Scientific, Technical Assessment and Reporting Team (STAR) Meeting

Theme: Increasing our capacity and growing our networks through collaboration

Thursday, August 22, 2024

10:00AM – 12:00 PM

This meeting was recorded for internal use only to assure the accuracy of the meeting notes.

***Next Steps**:*

- ✓ *Follow up with Chesapeake Monitoring Cooperative (CMC) on helping with the amplification of their case studies and integrating Salt Watch in their work.*
- ✓ *Get in touch with STAR Leadership for help in drafting proposals for the University of Michigan School for Environment and Sustainability (SEAS) Program – Deadline September 29th.*
- ✓ *Coordinate cross-Goal Implementation Team (GIT) projects for the Scientific and Technical Advisory Committee (STAC) Synthesis Request for Proposal (found on our STAR Meeting webpage). This is an opportunity to address some climate science needs.*

Minutes

10:00 AM Welcome, Introductions & Announcements – ***Ken Hyer*** *(US Geological Survey) and* ***Kimberly Van Meter*** *(Penn State) - STAR chair and vice chair,* ***Breck Sullivan*** *(USGS) STAR Coordinator,* ***Peter Tango*** *(USGS) CBP Monitoring Coordinator*

Announcements

- Welcome Gabriel Duran, new STAR Staffer!
- Sign-up for STAR Newsletter!

Upcoming Conferences, Meetings, Workshops and Webinars

- 35th Annual Environment Virginia Symposium – abstracts due August 31st. A lot of Virginia organizations and scientists come together. April 8th – 10th.
- Potomac River Conference – October 17, 2024, Lorton, Virginia.
- Watershed Forum – October 18-20, 2024, Shepherdstown, West Virginia. ITAT session will show off the Watershed Data Dashboard and ITAT's Tributary Summaries (under "Projects and Resources") for how it can help be used as a tool for those in different organizations.
- American Planning Association (APA) Maryland 2024 Conference – October 22-24, 2024, Ellicott City, Maryland.

- 12th US Symposium on Harmful Algae – October 27-November 1, 2024, Portland, Maine.
- 14th National Monitoring Conference – March 10-12, 2025, Green Bay, Wisconsin. Abstract due August 30th.

10:15 AM - Making Monitoring More Accessible: The Chesapeake Monitoring Cooperative's Case Studies Map and Community Connection Chart *– Matthew Kierce (IWLA, mkierce@iwla.org)*

Description: The Chesapeake Monitoring Cooperative (CMC) is continuing to capture and build out community water monitoring success stories through our Case Studies Map. In addition to highlighting monitoring wins across the watershed, the CMC has been prioritizing making the complexities of water monitoring more accessible through resources such as a Community Connection Chart.

CMC was created in 2015 – aimed to provide technical, logistical and outreach support for the integration of volunteer-based/participation and nontraditional water quality data and benthic macroinvertebrate monitoring data into the Chesapeake Bay Program (CBP) partnership.

What is DEIJ in our work? Volunteer water monitoring is crucial – it fills gaps in our data where water monitoring is needed. BUT there is inherent systemic barriers that limits access to this work. CMC is more focused on democratizing access to water monitoring as an activity and as quality data. In summary, an overall dedication to increasing engagement of underrepresented communities in water monitoring.

Why do this? The watershed is a diverse place. For best results, we have to capture all the voices that are in the watershed. CMC rewrote their mission to commit to supporting *ALL* partners, communities and individuals who want to collect, share, interpret, use water quality data and more generally to improve the overall health of the Chesapeake Bay watershed.

How do we do this? We work with communities and monitoring groups to identify barriers in accessing water monitoring and tailor solutions to community needs. Are there solutions and attack strategies that we can utilize to break down those barriers? CMC created the *Community Connection Chart* to help new individuals and communities find their way into this space. Lastly, continue to highlight case studies where communities have been successful and positive impacts.

- Attacking Barriers – CMC identifies barriers to monitoring and strategies to overcome them. Some examples of barriers include time constraints, monetary

constraints, child/family care, science literacy, community exclusion, ownership, accessibility, among others. These conversations with the community allowed CMC to develop potential strategies that could be used and what is within their sphere of control. CMC expanded community involvement and fostered relationships for new programs.

