Scientific, Technical Assessment and Reporting (STAR) Meeting

Thursday, April 22, 2021
10:00 AM – 12:30 PM

Join by Webinar:
Meeting Number: 120 243 2095
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Meeting Materials:
https://www.chesapeakebay.net/what/event/scientific_technical_assessment_and_reporting_star_team_meeting_april_2021

This meeting will be recorded for internal use to assure the accuracy of meeting notes.

Action Items:

- ✓ Provide an update on improving the CBP monitoring networks at future STAR meetings.
- ✓ Review the feedback on SSRF, consider improvements to the process, and present potential changes to STAR.

AGENDA

10:00 **Welcome, Introductions & Announcements – Bill Dennison** (UMCES) and **Scott Phillips** (USGS)- STAR Co-Chairs, **Peter Tango** (USGS) Co-Coordinator

Upcoming Conferences, Meetings, Workshops, & Webinars-

- National Monitoring Conference - April 20 – 22, 2021 (Virtual)
- Atlantic Estuarine Research Society & New England Estuarine Research Society- Joint Conference - April 27-30 (Virtual)
- Mid-Atlantic Climate Change Education Conference - June 28-July 1 (Virtual)
- CERF - November 1-4 and 8-11 2021. ABSTRACTS DUE- May 5, 2021.
- American Fisheries Society - November 6 - 10, 2021. ABSTRACTS DUE - April 22, 2021
- A Community on Ecosystem Services – December 13 – 16, 2021. Bonita Springs, FL.

AFS meeting extended due date for abstracts to September 16, 2021.
CERF abstracts are now due May 14, 2021.

10:05 **CBP Communications Update – Marisa Baldine** (CRC)
2019-2020 Bay Barometer was released, and the following are the materials.

Press release:
https://www.chesapeakebay.net/news/pressrelease/annual_bay_barometer_shows_mixed_recovery_of_chesapeake_bay_ecosystem
Report:
https://www.chesapeakebay.net/documents/Bay_Barometer_2019-2020_Web.pdf

Blog:
https://www.chesapeakebay.net/blog/post/2019_2020_bay_barometer_shows_an_ecosystem_in_mixed_recovery
Photo album:
https://www.flickr.com/photos/chesbayprogram/albums/72157718858017378

Bruce Michael said MD DNR is working with VIMs to make sure they have consistent methodology for the Bay hypoxia reporting. This will ensure they are both reporting on the same information. USGS and UMCES is doing the hypoxia forecast which will hopefully be released in early June.

Scott Phillips shared USGS just released a science summary on "Occurrence of toxic contaminant mixtures in surface water and groundwater in agricultural watersheds of the Chesapeake Bay".
The summary includes findings from several recent publications, with information on the:
-Occurrence of toxic contaminants
-Factors affecting occurrence of toxic compounds and estrogenicity
-Potential co-benefits of best management practices

Also, USGS recently completed mercury map narrative. The findings from these studies will help the address the CBP toxic contaminant research outcome.

10:10 **Improving Monitoring Networks: PSC Request - Lee McDonell** (EPA) **& Peter Tango (**USGS**)**
Agenda item: Lee and Peter will provide an overview of the PSC request for information and guidance on solutions and support needed to improve capacity to meet management decision-support needs with our CBP monitoring networks (Tidal, Non-tidal, SAV, Benthic, Citizen Monitoring). Peter will provide detail on addressing the request and expectations for support across CBP workgroups.
Materials: Improving Monitoring Networks Presentation, Briefing Document

Notes from meeting: The Principal Staff Committee (PSC) was interested in understanding the CBP budget and funding for monitoring. Lee McDonnell shared this information at the last PSC meeting while sharing with them information on everything that goes into the monitoring program. The five monitoring networks discussed were tidal water quality, nontidal nutrients and

sediment, Submerged Aquatic Vegetation (SAV), tidal benthic organisms, and citizen monitoring. In the presentation to the PSC, they acknowledged there is a history of resource limitations to sustain and grow the monitoring program resulted in decreased capabilities of the CBP networks. However, the networks could be improved by using newer research developments and innovations to address capacity gaps. PSC recognized that the monitoring program needs to be enhanced so they requested information on what is needed to improve the CBP monitoring networks. Peter Tango commented STAR will lead this effort in collaboration with Scientific Technical Advisory Committee (STAC), CBP Goal Implementation Teams (GITs), and partners participating in the monitoring networks. The process will take 9 months to provide the PSC recommendations while answering 8 questions on the status and threats of the monitoring program. The eight questions consist of:

- Network status
    - o Numerous summaries are available about the network status, and examples are available on the CBP website. Some of these summaries have not been updated to include changes in the monitoring network.
- Vulnerabilities
    - o An example is a list of stations that may be lost due to funding or safety issues.
- Programming strategy
    - o This question addresses what the cost is of sustaining existing operations which is available in the grant documents.
- Information gaps to fill
    - o Use the gaps identified in the CBP Science Needs Database and assess if there are any gaps missing and how they can be addressed.
- Monitoring program options to fill gaps
    - o Identify if current monitoring products can fill information gaps. This will be discussions at future workgroup meetings across the CBP and at newly accepted STAC Workshop.
- What innovations are available
    - o Discuss utility and readiness of innovations, the data, and the products especially through the STAC Workshop to see how it can improve the monitoring program.
- Who – partners for addressing information gap data and products
    - o Once the innovations are identified, the groups will provide a list or current and potential partners.
- Detail on financials for sustaining and growing network to meeting information needs
    - o Provide a list that reflects the costs of these needs.

This will be a collaborative effort through multiple network groups along with supporting CBP groups. Peter Tango has started sharing this effort with other groups and plans to meet with more groups that benefit and utilize the monitoring information. The team will confront the supporting groups soon with more detailed plans, dates, and tasks to assist with these efforts.

The proposed timeline is to capture the status and vulnerabilities of existing networks during Spring 2021, innovation assessment and financials of sustaining networks during Summer 2021, and evaluation limitations, financials for adopting innovations, and recommendations in Fall 2021. Before the PSC request, Peter Tango already proposed a STAC Workshop for Advanced Monitoring Options and Recommendations. It was approved and will support the work to answer the PSC request. It will build off what was learned in the next 9 months into 2022. Overall, the 9-month effort will produce a concise issue and recommendation summary with financials.

Bill Dennison wondered about a broader outreach to groups outside the monitoring team to see how the information is used and beneficial to them. He asked if there is a way to reach out beyond the scientific community that generates and uses the information so that it can reach decision-makers and elected officials. Peter Tango suggested this being a theme for one of the STAC Workshop mini-meetings, or it could be a task after the summary is completed to share it. Peter also mentioned taking the recommendations compiled to the Local Government Advisory Committee (LGAC). Lee McDonnell said one of the immediate concerns is that this effort came out of the budget talks so they need to come back with recommendations to streamline the financial situation and point out innovations to fill gaps. Lee thinks it is appropriate afterwards to see if CBP is meeting the monitoring needs of the partnership. There is a broader conversation to be had after the summary is completed.

Jennifer Starr said Peter Tango is welcome to present at LGAC for thoughts. LGAC would welcome the discussion.

Denice Wardrop highlighted it should be a separate outreach effort from the outreach given to the PSC. It is important to consider the other outcomes especially with 2025 coming soon. She thinks it is very appropriate in a separate effort to convene environmental managers across the watershed and ask, as moving past 2025, what do they need monitoring to do? Scott said some of the information is going to be captured in this PSC effort. Question 3 in the briefing document states assessing other outcomes, and they have the monitoring needs from those managers already captured in the Strategic Science and Research Framework (SSRF). They just need to engage those groups and discuss those needs. Denice commented science needs in SSRF may not capture everything, so

she reemphasized the importance to reach out to the managers after the 9 month effort for the PSC.

Peter Tango commented he likes having the extended timeline to address the issue because what was asked by the managers over a decade ago in the first monitoring evaluation is still not being addressed. The first step is address sustaining the program while balancing other needs. Denice Wardrop said the effort will also highlight the value of certain pieces of monitoring.

