Scientific, Technical Assessment and Reporting (STAR) Meeting

Wednesday, May 29, 2019
10:00 AM –12:30 PM

Conference Line: 929-205-6099 Meeting ID: 776-005-307
Webinar*: https://zoom.us/j/776005307
Meeting Materials:
https://www.chesapeakebay.net/what/event/scientific_technical_assessment_and_reporting_star_team_meeting_may_2019
NOTE DIFFERENT LOCATION: UMCES Annapolis Office
429 4th Street
Ian Conference Room

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

AGENDA

Action Item:

- ✓ Follow up on feedback for the Strategic Science and Research Framework in the next STAR meeting.
- ✓ Schedule a meeting for a discussion about stream health metrics.
- ✓ STAR needs to make a data call to get the 2015 data for the stream health indicator.

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

Peter tango shared the new report on global fishing and the increasing intensity of the fishing industry on overfished stocks. It ties into local issues with the recent Atlantic States Marine Fish Commission analysis indicating striped bass have been overfished in the area since 2012 and the decision on closure of the spring trophy rockfish season in Virginia.

Watermen have said this is the worst year they have seen for blue crabs even though the juvenile numbers are high.

Bill and Peter emphasized again how the 2018 wet year has continued in 2019. Bruce mentioned that the Conowingo Dam is not open now, but in May it was open on multiple occasions so there are still very high flows. Peter announced that in June he will be giving a presentation on the continuation of high flows in 2019, and if anyone has information on this subject, to please send it to Breck.

VIMs will soon provide an SAV update. Bruce stated that the information they gave him on SAV showed a drop off, but not as bad as it could have been based on the previous wet year. There are increases in grasses in the lower part of the Bay.

Bill stated we need to have a discussion on the new generation of commercial satellites. Hopefully in the future, we will be able to use a combination of aerial and satellite imagery. Satellite imagery is useful because aerial flights are only issued during certain times of the year, but satellite imagery can be retrieved during any time. He is hoping this can be figured out more during the STAC workshop Peter is working on organizing.
Peter mentioned this goes along with a NASA call he had earlier on a cover crop buoy which uses satellite imagery to capture a time lapse of cover crops to gather day to day information on the status of cover crops.

Mark commented on proposals from USGS for harmful algal blooms. They put one in for the Chesapeake and Delaware basin. They are hoping to make a suit of calibration data.

Renee Thompson announced the Healthy Watersheds goal team has a meeting Thursday, June 6th. The first topic is the TetraTech report on their Healthy Watersheds Assessment for the Chesapeake Bay which may be useful for other GITs' outcomes.

Upcoming Conferences, Meetings, Workshops, & Webinars-

- Coastal and Estuarine Research Federation Conference (CERF), November 3 – 7, 2019. Mobile, Alabama. Abstracts due May 1, 2019.
- Annual Water Resources Conference (AWRA), November 3 – 7, 2019. Salt Lake, Utah. Abstracts due May 6, 2019.
- Association for Environmental Studies and Sciences (AESS), June 26 – 29, 2019. University of Central Florida.
- International Symposium on Sustainable Systems and Technology (ISSST), June 25 – 27, 2019. Portland, Oregon.
- Esri User Conference, July 8 – 12, 2019. San Diego, CA.
- AGU Understanding Carbon Climate Feedbacks, August 26 – 29, 2019. San Diego, CA. Abstracts due May 8, 2019.
- Environmental Leadership Conference for Independent School Leaders, July 17, 2019. Smith Island, Maryland
- Chesapeake Studies Conference, June 5 – 7, 2019. Salisbury University, Salisbury, MD.

10:10 **Communication Team Update– Joan Smedinghoff** (Alliance for the Chesapeake Bay)

10:20 **UMCES Report Card – Bill Dennison** (UMCES)
Bill will discuss the results from the UMCES report card released on May 21st.