The Community Connection Chart: the goal is to give communities the tools to connect the things that they are concerned with to the water quality parameters that they can start to look at as potential options to tackle what they are concerned about. This gives communities control over the work, ownership of the monitoring process and the data, reduces science literacy barriers, and enhances advocacy goals.

- The chart depicts the different parameters and explains in plain terms and more accessible language meanwhile highlighting the importance of why they are monitored – parameters like benthic macroinvertebrates, dissolved oxygen, pH, temperature and turbidity. This tool is a great starting off point for groups/communities who are just stepping into this space of water monitoring. Additionally, the charts offer/recommend different parameters to monitor (bacteria, etc.) depending on what the communities are concerned about.

Case-studies:

Rock Creek Park, D.C. The DC Citizen Science Water Quality Monitoring Program, coordinated by the Alliance for the Chesapeake Bay. Rock Creek's water quality standards were not met, due to bacteria from unsafe water activities in Rock Creek Park. To improve the quality – The program created bilingual signs discouraging unsafe water activities which led to an 80% reduction in water-based recreation within weeks.

Limestone Branch, VA. Issac Walter League of America (IWLA) volunteers discovered low macroinvertebrates scores, leading to identification of E. coli contamination. Loudoun Wildlife Conservancy secured funding to conduct further testing, raised awareness, and provided resources to residents, particularly underserved communities. This led to EPA-mandated actions to address the wastewater issues, including the installation of water filtration systems for 17 Hispanic families - saving the community nearly $250,000 over four years.

The overall goal is to make connections – we can connect the connection chart to case studies. By identifying certain concerns and the different parameters they monitored, successful case-studies demonstrate as testaments to its effectiveness.

Water monitoring interactive website.

Next Steps:

CMC wants to continue to put together more case studies and have this as a database of success stories in the watershed to leverage going to new groups. Second, CMC wants to continue identifying service provider specific projects that are also working within the DEIJ space (i.e., Integrating Salt Watch to provide accessible monitoring and datasets). Third, continue to build relationships with underrepresented groups, including HBCUs and Virginia Indian Tribes. Overall, CMC's goal is to remain committed to an inclusive environment, empowering all communities in the Chesapeake Bay watershed.

Discussion:

Larry Sanford: ***Q****:* Have you gotten any sense of people wanting to clean up their environments? ***A****:* Yes! By starting early and listening to what the community is concerned about allows them to steer the conversation, they get a sense of ownership and lead the clean up.

Kaylyn Gootman: ***Q****:* Is there something that surprised you about these efforts? ***A****:* It always surprised me that there are a lot of great stories out there, but it takes a lot of digging to find them. A lot of these stories don't have the space/audience to get their stories amplified. It makes the CMC want to find them and amplify these voices so that everyone can be inspired.

Julie Reichert-Nguyen: ***Q****:* The charts are some great visuals for keeping people involved and capturing the work. Does the CMC look into salt watch and saltwater intrusion or, more generally, climate related parameters? ***A****:* Yes! There is a desire to integrate salt watch for saltwater intrusion and even just simply looking at water temperature. This will need some follow-up.

Comment from Chat: *Julie Reichert-Nguyen:* EPA Region 3 presented on their equitable resilience builder at our August Climate Resiliency Workgroup meeting. It would be great to brainstorm this framework in engaging communities on equity and climate resilience along with monitoring. See Maxwell's presentation here.

Breck Sullivan: ***Q:*** How do you pick which programs you choose next and how can CBP get involved and share out relationships with communities with you? ***A:*** There are continuing conversations with CBP to identify those groups. It's tough to get connected and you really need to be in the community and on the ground working with them, but this is harder work and takes longer. We continue to build out those conversations and relationships with already existing relationships and we hope that we can get the gears moving to allow this to flourish.

Comment from the chat: *Rachel Felver:* Great work, Matthew! I'd love to chat more about integrating your case studies with the database that the CBP Comms Office has set up. We can chat offline. Thanks!

