Chesapeake Bay Program's (CBP)
Scientific and Technical Advisory Committee (STAC)
June 11, 2020 Quarterly Meeting Minutes
Webinar Meeting

Thursday, June 11 Minutes

Attendance:

Members: Adel Shirmohammadi, Alix Fink, Andy Miller, Brian Benham, Bill Dennison, Chancee Lundy, Deidre Gibson, Ellen Gilinsky, Eric Smith, Greg Noe, Hamid Karimi, Jason Hubbart, Jeremy Testa, JK Bohlke, Kathy Boomer, Kirk Havens, Kenny Rose, Kurt Stephenson, Lara Fowler, Larry Sanford, Leah Palm-Forster, Lee Blaney, Len Shabman, Mark Monaco, Martin Lowenfish, Mike Runge, Tess Thompson, Tom Ihde, Tom Johnson, Tony Buda, Zach Easton

Guests: Isabella Bertani (UMCES), Jessica Blackburn (Alliance for the Chesapeake Bay), Karl Blankenship (Bay Journal), Katie Brownson (USFS), Mark Dubin (CBP), Shalom Fadullon (UDEL), Gary Felton (UMD), Leah Franzluebbers (FWS), Norm Goulet (NOVA), Bill Jenkins (EPA), Arianna Johns (VA-DEQ), Caitlyn Johnstone (Alliance), Lewis Linker (EPA), Rich Mason (FWS), Molly Mitchell (VIMS), Hadley Menk (NOAA), Megan Ossman (CRC), Regina Poeske (ORD), Gary Shenk (EPA), Suzanne Skelley (NOAA), Jennifer Starr (LGAC), Emily Trentacoste (EPA), Mark Trice (DNR), Rebecca Whiteash (PA-DEP), Joe Wood (CBF).

Administration: Denice Wardrop, Annabelle Harvey, Meg Cole

Call to Order, Announcements—*Andy Miller (STAC Chair – UMBC)*
Andy Miller (UMBC) called the meeting to order at 8:30 am. Miller requested a motion to approve the March 2020 Quarterly Meeting Minutes and the April 2020 Executive Board Meeting Minutes. Both documents were approved. Miller asked for member announcements, to which Kirk Havens (VIMS) reported that Carl Hershner (VIMS) has officially retired. Lara Fowler (PSU) informed STAC of her new role on the Scientific Committee organizing the Baltic Sea Science Congress to be hosted in June 2021 at Aarhus University in Aarhaus, Denmark. Fowler is leading a joint session on the Chesapeake Bay and Baltic Sea panel, where Ann Swanson (Chesapeake Bay Commission) is slated to be a keynote speaker. Finally, STAC Staff discussed plans for monthly and quarterly STAC newsletters to be circulated in Fall 2020. Denice Wardrop (CRC) described the effort as a providing STAC a space to continue outside and beyond official STAC activities.

DECISION: The March 2020 Quarterly Meeting Minutes and April 2020 Executive Board Minutes were approved.

Recap of STAC March 2020 Quarterly Meeting—*Andy Miller (UMBC)*
Miller recapped important takeaways from the March Quarterly Meeting which took place remotely on March 10th and March 11th, 2020. At the March Quarterly Meeting, Miller welcomed Lee McDonnell, the new Chief of Science, Analysis and Implementation Branch of the

Chesapeake Bay Program Office (CBPO) and provided a recap of the prior December 2019 Quarterly Meeting and January Principals' Staff Committee (PSC) Meeting. Scott Phillips (USGS) reported-out on the STAC Workshop Contaminants of Emerging Concern, Annabelle Harvey (CRC) on the FY2020 Workshop RFP results, and Denice Wardrop (CRC) and Gary Shenk (USGS) jointly on the new STAC workshop report recommendations protocol. This new workshop process, entitled "SPURR", is designed to streamline workshop finding effectiveness by connecting workshop steering committees with Chesapeake Bay Program (CBP) "champions" who will help close the loop on integrating recommendations within the Program.
STAC was updated on CBP science needs with presentations on the Stewardship Cohort by group representatives. The remainder of the afternoon was utilized for the ongoing STAC activity, *Achieving Water Quality Goals in the Chesapeake Bay: An Assessment of System Response and Science Needs* ("SGA"). After Kurt Stephenson (VT) presented on report logistics, Bill Dennison (UMCES) updated the membership on Estuarine Workgroup progress.

