulated amongst the Steering Committee, the Steering Committee will release the final CESR report to STAC.

As a federal employee, Runge questioned whether the review process would trigger additional peer-review requirements for agency workers but suggested listing CESR as a consensus report may circumvent such issues. Wardrop clarified the individual workgroup reports will be published as STAC reports similar to STAC workshops. If additional materials are extrapolated from those reports, that is at the discretion of the respective workgroup. Boomer emphasized

the request for feedback and proposed two options for authorship: STAC as the author or the CESR Steering Committee and other intimately involved individuals listed as authors. Also, Boomer suggested Members prioritize CESR report feedback and not simply list concerns. To Boomer's first comment, Andy Miller (UMBC) stated the Executive Board and CESR Steering Committee are clear in their desire to publish this report as a STAC consensus document. If this were to change, Miller claimed it would indicate a major shift in the final stages of the writing process; Boomer agreed that had been the goal since 'day 1' but is introducing this alternative scenario to help gather feedback from other STAC Members who may not have been as part of the process. Wardrop explained the process is designed with consensus as one of the primary objectives and instead stated an alternative may be framing the discussion as 'what can we do to get to consensus?'

ACTION: STAC Members are asked to provide comments on the process of finishing the report to Denice Wardrop (dhw110@psu.edu) by December 16th.

Update on Conowingo—*Kathy Boomer (FFAR), Andy Miller (UMBC), Larry Sanford (UMCES)*
As part of an ongoing conversation on Conowingo, Miller, Boomer, and Larry Sanford (UMCES) collectively presented on assessing Conowingo's 'super BMP power.' At the September Quarterly, STAC revisited its understanding of the Lower Susquehanna Reservoirs and their impacts on the Upper Bay to examine what additional knowledge has been generated since the [Lower Susquehanna River Watershed Assessment](#) (LSRWA) was published in 2016. In addition to this revisit, Deena O'Brien (Exelon) joined STAC in September to discuss the background of the Conowingo Dam and the new 50-year relicensing agreement.

Sanford presented concerns from Hydrologist Joel Blomquist (USGS) on the reservoir system as a whole. Blomquist believes the upstream reservoirs are more active in the dynamic equilibrium processes than previously understood. In addition to requesting enhanced bathymetry monitoring and research, Blomquist is concerned about dissolved ortho-phosphorus. From a STAC perspective, Sanford offered the following recommendations:

- Continue to inform the public understanding through appropriate unbiased outreach.
- Work with the Conowingo Watershed Implementation Plan (CWIP) team to evaluate proposed actions and monitoring needs, provide additional suggestions.
- Be prepared to consider specific actions in more detail through proposal/report review and or/workshops.
- Communicate/coordinate research opportunities to the scientific community.

A small group of select STAC Members will work with Karl Blankenship (Bay Journal) to fashion a Conowingo FAQ article. Other prior STAC involvement in Conowingo include the following: STAC Review of LSRWA (2014), USGS long-term analyses of sediment and nutrient flux, STAC Workshop on Conowingo Reservoir Infill (2016), UMCES Reports on Biogeochemistry, Geology, and Physics of Conowingo Reservoir and Upper Chesapeake Bay (2017), 2019 USGS analysis of orthophosphorus flux trends, and 2020 STAC comment and recommendation to Federal Energy Regulatory Commission (FERC) on the Exelon agreement.

Wardrop wondered what the unique role STAC could play in the overall Conowingo conversation without being redundant. Boomer suggested a holistic inventory and assessment of the research modeling done up to this point with a list of further recommendations for cost-effective monitoring strategies. For the most direct and effective outreach, Sanford suggested establishing an informal group within STAC that could function as a liaison to the CWIP Steering Committee and relay Committee comments; Gilinsky agreed. Wardrop suggested a technical review may be a good avenue for this endeavor as they are designed to provide a synthesis and summary of the state of the science quickly. Miller added the primary need for process studies is to understand the internal dynamics of the system which he had discussed with the Principals' Staff Committee (PSC) while STAC Chair at several PSC meetings.