The new report card can be found at this link. The Chesapeake Bay received a lower score, but it resulted in the same grade (C) and showed positive trends. The bad scores are expected due to the high rainfalls causing increased runoff. There are better scores at the lower bay. In terms of parameters, dissolved oxygen received a low score along with water clarity. Total phosphorous and benthic communities did not do too bad. The biggest difference in this report card is UMCES included Watershed on their title because they are incorporating more than just the Bay. To highlight what is going on in the watershed, the report card included a benthic index of biotic integrity scores. The Chesapeake Bay Foundation already released their results on the Bay which presented really low scores. The Bay Barometer was released a few months ago showing positive trends, but this report is based on 2017 data. The UMCES Report Card is releasing information that the Bay currently is not doing horrible, but it is overcoming a hurdle on its way to an upward trajectory.

John Wolf asked if the watersheds in the benthic index were all the same scale. Claire stated it is difficult to answer because it is only the 2008 baseline data and not all the data. She also used HUC12 intersected with bioregions, so the units are different sizes. A colored in unit means there were five or more sample locations in that bioregion/HUC12 unit.

10:40 **Update on CBP Indicators – Peter Tango** (USGS@CBPO) **& Danny Giddings** (EPA)
Peter will identify which indicators may be completed this year and discuss the progress of each one along with their connection to the GITs science needs.

Laura Dresher provided Peter and Danny before she left with a document on the status of the indicators. There are some indicators still outstanding. These are the ones Peter and Danny will focus on this year. The Diversity, Citizen Stewardship, Climate Resiliency, Wetlands, and Stream Health indicators are progressing, but still need help in solidifying reporting. The Black Duck, Local Leadership, Healthy Watersheds, and Forage Fish indicators need development support.
Peter then asked these groups where they were in their progress and how STAR could help:

- Diversity recently sent out a survey to update their leadership indicator.
- The Climate Resiliency Workgroup will soon follow up on the data available, but they do no foresee any trouble acquiring it.

- Jen was curious about the reference to the NOAA CAP data which is intermittent. The indicator she is aware of is based on data recorded by the jurisdiction which takes a non-tidal approach.
- The Black Duck indicator is now based on the amount of available food for ducks so the acreage of wetlands in the watershed instead of based on the number of ducks documented by airplanes. They are working on getting the baseline data.
- Local Leadership is exploring how to asses an indicator. Originally, they were trying to find a suite of different elected officials in agricultural, urban, and suburban areas and testing their knowledge of the Chesapeake Bay. As a progression, they would provide workshops and materials to help educate the officials.
    - Bill suggested the Workgroup come up with the question they are looking to answer with their indicator and present it to graduate students for a potential thesis topic.
- Mandy has recently been employed to follow through with the forage fish indicator.

11:10 **Update on Stream Health Indicators – Claire Buchanan** (ICPRB)
Claire will provide an update on Stream Health indicator metrics and analysis.

The 2000 Chesapeake Bay Agreement stated there needed to be a decision on a common method to measure and evaluate stream health, provide stream monitoring data, and establish a goal. The CBP decided to measure biology. Macroinvertebrates are monitored by all jurisdictions with similar field and laboratory methods. The Chesapeake Basin-wide Index of Biotic Integrity (Chessie BIBI) was created to gather all the sampling. It contains more than 25,000 sample events from federal, state, county, and citizen monitoring programs. The goal from the 2014 Chesapeake Bay Agreement is very generic. As a result, decisions were needed to be made on this non-specific goal. Some of the following issues were answered for the goal and others still need to be decided:

- What is the baseline period?
    - 2006 – 2011 is the "2008 baseline"
- Which method to resolve sampling bias and data gaps?
    - Use proportional Watershed Rating method to avoid spatial bias caused by more intense sampling in some urban areas.
    - Fill in data gaps with predictive model results
- Build consensus on what qualifies as 10% improvement.
- What does it mean by health and function?
- What stream GIS layer resolution should be used for the "improvement" of ten percent of stream miles.
- Establish more sentinel sites for trend analysis.
- Verify site type as probabilistic vs targeted.