On the second day of the meeting, STAC heard from Caitlyn Johnstone (Alliance for the Chesapeake Bay) on outreach and communications resulting from STAC reports. Johnstone detailed the ways she is able to breakdown a STAC workshop publication into communicable articles for the general public. Finally, STAC considered potential topics to include in STAC's Letter to the Executive Council (EC).

Principals' Staff Committee (PSC) Update and Letter to the Executive Council
—Andy Miller (UMBC)
Miller recapped important takeaways from the May 2020 Principals' Staff Committee (PSC) Meeting, which discussed the themes of the 2020 Executive Council (EC) Meeting. The PSC adopted a new theme, the results of the COVID pandemic on watershed restoration and bay health. Although jurisdictions have felt challenges in both monitoring and enforcement due to COVID, the EPA stated they remain committed to the 2025 Bay Restoration Goals. As of the June 2020 Quarterly Meeting, Miller stated most halted monitoring had been reinitiated. Swanson advised the PSC to be proactive in utilizing any potential economic recovery efforts to enhance current Program goals, citing a current proposal in Congress for a 21st Civilian Conservation Corps, "if a wave is building, we need to have our surfboards ready." Noting the potential for a green workforce, Fowler emphasized the potential for social-distancing jobs in support of watershed restoration implementation and maintenance such as riparian buffer maintenance. Following this point, Adel Shirmohammadi (UMD) stated a major issue in best management practice (BMP) efficiency is a lack of workforce personnel to inspect and maintain BMP operations. Miller agreed, stating inspection and enforcement are professions that can be highlighted in this effort as individuals can be trained to perform these tasks.

Following an update on the PSC Meeting, membership reviewed STAC's drafted letter to the Executive Council due in mid-July. Understanding the serious impacts of COVID, the Executive Board reached out to the other CBP advisory groups, the Local Government Committee (LGAC) and the Citizen's Advisory Committee (CAC), to draft a combined statement on future Bay recovery under COVID. In this document, STAC included a statement of support of the CBP Diversity, Equity, Inclusion and Justice (DEIJ) statement.

ACTION: STAC Staff and the EB will review suggested edits to the letter to the Executive Council (EC). A finalized letter will be approved by the EB and distributed to the entire membership prior to submitting to the EC in late July.

STAC Workshop Report-Out: Freshwater Mussels—*Joseph Wood (CBF)*
Joseph Wood (CBF) discussed the STAC report entitled, *Integrating Freshwater Mussels with Chesapeake Bay Restoration*, which looked at the overlap in Chesapeake Bay restoration goals and freshwater mussel propagation. Major recommendations from the workshop included: improve the collective understanding of mussels through encouraging additional mussel surveys and analyzing current mussel distribution datasets, address research needs surrounding co-benefits and ecosystem services, and consider the impact of bay restoration on mussels when establishing the co-benefit network, providing edits on relevant outcomes under the Vital Habitats Goal, and restoring streams.

STAC members discussed the possibility for pollution-tolerant mussel propagation in areas of the Bay in need of additional filtration. Additional questions raised by STAC for possible future inquiry included examining the impact of runoff to mussels in urban watersheds.
Following the report summary, Caitlyn Johnstone (Alliance) informed STAC that the CBP Communications Office will be publishing an article on this report once it is finalized.

FY2020 STAC Workshop Proposal: Request to approve additional proposal
Annabelle Harvey (CRC) provided an overview on a fourth proposal received for the FY20 STAC workshop RFP entitled *Assessing the Water Quality, Habitat, and Social Benefits of Green Riprap*, co-chaired by Molly Mitchel (VIMS) and Rich Mason (USFWS) . The total funds requested for this proposal is $10,000. With $20,000 still available for FY20 workshops, STAC could fund this additional fourth proposal. Harvey presented the mean scores from STAC members' initial score sheets and feedback on each proposal. Overall, all four FY20 proposals were scored similarly by STAC.

Comments regarding this proposal raised the probability of FY20 workshops transitioning to a virtual format and suggested the workshop plan for this possibility. Other members recommended the Steering Committee include additional practitioners. Gilinsky made a motion to approve funding for Proposal #4, *Assessing the Water Quality, Habitat, and Social Benefits of Green Riprap*. Seconded by Mark Monaco (NOAA). Kirk Havens (VIMS) abstained. Motion carried.

