



## Scientific, Technical Assessment and Reporting (STAR) Meeting

Thursday, March 26, 2020

10:00 AM – 12:30 PM

Conference Line: 929-205-6099 Meeting ID: 649-555-639

Webinar\*: <https://zoom.us/j/649555639>

Meeting Materials:

[https://www.chesapeakebay.net/what/event/scientific\\_technical\\_assessment\\_and\\_reporting\\_star\\_team\\_meeting\\_march\\_2020](https://www.chesapeakebay.net/what/event/scientific_technical_assessment_and_reporting_star_team_meeting_march_2020)

\*If you are joining by webinar, please open the webinar first, then dial in.

### AGENDA

#### Action Items:

- ✓ STAR can reach out to partners to see if there are studies that have researched identifying public access sites vulnerable to climate change impacts and if it overlaps with any of the Chesapeake Bay Program (CBP) public access sites.
- ✓ STAR will host a training for the Chesapeake Environmental Justice (EJ) Screen and National EJ Screen.
- ✓ For the next iteration of the Watershed Dashboard, Emily will work with the Diversity Workgroup to decide which factors would fit best in the dashboard.

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

#### Upcoming Conferences, Meetings, Workshops, & Webinars-

- [Choose Clean Water Conference](#), May 19 – 21, 2020. Richmond, VA.
- [Chesapeake Research Symposium \(ChesR20\)](#), June 8 – 10, 2020. Annapolis, MD. Abstracts are due March 27, 2020. Remote only Conference. Free registration.
- [Chesapeake Studies Conference](#), June 11 – 12, 2020. Salisbury, MD.
- [World Seagrass Conference & International Seagrass Biology Workshop](#), August 9 – 14, 2020. Annapolis, MD. Abstracts due April 1, 2020.
- [The National Coastal and Estuarine Summit](#), October 4 – 8, 2020. Providence, RI. Call for Proposals is open until April 3, 2020.
- [A Community on Ecosystem Services](#) (ACES), December 14-17, 2020. Bonita Springs, FL.

**10:10**      **Stewardship Cohort Science Needs Discussion – Emily Trentacoste (EPA) & Outcome Leads**

#### Materials: Stewardship Cohort Science Needs

In follow-up to the Management Board review, STAR will discuss the updated science needs of the Stewardship Cohort, planned actions moving forward, potential opportunities to address needs, and progress on indicators in development.

### *Citizen Stewardship*

**Outcome:** Increase the number and diversity of trained and mobilized citizen volunteers with the knowledge and skills needed to enhance the health of their local watersheds.

#### **Science needs:**

- Identify methods for advancing and incorporating social science into work
  - Sustainable Fisheries Goal Implementation Team (GIT)
    - In terms of audience, they will focus on CBP relevant stakeholders for now because fishery managers would have additional needs.
    - Hardened vs living shorelines are a big issue for the GIT. They will focus on coastal landowners and permit agencies.
    - They think there is an invasive catfish opportunity for social marketing to promote sustainable seafood consumption safely (i.e. contaminant advisories).
    - Forage citizen science monitoring interest to scale up for more widespread data collection in shallow waters.
    - Oysters economics study helped to quantify benefits from restoration to local community. They have an interest in similar work on economics of ecosystem services.
      - Scott mentioned the May STAR meeting will be dedicated to the ecosystem services topic.
      - Bill commented on the importance of considering how ecosystem services costs and benefits are distributed across the watershed.
        - Katie said it is also important to think about how to minimize potential trade-offs between different ecosystem services (for example ag production vs. fisheries habitat) and take a dynamic perspective, recognizing that these costs/benefits will vary over time.
    - There needs to be a balance of aquaculture support with conservation/restoration goals.
      - Peter Tango agrees this is very important, and this relationship will play into the evolution of bay health and consumptive uses of resources. He stated every lawn is a potential oasis for improved habitat diversity and bay smart landscaping so they should also focus on individual landowners and not just streamside and bayside property owners.
    - NOAA is also focused on engaging recreational fishing communities as another audience.
    - Bruce Michael commented that MD DNR has a “click before you cast” DNR program connecting water quality to fish habitat conditions.
  - Toxics Contaminant Workgroup