- Implement a communication strategy.

The Preliminary 2008 Baseline showed 43% of the watershed is excellent/good, 17% is fair, and 40% is poor/very poor. The first post-baseline is 2012 – 2017. They can get the modeling data for this baseline, but they do not have the monitoring data for anything past 2014. It is a matter of updating the database.

Bill Ball asked they considered doing a rolling average baseline. Claire stated this is great idea, but they still don't have the data yet for 2015. It is collected but not analyzed yet. Another issue is that the model needs to update its land cover layer and would then need to have a different land cover layer for every year.

To learn more about the Chesapeake BIBI, follow this link.

11:30 **Update on CMC – Liz Chudoba**

Liz will provide an overview and update on the Chesapeake Monitoring Cooperative with a focus on the benthic invertebrate monitoring done by citizen groups and the new Data Explorer.

Liz showed the sites which are a part of the Chesapeake Bay Program Monitoring, the volunteer and nontraditional groups integrated into the CMC, and all the known volunteer and nontraditional groups which she hopes to reach out to and help them meet the CBP monitoring standards. The data in the Data Explorer includes water quality and benthic data which was just added this week. Liz than gave an overview of the Chesapeake Data Explorer website, where to find information, and what graphs the website provides. On the visualization page, the data is averaged, but if a user downloads the data, it is the raw data. How the data is transferred begins with the volunteer group uploading the metadata to the Chesapeake Data Explorer. It is then publicly available. The next step is for Liz to upload it to the CBP Duet System. The CMC recently made their first 2018 upload with 40,000 data points last week. This data is then transferred over to the EPA WQX. Next steps include taking a deeper dive into the data to organize what is available and where so it can hopefully help with the CBP indicators.

12:10 **GIT Funding Discussion & Strategic Science and Research Framework Feedback**

GITs may have an open discussion on possible ideas for proposals focusing on ones with cross-GIT collaboration. This discussion will also provide an opportunity to narrow in on proposals focusing on science and connecting it with the Science Needs list.

Bruce Vogt spoke for the Fish GIT on potential GIT proposals they are submitting. They formed their list based on the science needs they proposed for the Strategic Science and Research Framework. They are not putting anything in for blue crab because it is not cross-GIT and while it is a need, it is not as pressing as

some of the other ones. One project is focused on the oyster restoration BMP. They are curious on how to get it incorporated into the Watershed Implementation Plans, but there are data gaps. The GIT wants to look at striped bass habitat to find where spawning and nursery habitat are in the Bay and how are they changing over time. Another one with a lot of interest is following through with a fish indictor for the Climate Resiliency Workgroup. There last idea is a shoreline website to help communities build living shorelines.

The Climate Resiliency Workgroup met with the Fish GIT, and they are interested in advancing the fish indicator. The CRWG also discussed doing a proposal for a workshop with the Fish GIT on the Climate Smart Tool.
The Climate Resiliency Workgroup is also thinking of ways to incorporate climate aspects into the SRS process so that GITs include it in their workplan. This may involve having a climate representative at the SRS pre-meetings, adding a slide to the SRS presentation, or including a paragraph section in the SRS materials.

12:30 Adjourn

Next Meeting Dates: June 20th (Note: The next STAR meeting changed from June 27th to June 20th)

Participants: Bill Jenkins, Laurel Abowd, Mike Mallonee, Bruce Michael, Renee Thompson, Scott Phillips, Annabelle Harvey, Liz Chudoba, Sally Claggett, Jeremy Hanson, Claire Buchanan, Douglas Austin, Mark USGS, Durga Ghosh, Jennifer Griener, Allie Wagner, Michelle Williams, Danny Giddings, Kristen Saunders, Jennifer Dopkowski, Peter Tango, Bill Ball, Rebecca Chillard, Breck Sullivan, Emily Trentacoste, John Wolf, Greg Barranco, Angie Wei, Paige Hobaugh, Dia Brown, Makayla Brown, Bruce Vogt