DECISION: RFP (#4) *Assessing the Water Quality, Habitat, and Social Benefits of Green Riprap* was approved for funding.

ACTION: STAC Staff will send the proposers all STAC comments from the initial scoring and the June Quarterly Meeting.

Update on the Next Generation Stewards Cohort and Discussion of STAC Engagement on CBP Science Needs—*Emily Trentacoste (EPA)*

Based on feedback from CBP workgroup members, Emily Trentacoste (EPA) proposed shifting the current planned timetable of when Bay Program Cohorts report to STAC based on feedback from CBP workgroup members. The current agenda requires a quick turnaround by the groups, with the STAC Quarterly Meeting directly following the Management Board Progress Review. Trentacoste encouraged STAC members to call into upcoming Scientific and Technical Assessment and Reporting (STAR) meetings to participate in a more detailed discussion about science needs.

The planned Next Generation Stewards Cohort discussion will take place at the upcoming STAC September Quarterly Meeting and will cover three outcomes: environmental literacy planning for all students in the Bay region, continually increase student engagement through Meaningful Watershed Educational Experiences (MWEEs), and to continually increase the number of schools in the region implementing best management practices (BMPs). Trentacoste pointed STAC to Chesapeakebay.net/decisions to view the already-identified needs by cohort.

Trentacoste requested STAC feedback on the process of workgroups reporting to STAC at quarterly meetings in general, as well as understanding and identifying better ways for the CBP to engage with STAC on the science needs. Lara Fowler stated that as a researcher, it would be helpful to have a singular place for CBP identified science needs with individuals to contact for more information. Miller proposed matching STAC members with cohorts relating to their expertise and furthering this point, suggested incorporating diverse colleagues outside the CBP on these identified needs.

ACTION: STAC Staff will work with Emily Trentacoste (EPA), Andy Miller (UMBC), and Denice Wardrop (CRC) to identify STAC members best suited to engage with certain CBP cohorts. Meanwhile, STAC members are encouraged to visit Chesapeakebay.net/decisions to filter Chesapeake Bay Program (CBP) needs by cohort. Future CBP meetings are included on the CBP calendar available here: Chesapeakebay.net/what/calendar.

ACTION: STAC members are encouraged to visit the Scientific and Technical Assessment and Reporting's (STAR) Meeting page to help identify individuals with expertise suited to help fill CBP science needs but have not traditionally engaged with the Program.

EPA **ORD Connection to CBP Science Needs**

—Regina Poeske (EPA, Office of Research and Development)

Regina Poeske is a wetland ecologist and the Regional Science Liaison for EPA Region 3 to the Office of Research and Development (ORD). Regina provided an overview of ORD, spoke about the Regional Science Program, and discussed how ORD research may be better connected to Bay Program science needs. Examples of areas Poeske highlighted for possible future collaboration were the following: advancing the science of Environmental DNA (eDNA) to identify species from water sample to inform CWA programs, developing methods to identify and quantify microplastics and their effects on aquatic resources/human health, and identifying relevant ecosystem services to inform restoration and incorporating intro decision-making. STAC members were in favor of strengthening connections between specific Chesapeake Bay Program priorities and ORD research opportunities.

ACTION: STAC Staff and leadership with coordinate with Emily Trentacoste (EPA) and Regina Poeske (EPA) to integrate STAC findings and recommendations into EPA ORD work.

COVID Impact on Bay Restoration Goals

—Norm Goulet (NOVA), Mark Trice (DNR), Gary Felton (UMD)

To begin examining the real-time impact of COVID on Bay restoration goals, Norm Goulet (NOVA), Mark Trice (DNR), and Gary Felton (UMD) were asked to provide short talks on local government, air pollution and atmospheric deposition, and agriculture, respectively. Norm Goulet spoke about growing concerns at the local government level of increased furloughs, reduced hours and monitoring, as well as halted projects and hiring freezes. Mark Trice discussed anticipated benefits/impacts to air quality from COVID. Due to stay-at-home orders and reduced commercial activity, there is a 50% overall reduction in NOx emissions rates in the region. If there is interest in modeling deposition rates, Testa discussed a current UMCES project to model a normal year deposition level versus a year with reduced emissions due to COVID-19.