Carin Bisland stated the other issue is related to budget. Is there a balance between funds spent on monitoring/tracking and implementation? Congress continues to increase EPA CBP funding but puts the entire increase in implementation. Is there a recommendation related to the relative proportion going into monitoring to see if actions are having the expected result? Peter Tango said that is an excellent recommendation in terms of setting up the financial dimension of this review.

Scott Phillips said these are all great suggestions and need two phases. Phase 1 needs to get done before December for it to be considered for federal funding in FY23.

Sean Corson stated he is excited about getting a better picture of hypoxia and relating TMDL to living resource response. He is also interested in segment delisting. He also commented many of the cross-cutting climate questions can be addressed via monitoring as well. Exploring the relationships between changing weather and climate, DO/Temp/Salinity and living resources is an exciting new chapter.

Greg Allen said the Policy and Prevention Toxic Contaminant Outcome should receive benefits from the monitoring programs because it is pollution oriented. It is mainly focused on PCBs. They stopped asking and relying on little bits of information from the jurisdictions. They are obligated to collect information in their fish consumption advisory so it would be helpful if the monitoring program could help the jurisdictions be more effective with their monitoring on PCBs TMDLs. Scott Phillips mentioned to include mercury since it also contributes to fish consumption advisories.

Denice Wardrop stated the two priorities for monitoring that were identified during MRAT were delisting of segments and effectiveness of BMPs.

Bill Ball commented it is important to focused on monitoring of BMPs for purposes of better understanding. A lot more needs to be done on this research. It is not just for management but for better scientific understanding.

Renee Thompson said in terms of monitoring for Healthy Watersheds is combining what is seen in the streams, biotic information, and water quality and how it can be coupled with the landscape characteristics to have a better understanding of all watershed health. She said understanding current conditions remains to be a problem.

Julie Reichert-Nguyen said the Climate Resiliency Workgroup is trying to make sure the monitoring networks incorporate key climate parameters along with other non-climate stressors. This allows to assess change and look at multiple stressors to see what is building resiliency and what is not resilient.

Kristin Saunders said workgroups like climate are having capacity issues on maintaining and developing indicators. She highlighted to make sure the monitoring available is capturing signals of change to allow people to do deeper investigation in areas because there cannot be monitoring everywhere.

Dencie Wardrop said one item that come out of MRAT is that people do not think about or articulate the value of information in decisions making. Not all monitoring data has the same value in decision making which makes it difficult because as Kristin said, the CBP cannot monitor everything.

Scott Phillips mentioned this will be a standing item at STAR for Phase 1 (Recommendations and summary for PSC request).

11:00 **Strategic Science and Research Framework (SSRF): Improvements for 3rd Strategy Review System Cycle – Emily Trentacoste** (EPA)
Agenda item: Emily will provide background on the SSRF. STAR attendees will participate in mentimeter questions to gain feedback from Cohorts on the process.
Materials: SSRF Presentation, Mentimeter

Notes from meeting: In 2018 as part of the Strategy Review System (SRS), the Management Board (MB) was receiving a lot of needs from the outcomes, many of them related to science. The MB made a request for STAR and a small group of the leadership get together and compile all the science needs across the program. One piece of feedback was that this process of compiling science needs should not be a onetime thing put in front of the MB and request them to prioritize. The first part of 2019 was spent discussing what the framework should like and how to use it. The adaptive management cycle already existed so it was recommended to tie it in with that cycle. At the Biennial meeting in 2019, the idea of the framework was established. The first pilot of utilizing the framework was in 2019 and 2020. Now there are some clear contact points and tasks along with a new database.

Some steps STAR leadership is considering how to use the database and framework to engage with resource providers to help meet the needs. This has already started a bit within federal partners, but there is still a lot of room to improve on how to connect with other partners.

Scott Phillips said another piece they are trying to connect with this framework is assessments of CBP indicators. There is the Status and Trends Workgroup that tries to establish and maintain indicators for 31 outcomes. Since indicators are a part of science needs, this framework will help the group focus on one set of indicators to see if there can be distinct progress on them or capture any gaps that need to be filled for them.

STAR moved into the menti questions, and the results are available here.