- Greg Allen commented that the program needs to be inclusive of all disciplines in social science during this time when we are developing the next generation of social science strategy.
  - The workgroup has one social science project with the Fish Consumption Advisory Infographic.
  - They welcome any support from social scientists to apply social sciences to reducing the number of PCBs loading into the system.
- Healthy Watersheds GIT
  - Renee commented there is an opportunity to integrate/incorporate and inform the Chesapeake Healthy Watersheds Assessment (CHWA) with citizen science. Monitoring is a key data gap when assessing watershed health at the state level. Data related to stream temperature, IBIs, and Visual habitat assessment could be incorporated into the CHWA or even as an additional overlay to help confirm and inform the individual catchment and watershed index values we are seeing in the CHWA.
    - Emily Bialowas said the Chesapeake Monitoring Cooperative has temperature data and benthic macroinvertebrate data.
- Climate Resiliency Workgroup
  - Climate Resiliency Workgroup has an action item with the Communications Workgroup to pursue social marketing research related to shoreline management/green infrastructure. It is a GIT-funded project from last year. Julie said she is not sure if the Citizen Stewardship Workgroup is involved. It may be beneficial to link with Habitat and the Fish GIT's efforts related to shorelines.
  - There is also a GIT-funded project for a Bay-wide scorecard to inform localities of the climate resilient actions they are currently taking and options they can consider in the future to help increase their resiliency.
    - Tuana commented that the Local Leadership Workgroup is focused on increasing capacity and knowledge of local leaders, and therefore, the workgroup would also be a great resource for the scorecard. Laura Cattell Noll is the coordinator of that workgroup.
- Diversity Workgroup
  - They will be mentoring a C-StREAM intern this summer that will start the beginnings of a social network analysis for the watershed.
- STAC
  - Emily said there will be a STAC workshop this year focused on behavior change of farmers and adopting water quality BMPS on farms.
  - STAC can help the workgroups gain more knowledge on social science and understand more areas where the work of the workgroups can be incorporated with social science.
- Stewardship index data collection every 3-5 years
- Use results from stewardship index to model relations of human attitudes/behavior towards consumption, restoration and conservation

- Carin commented that there is need to make sure the CBP is not overlapping their efforts because they talk about things in different ways. The endpoint is local engagement and action but the discipline to do that is social science. There are efforts in both local engagement and what tools/understanding are needed to effectively engage them which needs to be aligned appropriately.
- Katie said the Forestry Workgroup is excited to work with the stewardship survey data. They think it will be especially useful once they are able to do some modeling to see if there are some common characteristics of the people that are interested in planting trees. This way partners can be more focused in who they are targeting for tree-planting campaigns.
- Bill Jenkins made two points:
  - 1) Is it worth it, and if so how, to couple social science with broad (i.e. beyond water quality) public/community health concerns, and with financing (possibly as follow up from the recent Forum)? This would support work on diversity and inclusion as well.
  - 2) From a broad stewardship perspective, can the program use/leverage/describe as "insurance" the money and effort invested in conservation and restoration now and in the future as protecting the benefits (economic, health, environmental) that humans enjoy from existing natural green infrastructure and have been gained through past investments in implementation?

Emily commented that some of the major themes in this discussion was behavior change and the tools to incorporate it such as social marketing, living shorelines, ecosystem services, and increasing citizen monitoring.

#### *Public Access*

**Outcome:** By 2025, add 300 new public access sites, with a strong emphasis on providing opportunities for boating, swimming and fishing, where feasible.

#### **Science needs:**

- Identify public access sites vulnerable to climate change impacts (e.g. sea level rise, flooding) and potential effects
  - John Wolf said the GIS Team can help with this science need.
  - Kristen provided this link for data related to this topic: FEMA Flood Viewer - <https://www.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd>
  - Emily commented looking more into studies that have researched this and see if it overlaps with any of the CBP public access sites.
- Evaluate the accessibility of public access sites to underserved communities
  - John Wolf said the GIS Team can also help with this science need at least from a regional screening perspective. Public access sites, sea level rise, and underserved communities are all in the Chesapeake EJ Screen application.
  - The Public Access Workgroup is working with the Diversity Workgroup on this science need. Tuana mentioned it is not only about where these sites are in relation to underserved communities but also the qualities of those sites.

- Develop methods for tracking engagement at public access sites.
  - Gina asked how they are tracking people coming to the sites.
    - Olivia said that the workgroup is still working on how to answer this question on how to best track it.
    - Gina suggested the Angler Intercept Survey which is done by each state under NOAA.
  - Emily said some EPA offices are using cell phone data. Bill said he would have to look back at what Narragansett gave him to get at more details about their visitation and "attitude" research.
  - Wendy said there are mechanisms that can be put on a trail to identify this metric.
  - Olivia stated along with this question they are wondering if states are already counting in some way because if they were to do this watershed wide maybe they can tap into the states' efforts.
  - Wendy said it is good to have metrics of engagement as a target, but there needs to be a sampling design and data collection plan to support any evaluation of status and progress. Recommendations of tracking metrics should come together with how it will be monitored, at what frequency, data collection and data management.