10:35 AM - University of Michigan School for Environment and Sustainability (SEAS) Masters' Program collaboration opportunity *– Breck Sullivan (USGS), Dede Lawal (CRC)*

Description: UM-SEAS Master's Projects are applied research projects for client organizations addressing sustainability research need or related problem, over a one-and-a-half-year timeframe, with teams of approximately five graduate students spanning multiple disciplines of study within the SEAS master's degree program. Teams receive back-end support through a UM/SEAS faculty advisor while working directly with client organizations. Students have worked with the Chesapeake Bay Program Wetlands Workgroup on a wetland's communication project. The application for clients is due September 29th.

STAR has compiled a list of science needs along with communication/engagement needs from the Strategic Engagement Team (SET) to assist in identifying proposals (posted on the calendar page). This time is reserved for discussing the opportunity and which projects to pursue.

What is this program? This is a master's program that places students from multiple different disciplines into projects that students select. This involves a group of students (4-5), client support (in our case, it would be the CBPO), and a faculty advisor. This program offers the opportunity for a wide range of different disciplines, including Environmental Justice, Landscape Architecture, Behavior, Education and Communication, Conservation Ecology, Geospatial Data Sciences and Sustainable Systems to name a few. Thus, selected projects will have students from different disciplines.

What is the process for submitting? Proposals are due September 29th. First, there is an initial abstract to engage interest from students. We do need to confirm that there is an UM SEAS Faculty advisor who will champion this project, but this does not need to be an already established relationship, support is provided in identifying faculty advisors. This is followed by attendance at a Client Fair to pitch your project and get chosen by the students. Not all projects are chosen (around 50 will be submitted but only around 25 will be picked).

CBP has already had some students before! The Wetland Workgroup is currently working with students on the Wetlands Communication Strategy with Chris Guy and Dede Lawal.

Dede Lawal: Habitat staffer and alum from UM SEAS. This provides a real-world experience for the students in helping the clients. In writing the proposal, we wanted to create a captivating pitch to the students - students want a clear outcome and a clear directive on how to arrive at that outcome. Recognize that we aren't entirely sure what disciplines the students will be coming from. Therefore, it is important to be intentional on how you're targeting students and how they will be able to contribute to the project because it can be overwhelming for students from different disciplines who are receiving over 50 different proposals. They will likely filter the projects that are only relevant/of interest to them and their discipline. And try to integrate this into your proposals in the early stages. For instance, for the Wetlands Communication Strategy, we knew we needed students from Behavior, Education, and Communication and from our audience lens of local governments, we thought a student from Environmental Planning and Policy would be helpful. Of course, working in wetlands, we needed a student from Ecosystem Science Management. Ultimately, try to weave in these different disciplines into the proposal so it's easier for students to identify.

The Wetland Workgroup got 6 students from 4 different disciplines. Workload fluctuates throughout the year, where in the beginning it is a lot of time commitment for the proposal development and as things progress, their time will be divided between time in class, with their UM faculty advisers, and their time at the CBP office in Annapolis. Still, the workload of the project falls heavily on the students and less so on CBPO – we met with students once a month.

This is a chance for us to increase our capacity, and we do not need funding for these students since this is a capstone project. Some potential ideas from our Science Needs and the Strategic Engagement Team (does not need to be exclusively science based) includes Local Government & Land Use Planning, Fish Passage, Tree Canopy/Forest Buffers, Blue Crab Abundance, and Submerged Aquatic Vegetation (SAV). If you want to read up more on these potential projects, please refer to Breck Sullivan's presentation here (slide 7).

Discussion:

Julie Reichert-Nguyen: ***Q****:* We are trying to figure out how to get help from communication products from the marsh adaptation project for the Climate Resilience Workgroup (CRWG) without sharing massive reports. This might look like StoryMaps, fact sheets, etc.? Does something like this – communication products - might be of

interest to the students? ***A****: (Breck)* The first reaction is it might be. But to try and expand on this idea to bring in multiple different disciplines that might work best for this project. Maybe like GIS students? Landscape architects? And STAR is all in for support in any capacity. ***A:*** *(Dede)* In fact, most projects didn't include landscape architecture and there is an opportunity to get a good audience with that.