With respect to a timeline, Gilinsky asked about request for Member feedback. Boomer replied the Maryland Department of the Environment (MDE) is about to undertake a dredging effort and plan to complete by spring. Gilinsky found it 'troubling' that monitoring has not been included and seconded Sanford's recommendation for a subset of STAC to interact with lawmakers immediately to press for a monitoring plan. Fowler agreed but underscored the need to advance the ball fundamentally and implement BMPs quickly, one way to do this could be to remove barriers through an activity such as a reverse auction. Further, Fowler said the dialogue around Conowingo should happen in tandem with those on the Pennsylvania/Upper Susquehanna to examine human behavior and BMP implementation as reservoir dynamics are studied.

[Reflections and Plans for STAC 2022-2024](#)— *Kathy Boomer (FFAR)*

Closing out the day, Boomer discussed Committee plans over the next two years and Membership met in breakout groups. Boomer proposed a 2021-2023 STAC agenda schedule with themed topics and suggested speakers. At upcoming meetings, Boomer would like to keep STAC business and other issues to a quarter of the meeting and the remainder dedicated to the respective theme. Gary Shenk (USGS) mentioned that STAC is on the Bay program Strategy Review System (SRS) schedule and from the Program perspective, it is important STAC continue to engage with the Overview in this way – a possibility could be to link up the themed Quarterly schedule with SRS topics; Boomer agreed.

Members met in 3 rounds of breakouts for 35 minutes each to discuss the following 'Round Robin Topics':

- Round Robin 1:
 - Introductions: What are you excited to contribute to STAC? What keeps you up at night?
 - CBP/STAC Leadership Opportunities?
- Round Robin 2:
 - Additional or alternative STAC priorities, strategies, and roles?
 - How can we continuously uphold commitment to DEIB?
 - Additional STAC responsibilities, strategies, and opportunities?
- Round Robin 3:
 - Other theme foci? GIT/CBP involvement? Preferred theme team?
 - Other meeting strategies?
 - Additional expertise needed?

After returning from the breakout sessions, STAC Members spoke about insights and suggestions from the three round robins. Fowler raised that STAC had originally pushed for the SRS process as a strategy to synthesize science needs and the Executive Board should take a closer look at building quarterly meetings in coordination with emerging science needs. In addition, Fowler highlighted Letavic's comment on the importance of soil health and its connection to concerns emerging from the Local Government Advisory Committee (LGAC). Finally, Fowler emphasized the need to be solutions oriented. Boomer committed to aligned the Committee schedule will tie with the SRS process and the CESR report moving forward. Reinforcing Fowler's comment, Sanford stated that speaking to solutions can combat fatigue in dealing with serious issues. On quarterly themes, Sanford recommended speakers meet with GIT and Cohort representatives before the meeting to build and open up dialogue.

On the topic of diversity, equity, inclusion, and justice (DEIJ), Chanceé Lundy (Nspiregreen, LLC) stressed the need for more alignment with issues other than increasing diversity on the Committee like flooding. Lundy suggested working with groups within the Program that speaks to these issues on the ground regularly such as the Citizens Advisory Committee (CAC).

ACTION: STAC Members are requested to complete a survey on STAC Next Steps 2021-2023 via QuestionPro by Monday, December 13th.

Wrap Up

The STAC [March Quarterly Meeting](#) will take place virtually on March 8th and 9th. The meeting will begin with a briefing on new land cover, land use and change data from the Chesapeake Conservancy and a report out on STAC workshop RFP FY22 results. In the afternoon on Day 1, STAC will hear an update from the Water Quality Goal Implementation Team (WQGIT) on proposed new changes to BMP review protocols and on the science needs of the Healthy watersheds and Aquatic Life cohorts. The first day will end with a report out on CESR, focusing on red flag concerns, an updated CESR timeline, reviews of authorship and communication strategies, and request for approval to move into the editorial phase of the document.

Day 2 will focus entirely on adaptive management and opportunities to advance CBP adaptive management going forward. Runge will introduce the concept of 'triple-loop learning' as a framework for discussion on how the Bay Partnership could adapt as it approaches, and looks past, 2025.