#### *Diversity*

**Outcome:** Identify stakeholder groups that are not currently represented in the leadership, decision making and implementation of conservation and restoration activities, and create meaningful opportunities and programs to recruit and engage them in the partnership's efforts.

#### **Science needs:**

- Integrate diversity, equity, inclusion, and justice (DEIJ) considerations across all science-based decisions in the CBP. An existing resource we have for this is the EJ Screen Chesapeake tool.
  - Jim doesn't know the awareness of this within the CBP science community or how it is incorporated within the priority process. He wonders how it can be routinely included in the process. John said the Chesapeake EJ Screen was a pilot of incorporating it with other CBP workgroup actions. The Chesapeake EJ Screen is different from the national tool, but diversity is a key audience of the future cross-GIT mapping effort. Chesapeake EJ screen is tailored towards certain aspects (Climate, Toxics, and Public Access, Environmental Literacy), but EJ screen in general could be applied to anything. The GIS team can work with other workgroups to incorporate their data in the Chesapeake EJ screen.
  - Emily suggested hosting a training for STAR and STAC for the Chesapeake EJ Screen and National EJ Screen. Jim agrees this is a good idea, but also thinks if a workgroup wants to use it then their information should be added to the Chesapeake EJ Screen.
  - Francesca recommended the group should consider other options of incorporating Diversity, Equality, Justice, and Inclusion (DEJI) besides using the Chesapeake EJ Screen.
  - Renee commented that she and Nora have used the "underserved" areas data layer that was part of the cross-GIT mapping effort to help inform

- some GIT funding projects as well as NFWF grant reviews. It would be good to investigate how DEIJ can inform the Vulnerability metrics in the CHWA.
  - Katie suggested incorporating Chesapeake EJ Screen into the new watershed data dashboard. She thinks it could fit under "targeting restoration." Emily said this is a great idea for the next iteration of the dashboard, and she can talk with Tuana and Francesca to figure out what are the best components to consider when people are using the other functions of the dashboard.
  - Emily asked who the contact should be with incorporating DEIJ into projects such as a RFP or GIT funding projects. Tuana said to reach out to her and Francesca, and if more feedback is needed, they can take it to the workgroup.
- Develop DEIJ tracking and/or targeting component for Chesapeake Bay Watershed Agreement goals and outcomes, where applicable.
  - Tuana is already working with the Public Access Workgroup on this idea. Emily asked if she is working with any other workgroups and what this might look like for other groups. Tuana said they are going through the SRS process right now which is taking up a lot of time, but after they are done, they are thinking of going to the other workgroups with ideas to help them incorporate it.
  - Tuana said they are working on incorporating DEIJ into grants. They are also tracking which organizations are getting the funding.
  - Carin suggested we may want to start tracking outputs in terms of changes in actions the program is taking to increase DEIJ. For instance, how many GITs are now using EJ Screen, how many grant RFPs are targeting or emphasizing DEIJ? They should not only track the change itself but whether the actions have influenced that change. She is hoping all workgroups can incorporate it into their Logic and Action plans so that the program as a whole is looking to change their actions based on DEIJ.
- Identify how we will measure success toward meeting our outcome, beyond evaluating the diversity indicator that captures the demographic profile of people participating in CBP groups. To do this, we may consider identifying ways to track inclusion, equity, justice in addition to diversity. We may also consider how to assess broader participation of underrepresented groups in Chesapeake Bay restoration activities at large.

**11:30**

#### **EPA Field Services Branch – Jennifer Fulton**

##### [Materials: Field Services Branch](#)

Jennifer will discuss the ongoing work at the EPA Wheeling Field Office and their resources and capacity which may potentially help accomplish some of the GITs' science needs. STAR will have a Cross-GIT discussion on incorporating these resources.

The Field Services Branch is a team of multi-disciplinary scientists who specialize in stream, wetland, and coastal ecosystems. They are in Philadelphia and Wheeling Offices. They are equipped to fulfill research and science needs focused on aquatic resources while serving as a partner to state and federal assessment programs. They do this by evaluating aquatic resource conditions through collection and analysis of environmental data, developing biological assessment tools, designing studies, and providing training.

They are assisting EPA Region 3 through the Water Division, Enforcement & Compliance Assurance Division, Superfund & Emergency Management Division, ORA Office of Communities, Tribes, & Environmental Assessment, and the CBP. Jennifer thinks the CBP is an untapped collaboration, but there is a lot of potential especially with their mussel and SAV surveys.