Kaylyn Gootman: Breck and I talked about an idea that came from Olivia Devereux et al on conversations for partnership priorities. One idea for a project is how do we prioritize as a partnership? There is economic, social science, organizational development, etc. There is a lot to evaluate for our work and this might be an opportunity to bring people externally to help with prioritizing and how to get there.

Comment from Chat*: Lorenzo Cinalli:* Katie and I are submitting a proposal for our Climate Resilience GIT project.

Amy Handen: ***Q:*** Are STAC members aware of any programs or opportunities from accredited universities or other graduate programs to help get Goal Implementation Teams (GITs) get connected to for addressing science needs or putting together new projects? ***A:*** *Meg Cole:* We have in the past but maybe there is a need for another update of information from our committee. I will get in touch with them. *Breck*: STAR and August, the STAR staffer, has been putting together a database of these different opportunities (e.g. proposal due dates, requirements, etc.) for members to refer to in identifying possible resources.

Kenneth Hyer: ***Q:*** This is a fantastic opportunity as we think about ways to grow capacity. Two projects in mind: First, in thinking about increasing our level of social science, could there be a project in a social science lens on how to engage people and incentivize certain behaviors, meanwhile trying to gather multiple different disciplines? Second, is there a project on how we can improve our local engagement outside of our normal pathways with the partnership? For example, best practices/strategies for engaging with those local networks? ***A****: Amy*: The challenges we face with trying to inspire and incentivize communities are very specific to the audience. Therefore, this project would be region specific and hard to cover all local projects. *Kaylyn:* The more places we can get this started, the better off we will be and the more we can learn from. We need to improve our connection to outside of our partners, and this cross-local piece is needed, and we should see what GITs need to do this.

Comment from Chat*: Katherine Brownson:* Thanks for all the additional info on the program- very helpful! We will likely be reaching out for some additional input/feedback on our proposal as it develops.

11:05 AM - STAC Synthesis Request for Proposals - Discussion/Brainstorming of Cross-GIT project proposals.

Description: The Chesapeake Bay Program's Scientific and Technical Advisory Committee (STAC) and the Chesapeake Research Consortium (CRC) are now accepting proposals (due December 2nd) to support a science synthesis project related to effectively managing for climate change at the intersection of impacts to water quality, people, and living resources within the Chesapeake Bay Watershed and Estuary. Appropriate topics for a STAC-sponsored science synthesis project are those where a thoughtful analysis and synthesis of available data and/or previously published results would identify, characterize, and suggest means of addressing important knowledge gaps, inform additional research, and place scientific information into a management-relevant context.

STAR has compiled a list of science synthesis needs to assist in identifying proposals (posted on the calendar page here - please refer to the updated Addendum B). This time is reserved for discussing which projects to pursue and how best to collaborate across GITs for these project proposals.

Discussion:

Meg Cole: STAC related RFP proposals link - refer to addendum B for the top 10 climate science needs. There are enough funds (~$125,000 available) for 1 big project or a lot of different smaller projects. There is the option to request the full amount of funding. Proposals are due December 2nd, 2024. The project must be completed by May 31, 2027, and duration must be aligned with availability of funds. Funding will be available in three phases: Phase 1 funds of $73,285 become available on 6/1/2024; Phase 2 funds of $29,800 become available on 6/1/2025; and Phase 3 funds of $22,642 become available on 6/1/2026.

Comments from Chat: *Denice:* STAC had done this before with money from the EPA (~$120,000) for a synthesis proposal. The synthesis will be useful for the program, and especially for filling in areas that are not within CBP's capacity to get finished. *Breck*: This is also a great way for staffers to get on a synthesis project and for career development.