Discussion questions:

- How well has the integration of SSRF into SRS worked? (Hi, Med. Low)
    - Emily Trentacoste commented there were no "Low" votes. She stated if this question was polled at the beginning of the last cycle, the votes might be different which is a testament to the feedback everyone has provided and the efforts to incorporate them over the course of building the framework.
- What have you found most useful about SSRF?
    - Renee Thompson said there is still a disconnect between the science needs and SRS process. She thinks it is very helpful that there is one place to understand the science needs. She also thinks this process helps capture science needs besides hard science such as social science and decision support science. She is struggling with the adaptive management feedback loop on how some are getting done and others are not. She wonders how do they come back to them to see if they have filled the gaps or if the information is still needed.
        - Emily agrees this is an area they are still figuring out.
        - Scott Phillips said in the big picture they would like to connect it with SRS because the Cohorts will go through the science needs every two years. The database can capture if a science need is completed.
    - Denice Wardrop said some groups while going through their Logic & Action Plan categorized their needs as knowledge, new knowledge, development of a tool, or new resources. She thinks similar categorization would be helpful with the science needs. She said as a science provider more specificity and what is included under a science need should be added.
        - Emily stated currently what is available is related to the type of science need, but the information Denice mentioned is not captured.

    - Katie Brownson agreed that it seems like there are a lot of management needs that get thrown in as a science need.
    - Renee Thompson wonders if they need to add a slide or question to the SRS templates that specifically addresses how the Science needs articulated previously are being addressed. Such as reporting progress on Science needs at SRS. This round was capturing them all, but they will need to articulate progress moving on.
    - Emily Trentacoste stated one area they need to work on is making sure there isn't a disconnect between the Logic and Action Plan and the science needs. The science needs should be captured in Logic and Action Plan if appropriate for the next two years. The database will cover science needs that are not in the Logic and Action Plan because the framework also captures long-term needs along with needs the cohort can't address. She will want to make sure they are aligned in the future.
- What improvements would you like to see in the SSRF process?
    - Kristin Saunders said she has seen members of the partnership use this information in a lot of different ways. One place she is not certain what is happening is at the leadership level. She wonders if directors are using the resource to help with allocating the budget. Are management board members using it to understand science needs across the board? They are using it during the SRS process, but are they using it outside of the cycle?
        - Emily said she doesn't know the answer and if it is that they don't know how they're using it, this is an item to improve going forward. She commented the first round focused on the operation of the framework, and the next cycle should focus on how the program uses the framework. This topic could be discussed at the Biennial Meeting.
    - Denice Wardrop suggested having the science needs when appropriate follow SPURR. SPURR: Specific, Programmic partner, Urgency, Risk of not doing it, Resources required; Great in one place but they are not actionable.
    - Peter Tango commented it could be a nice biennial meeting element to pull a few examples of what is a request and what are examples for how to improve the request, translate the request to very detailed, targeted request on the need.
    - Emily commented Cohorts can update their science needs
    - There are other emerging needs (local engagement, climate resilience, DEIJ) how can we streamline the different sets of needs?
- When in the SRS process do Cohorts feel their science needs are "finalized" to be put in the database?

    - Breck commented this is an opportunity to also consider another touch point in the framework if Cohorts feel they need to meet with STAR leadership again to finalize their science needs.
    - Renee Thompson said it is important for STAR to be a sounding board because some Coordinators are hesitant to bring half though ideas to STAR. She thinks this should be a place for exploring and learning.
- Are you using the SSRF information to target projects, generate proposals, or launch discussions with potential partners to fulfill your science and research needs?
    - Scott Phillips said USGS used the science needs to revise their Chesapeake Science Strategy. They focused on needs where they had capabilities.
    - Julie R said it has been useful that all the science needs in one place especially for the Climate Resiliency Workgroup and connecting it to other workgroups. The process helped form the collaboration with the Wetlands Workgroup and drafting the joint GIT Funding project. Climate has also used the science needs to inform work for summer internships.
    - Kristin Saunders have been using it to home in on collaboration ideas among goal teams and workgroups.
    - Renee Thompson used SSRF for GIT funding justification.