Lastly, Gary Felton described changes to agriculture in recent months. Due to the pandemic, the poultry industry has had to euthanize whole flocks as processing plants were forced to close. Technical assistance capacity greatly diminished and NRCS is currently helping with emergency mortality disposal for poultry. In Pennsylvania, the dairy industry is dialing back production and has had to dump surplus milk on the landscape. Meat packing and mushroom industries are similarly heavily impacted, with less demand from the restaurant industry and public schools. Maryland's cover crop program is currently halted, without the ability to do verification work in the field. USGS and the Beltsville Agricultural Research Center (USDA-BARC) are exploring remote sensing for verification.

Yet, possible new opportunities for Bay goals were highlighted in discussions about increased usage of public parks. Larry Sanford (UMCES), Jeremy Testa (UMCES), Kenny Rose (UMCES), Fowler, and Miller expressed interest in leading a possible fifth FY20 workshop on COVID impacts in the Bay region. Lew Linker (EPA) pressed the group to look at the "big picture thinking" when imagining how the region may recover.

ACTION: Interested STAC members and STAC Staff will pursue a potential FY2020 STAC Workshop on COVID impacts on the Chesapeake Bay. **(If you are interested, please email STAC Staff)**

Achieving Water Quality Goals in the Chesapeake Bay: An Assessment of System Response and Science Needs (STAC SGA)

—Kurt Stephenson (VT), Bill Dennison (UMCES), Zach Easton (UMCES), Kenny Rose (UMCES)

Stephenson provided a SGA process update and then discussed the integration of workgroup sections into the overall document. Since meeting in March, the document is currently undergoing revisions. Workgroup updates are to follow. Future next steps will be to define common nomenclature around uncertainty and variability, policy and management response to

scientific uncertainty, the term “adaptive management”, and various techniques and analytical approaches to deal with uncertainty. Due to COVID, the timeline has been pushed back about three months, with the report projected to be finalized in September 2021.

Bill Dennison (UMCES) followed Stephenson to discuss the Estuary Workgroup’s progress since the March Quarterly Meeting. Dennison presented on eight key points identified by the Estuary Workgroup and outlined in their document – focus on accelerating restoration processes, create a collaborative integration approach, understand ecosystem dynamics at the land-sea interface (triblets), account for climate change in Bay restoration, use shallow water benthos as an example in monitoring/modeling/research, develop a future vision for Bay management, and identify new tools, approaches, and personnel that will feature in Bay restoration science and analysis.

The Watershed Workgroup report out was given by Zach Easton (VT). Their main focus of the document is on the effectiveness of landscape nonpoint source (agricultural and urban) management efforts in the watershed. Overall, BMPs are effective, but response is not detected. Effects may be masked due to BMP lag-time, legacy nutrients and sediments, and/or insufficient monitoring to detect the signal. The section further elaborates that BMPs and policies may not perform as we expect due to nutrient mass balance, BMP performance over- or underestimates, BMP positioning on the landscape, and the behavioral response to nonpoint source (NPS) control measures. Additionally, timing/speciation and future uncertainties (policy, land use, climate changes) can impact BMP efficiency.

Finally, Kenny Rose (UMCES) concluded the workgroup reports with a summary of the Living Resources’ development. Rose proposed a framework to connect water quality and habitat to living resources in order to assess resources within an ecological context. The report is split into seven major sections: foundational concepts, available data, statistical and simulation tools, logical workflow, shovel-ready examples, likely types of results and their interpretation, and implementation.

ACTION: Each SGA Workgroup should schedule a workgroup meeting in the upcoming months. If you are a workgroup lead, feel free to ask STAC Staff to assist in scheduling your meeting and/or setting up a Zoom meeting.

Wrap Up

The next quarterly meeting will be remote and take place on September 15th and 16th. At this meeting, Miller will provide a recap of the 2020 Executive Council Meeting and request the approval of the proposed 2021 STAC Quarterly Meeting dates. An in depth discussion on equity and environmental justice is planned. In addition to STAC SGA workgroup report-outs, Fowler will present ‘Lessons from the Baltic’. STAC Staff will provide an update on the new monthly and quarterly STAC newsletter, *The Abstract*.