Jennifer also provided examples of projects they have participated in such as the Tar Site Remediation Biological Assessment in Kinzua Creek, PA. They worked to report on condition and abundance of biological assemblages to determine aquatic life use impact from waste wood tar deposits. They collected information on biological, physical, and chemical characteristics such as fish abundance, stream habitat measurements, and water quality parameters.

The Field Services Branch also provides specialized capabilities which includes a dive unit to do equipment recovery, sample collection, and photography. They have specialized equipment for example hazmat dry suits, boats from 14 – 35 feet, side scan sonar technology, and more that may be useful for projects with the CBP. There are no costs for their services because they see this as a collaboration opportunity.

Scott asked if people want to continue the conversation, should they contact Jennifer directly? Jen said yes. They can contact her and to please cc Emily Trentacoste and Bill Jenkins in the email.

Scott said he will reach out to Jen to discuss USGS's efforts on stream health and fish assessment and who they are working with to hopefully expand their collaboration.

Emily said a collaboration they are already doing with Jen and her team is with the Stream Health Workgroup. The Field Services Branch is collecting benthic data to help go into the stream health indicator. There are a lot data gaps so they are helping to process citizen science monitoring samples to the level needed for CBP approval. This will allow the data to reach a larger geographic area across the watershed.

Julie said the Climate Resiliency Workgroup has a similar interest of using citizen science to fill in stream temperature gaps. Julie asked if the national assessments based on the presentation include stream temperatures because the current stream temperature climate indicator is outdated. It only goes to 2014. Jen said that every state in Region 3 is collecting continuous temperature data from all their sites. Julie said she will be reaching out to see which sites they have available.

Ken Hyer asked if there is an order of prioritization of which projects they collaborate on if they are being asked by multiple organizations. Jen said they have not reached a point where they have had to say no to any project, but they of course need to make sure they are meeting the needs of the EPA first.

Peter asked if any boats are sitting idle and can be used on the Bay. Jen said there is a range of didn't size boats available to use.

**12:10**

**Issues due to COVID-19 – All**

- Are there any major changes to monitoring programs?
  - Tidal Monitoring
    - Bruce Michael said MD DNR is temporarily shut down. He is meeting with MD DNR leadership to decide the priorities of moving forward and hoping there are opportunities for the staff to operate in a safe manner to continue the long-term monitoring. They are continuing with their data management and information that was collected before the shut down because this can be done remotely.
    - Peter Tango said VA DEQ is not monitoring too.
  - Non-Tidal Monitoring
    - USGS is continuing to sample Non-Tidal Network for MD, VA, and WV.
    - Peter said it is shut down for the moment in PA.
    - Gary said they are not going out in PA because the lab is not available, but they are still doing some in NY.
  - University of Maryland Center for Environment Science (UMCES)
    - UMCES has severe research restrictions. They may continue carrying out their work at home, but they are not allowed to access their field work or lab. CBP UMCES employees are not affected because they can easily telework.
    - The impact to the research enterprise is significant. Work related to human health is still being maintained, and monitoring stations for air pollution and mercury sampling are hopefully going to continue through this crisis.
  - Chesapeake Monitoring Cooperative
    - Liz said they are going to respond that citizen monitoring can continue if it is in a safe manner – stand 6 feet apart from non-household members.
    - Benthic Monitoring programs are on hold because those need be done in groups so they are focusing on field parameters which are done individually.
- Are there any major data management issues?
  - Mike Mallonee is working hard to upload benthic data. He stated he can receive and process data submittals through DUET.

**12:30**

**Adjourn**

**Next Meeting Dates:** April 23<sup>rd</sup>

**Participants:** Gena Hunt, Bill Jenkins, Dough Austin, Bruce Michael, Cuiyin Wu, Breck Sullivan, Laurel Abowd, Jennifer Greiner, Wendy O’Sullivan, Olivia Wisner, Bruce Vogt, Elliot Campbell, Scott Phillips, Bill Jenkins, Emily Trentacoste, Emily Bialowas, Tuana Phillips, Francesca King, Gary Shenk, Jeni Keisman, Jennifer Greiner, Jeremy , Amy Haden, Caitlyn Johnstone, Drew Budelis, Allie Wagner, Caroline Donovan, Fred Irani, Julianna Greenberg, Julie Reichert-Nguye, Katheryn Barnhart, Katie Brownson, Kristin Saunders, Lee McDonnell, Liz Chudoba, Megan Ossmann, Mike Mallonee, Morgan Corey, Nora Jackson,



Regina Poeske, Renee Thompson, Ruth Cassilly, Yeonjeong Park, Angel Valdez, Cynthia Caporale, Ken Hyer, Mark Nardi, Peter Tango, Peter Claggett, Dave Nemazie