11: 45 **Environmental Justice Indicators - UMCES**

Agenda item: CBP affirms our commitment to embrace DEIJ following the Executive Council's DEIJ Statement and associated action plan. Application of indicators will help the CBP track DEIJ change in all areas of the CBP. UMCES MEES students will provide examples of indicators that may further be useful to CBP in tracking progress including proximity to hazards, management and governance, green space distribution, and distribution and application of environmental restoration funding. The students are looking for STAR feedback on the indicators and recommendations going forward for the class.
Materials: Compilation of pre-recorded indicator presentations

Notes from meeting: Students at UMCES developed an environmental justice index for the Chesapeake Watershed Report Card which is a way to capture and reflect environmental justice experiences at the community level. All environmental injustices are not going to be a direct reflection of all communities so some indicators are going to be a more accurate representation of a given community than others, but they used their class time to explore some potential indicators. A video on the indicators the students worked on is available here along with blog articles on their work. Next steps after indicator development include meaningful stakeholder engagement and progressive integrated action. This will continue through the course at UMCES as they

undertake human subject research to produce indicators with community groups.

Denice Wardrop asked if the students are producing an indicator of environmental injustices or are you producing indicators of vulnerability. Faith Taylor said it is going to be an indicator of environmental injustice for the Bay overall, but they are starting with the Patuxent watershed. Andrea Miralles-Barb stated the difference is that a vulnerability indicator is the measure of how much exposure someone has or how much damage is incurred, whereas environmental justice indicators captures the resources communities have to respond to those hazards. It is not just about exposure but also about how to respond to them.
Denice Wardrop asked how it could be used. Andrea Miralles-Barb stated a lot of the data that would capture the issues are not available. One direct action they would like to see is getting this information captured and funded. Taylor Gedeon said another pathway is environmental remediation. There is data missing, but they need to understand where the communities feel this funding should be directed.

Vanessa Vargas-Ngu IRB was approved so they will be sending out surveys soon to the group. They are also engaging with stakeholders in the next couple weeks during their last few class times.

Denice Wardrop said she has recently become aware of an expanded definition of justice as including both accountability and restoration/reparation; Does the indexes cover both? Faith Taylor said an inherent drawback of using of utilizing an indicator or a system or an index overall is that the reparations are not inherently built into the index.

Tuana Phillips said this is great work, and thank you for presenting! She asked if they thought about using the UMD EJ Symposium as a way to engage stakeholders and seek feedback in this effort? She can also share the survey with the Diversity Workgroup distribution list if that would be helpful. Faith Taylor said for their current work, they need to take step back from getting feedback from people outside the community because they need to do a deeper dive on how the indicators can serve the community needs which they capture at the stakeholder engagements. What drives their project needs to focus on the communities' concerns.

Peter Tango asked did they look at EPAs pilot Ecosystem Integrity Index work. Taylor Gedeon said they have not explored that yet, but they will look into it.

12:30 Adjourn

Next Meeting Dates: May 27, 2021

Participants: Scott Phillips, Emily Trentacoste, Bill Dennison, Peter Tango, Tom Butler, Breck Sullivan, Marisa Baldine, Tom Parham, Kristin Saunders, Megan Ossmann, Bruce Michael, Jennifer Starr, Jackie Pickford, Bill Ball, Doug Austin, Nora Jackson, Ken Hyer, Mandy Bromilow, Annabelle Harvey, Katie Brownson, Gary Shenk, Katie Brownson, Lee McDonnell, Ola-Imani Davis, Amy Handen, Denice Wardrop, Briana Yancy, Garrett Stewart, Greg Allen, Jeni Keisman, Julie Reichert Nguyen, Justin Shapiro, Katheryn Barnhart, Liz Chudoba, Mark Nardi, Renee Thompson, Sean Corson, Gina Hunt, Greg Barranco, John Wolf, Caitlyn Johnstone, Carin Bisland, Meg Cole, Faith Taylor, Amber Fandel, Ashely Silver, Bo Williams, Jehnae J. Linkins, Katrina Kelly, Nylah McClain, Olivia Jade Wolford, Shakira, Taylor Gedeon