Kaylyn: ***Q:*** Would the prioritization of stated goals and outcomes for the partnership be more relevant for this conversation? ***A:*** *Breck:* STAC does have members who specialize in decision science and maybe forming that aspect can help bring the STAC members interest into this. ***A:*** *Denice:* in a recent call, there was a big workgroup of social scientists that may be relevant to this conversation. ***A:*** *Meg:* this was the first meeting

of a potential social science WG under STAC – this included people in social science, economics, collaborative models, etc. There is more of a push to bring more social scientists into STAC, but it's been a challenge. By September, we will draft a mission statement to bring to STAC and get approval from the leadership to find steps forward. Here is the first meeting of that WG in September. ***A:*** *Julie:* We must remember the purpose of this STAC proposal, synthesizing climate change issues, and need to integrate that into our synthesis. Still, there are a lot of great conversations on how to lump some of these groups/outcomes. A very interesting question that might help inform us for Phase 2 of Beyond 2025 is that a lot of our outcomes are siloed and how do we synthesize our outcomes to have that intersection with water quality and living resources people? Climate Resiliency Workgroup (CRWG) is submitting a synthesis proposal for their top climate science needs and that is quantifying the resilience effectiveness of nature-based solutions. Essentially, there is a lot of data out there on nature-based projects and can we synthesize that data to create resilience metrics around these nature-based solutions, like flooding, erosion control, shore-line protection, etc. Meanwhile building in ecosystem services – fish habitat, bird habitat, water quality, etc.

Discussion from Chat*: Denice:* Beyond 2025 contains many opportunities not fleshed out, most notably a vulnerability assessment approach to local management actions (including resilience metrics). Perhaps cross walking science needs with opportunities that are in Beyond 2025?

- ***Q****: Kaylyn:* is this something Lee's Living resource folks should consider applying for?
- ***A****: Denice:* Yes, for example, there's a lot of habitats modelling that needs to be done that could be accomplished by a post doc.

Julie: ***Q:*** There is some confusion on this format in if it's like the GIT funding where a workgroup would take the lead and work with a STAC sponsor or is this something more like contracting the project out to a contractor with less workgroup/GIT involvement? ***A:*** *Larry:* The science synthesis isn't a workshop but rather a gathering of different experts to address topics for the CBP overall with a deep dive into the literature to assemble the best information that has been published recently about that topic. It's not looking into a specific operational lead of the Bay Program or how the GITs can work better together. It is not operational and more than a true science effort that includes a literature review. ***A:*** *Breck:* In the form of the structure, there have been different ways of doing this where one science synthesis for SAV had a group of various scientists who all worked together to create a synthesis and communication products. There has also

been the opportunity where post docs have come on board to take over the project, and there is a steering committee that informs them.

*Julie follow-up **Q***: is this open for non-governmental organizations (NGOs), for-profit firms, etc. or mainly universities? ***A****: Denice:* it is externally competed - not like GIT funding. The proposal needs a STAC champion – must connect with someone on STAC to work with. The STAC champion doesn't need to be a Co-Principal Investigator (Co-PI), just someone who can speak for the proposal and be an advisor for the project.

List of current STAC members: link.

11:40 AM - STAR Poll: Engagement

Description: STAR participants will take a poll asking what challenges they are having engaging with audiences they're trying to reach, and what topics around engagement they want to discuss. This poll will inform future joint meetings between STAR and the Strategic Engagement Team (SET) and help us determine how best to assist the GITs in your goals for strategic engagement. It will also help inform SET's proposed GIT funded project on Network Science, which will provide training and technical assistance on network science to build the collaborative infrastructure and enhance the existing capacity of the partnership and accelerate achievement of our goals and outcomes. The training and technical assistance will increase our partnership impact through adoption of network science principles and best practices that enable us to intentionally design, cultivate and sustain relationships and connections among our partners and stakeholders who have similar purpose and values.

Q1: What is your Goal Team?

A: GIT1 = 0, GIT2 = 2, GIT3 = 1, GIT4 = 0, GIT5 = 1, GIT6 = 1, STAR = 10, SET = 2, Other = 4

Q2: Who are the Primary audiences you try to reach with your work?

A: state agencies and local governments, NGOs, Policymakers and CBP leadership and partners, Workgroup/GIT chairs, coordinators, and staffers, environmental scientists, jurisdictional partners, ag community, local government planners, land trusts, watershed organizations, grant applicants, NRCS offices, educators, Volunteer Water Monitors/Organizations, Climate Resilience Groups, Management Board

Q3: Who are the audiences you actually reach?

A: state and federal agencies, environmental scientists, workgroups, resource managers, NGOs, STAC, Bay Program staffers, general public, academic partners.

Q4: What goals do you have when reaching out to various audiences (please specify which goals for which audiences if necessary)?

A: integrate climate science in decision-making for land-use, support on WG initiatives, Provide advisory support, asking for feedback from and participation in work plan action from state agency leads, information sharing about resources, for decision makers – to allocate funding and enact laws to protect the environment, connecting partners with similar interest, for resource managers – to allow them to make science based decisions, increase implementation of practices, for environmental scientists – increase trans-disciplinary approaches and fostering discussions and broadening perspectives, for the public – increase understanding.

Q5: What actions do you want to happen as a result of this outreach?

A: expand use of tools, ecosystem-based fisheries management, behavior change is overall goal, more efficient and effective management decisions, climate-informed restoration and conservation, greater engagement, effective and rational management decisions, increased creativity, time and staff capacity on our side and their side (workload/capacity).

The September meeting will feature Kelsey who will present on . . .

Q6: What challenges do you run into in reaching these audiences?

A: Lack of relationships with intended audience [3], lack of time [2], lack of capacity to do outreach [4], schedule mismatch [1], communication challenges [0], other [0].

***Julie:** Outreach and building relationships take time and grants are not currently structured to allow that time.*

Q7: If you selected "other", please elaborate.

A: time and capacity, difficulty reaching underrepresented groups, capacity -> time -> relationship, need support to identify the appropriate points of contact for target groups, lacking expertise in the best way to reach out is a struggle too – what resonates with me might not with others.

Q8: Which of these challenge(s) do you want assistance with most?

A: Lack of relationships with intended audience [2], lack of time [0], lack of capacity to do outreach [5], schedule mismatch [0], Communication Challenges [1], other [0].

Q9: What kind of assistance do you want?

A: training, successful case studies, making connections and developing communication products, CBP provide access and opportunities with underrepresented groups, a point of contact to work with or ask for help.

Discussion:

Breck: The responses here and future discussions at joint meetings will help inform a GIT-funded project that the SET team put forward that will provide training and technical assistance on network science to build the collaborative infrastructure and enhance the existing capacity of the partnership and accelerate the achievement of our goals and outcomes.

Comments from chat:

Julie: FYI: NOAA announced a $600,000 funding opportunity for members of the public to conduct science that helps fisheries and fishing communities prepare for climate change. Proposals due 11/4/2024: link

12:00 PM - Adjourn

Next meeting: September 26th, 2024

Attendees:

August Goldfischer (CRC), Breck Sullivan (USGS), Lorenzo Cinalli (USDA), Gary Shenk (USGS), Kathy Boomer (FFAR), John Lancaster, Matthew Kierce (IWLA), Rachel Felver (Alliance for the Chesapeake Bay), Richard Tian (UMCES), Douglas Austin (EPA), Gabriel Duran (CRC), George Doumit (DNREC), Emily Young (ICPRB), Jennifer Olszewski (USGS), Ann Foo (UMGC), Katherine Brownson (USDA), Kaylyn Gootman (EPA), John Wolf (USGS), Dede Lawal (EPA), Laura Cattell Noll (Alliance for the Chesapeake Bay), Julie Reichert-Nguyen (NOAA), Erin Sonnenberg (EPA), Jamileh Soueidan (NOAA), Sarah Brzezinski (EPA), Ashley Hullinger (PA DEP), Jeremy Hanson (CRC), Peter Tango (USGS), Amy Handen (EPA), Caroline Kleis (EPA), Marisa Baldine (CBP), Tou Matthews (CRC), Larry Sanford (UMCES), Meg Cole (CRC), Suzanne Trevena (EPA), William Dennison (UMCES), Kenneth Hyer

(USGS), Gregory Barranco (EPA), Meredith Lemke (CRC), Denice Heller Wardrop (CRC), Caitlin Bolton (MWCOG), Britt Slattery (NPS)