

Scientific, Technical Assessment and Reporting (STAR) Meeting

Theme: Science needs of Local Action Cohort and upcoming monitoring opportunities



Thursday, March 25, 2021

10:00 AM – 12:30 PM

Join by Webinar:

Meeting Number: 120 432 2590

Password: STAR

Webinar*: <https://umces.webex.com/umces/j.php?MTID=m56392f1e8aadcd5a46ca559606049e25>

Or join by phone:

Conference Line: +1-408-418-9388 Access code: 120 432 2590

Meeting Materials:

https://www.chesapeakebay.net/what/event/scientific_technical_assessment_and_reporting_star_team_meeting_march_2021

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

AGENDA

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

Upcoming Conferences, Meetings, Workshops, & Webinars-

- [Fit-for-Purpose Water Updates and Life Cycle Comparisons of Non-Potable Water Reuse Scenarios - March 31 \(Webinar\)](#)
- [Estuary Research: Engaging the 5 Senses - April 1 \(Virtual\)](#)
- [Agricultural Conservation Technical “Boot Camp” Training Basic Level - April 12-15 & August 2-4](#) • [National Watershed & Stormwater Conference - April 13 - 16](#)
- [Atlantic Estuarine Research Society & New England Estuarine Research Society-Joint Conference -](#)

[April 27-30 \(Virtual\)](#)

- [Enhanced Aquifer Recharge: Influence of Stormwater on Groundwater Quality and Aquifer Recharge - April 28 \(Virtual\)](#)
- [2021 Pennsylvania Groundwater Symposium - May 5 & 6 \(Virtual\)](#)
- [D.C. Department of Energy & Environment \(DOEE\) Quarterly Stakeholder Meetings - May 6, August 5, November 4 \(Virtual\)](#)
- [VAEE Virtual Mini Conferences - May 22, July 17 & October 23 \(Virtual\)](#)
- [Mid-Atlantic Climate Change Education Conference - June 28-July 1 \(Virtual\)](#) ● [Agricultural Conservation Technical "Boot Camp" Training Level II - August 23](#) ● [CERF 2021 Is Going Virtual!1-4 and 8-11 November ABSTRACTS DUE- May 5th, 2021.](#)

10 :05 CBP [Communications Update](#) – Marisa Baldine (CRC)

Action Items:

- A USGS report will be distributed focusing on altered stream flow and its effects on benthic communities.
- A NOAA technical memo on the ecosystem services of oysters will be released.
- Marisa Baldine says the bay barometer release is still on hold, although the communications team will soon be releasing their creature feature as well as a series of monthly webinars.
- Scott Phillips says Chesapeake Bay awareness week is in April and it will be good to watch for people if they have Maryland Public Television.
- Marisa Baldine says this will overlap with potential earth day activities as well as with the UMCES creature of the Bay publication.
- *CHAT*
- *from Denice Wardrop to everyone: 10:20 AM*
 - *CRC Roundtable on April 21 is a special panel on History, Current Status, and Future Vision of CB*
- Scott Phillips asks for any other products which others want to make Marisa aware of?
 - Denice Wardrop brings up the CRC roundtable becoming 90 NOT 60 minutes. about where we've been, where we are and where we're going, this will be related to earth day.
- Scott Phillips says USGS has released a report on altered stream flow and its effects on benthic communities. He will send this out to STAR and the stream health work group.
- Bruce Vogt completed a NOAA technical memo on the oyster ecosystem services research including 9 projects spanning denitrification rates to economic impacts. It is a nice summary which can be sent around to STAR or he can present at some point. It fits well with cobenefits and the need for healthy reefs.

- Bruce Michael says the Conowingo hydroelectric facility got a 50-year license last week. The approved settlement agreement between Exelon and MD was approved. Exelon will provide 200 mill usd over 50 years to fund restoration. This will tackle freshwater mussel restoration with 4 mill usd for a freshwater mussel hatchery. This will be done over the first few years of the project. MDE will manage a clean water fund for BMP restoration and put in funding for a Conowingo monitoring station too.
- *CHAT*
- *from Kristin Saunders to everyone: 10:24 AM*
 - *Bruce, is it \$200 million per year or total?*

**10:10 Including Indicators as a part of Strategic Science Research Framework (SSRF) -
Katheryn Barnhart (EPA)**

Provide a brief outline of how the science needs in the SSRF can play a role in identifying needs for indicator development. Goal Teams may use this time to share updated science needs concerning indicators for CBP outcomes.

Action Items:

- The Status and Trends workgroup will continue efforts to combine science needs and indicators at STAR meetings to maximize efforts by STAR members.
- Next month Bill Dennison's class will present on several environmental justice indicators expanding beyond water quality including DEIJ.
- Katheryn Barnhart presented on the status and trends workgroup indicators in February. It was suggested to view how the science needs framework can shape indicator development. She wanted to dedicate time in STAR meetings to update science needs about indicators and combine with the framework for the status and trends workgroup and the science needs framework to help develop indicators. She then moves to ask if we can start with the Tree Canopy workgroup as a start.
- Scott Phillips says as we go through presentations, we will want to discuss science needs to update the indicators within the science needs database. He plans to combine indicators into STAR meetings to make a more efficient use of time.
- Bill Dennison says next month he will have his class present on several environmental justice indicators. He thinks expanding indicators beyond DO, Nitrogen etc., to DEIJ is a good idea.
- Scott Phillips says every time SRS goes to MB they present and part of that is the science portion to follow up on the science needs. Julie will start presenting then Peter and Renee will go.

10:20 – 11:35 Science Needs of the Local Action Cohort (3 Outcomes 25 minutes each)

Materials: The Outcomes Tree Canopy, Land Use Methods and Metrics, and

Land Use Options Evaluation science needs.

A representative from each outcome from the Local Action Cohort will discuss their science needs for next 2 years that were identified during the SRS process. Action: : The information will be used to update the science needs database and discuss the opportunities of how they can be addressed.

10:20 [Outcomes Tree Canopy](#) – Julie Mawhorter

Action Items:

- The Outcomes Tree Canopy Workgroup will work to address the current projects and resources for her workgroup and assess if they have enough capacity to complete desired projects.
- Outcomes Tree Canopy will work to assess existing tools and data to help target tree canopy efforts for env justice goals synthesize this information and identify knowledge gaps.
- Outcomes Tree Canopy will look to increase funding to expand outreach with the help of Rachel Felver and Britt Slattery
- Julie Mawhorter says they are early in the process and are focused on capacity building needs for partners in the watershed. As a result, they haven't framed things in terms of specific science needs. There is a key need to monitor the status of tree canopy and trends will have access to high-res land cover data. This is GREAT for a baseline on what they have. It will be a big focus to do analysis there and make sense of what's happening on the landscape. Thinks this will generate science needs in the future.
 - Big focus over the next few years will be to use data for a Bay wide summary report of current status and trends over the last 5 years and distill this to interpret to audiences. They will also work on county level data for fact sheets for a communications piece for local govt decision makers. Data will be used to test their indicators on forest and tree canopy in developed areas. This will allow them to see if they need adjustments to the indicator.
 - Scott Phillips says you have support to do the work and asks if you need any other people?
 - Julie Mawhorter says she doesn't know. She'll see what the steps are and meet to see if they need more capacity. Asks Peter about exciting capacity?
 - Peter Clagget will talk about this during his presentation.
- *CHAT*
- *from bruce vogt to everyone: 10:40 AM*
 - *Is there data to identify what may be driving trends in areas? understanding first step is having the basic status first*
- *from pclagget to everyone: 10:41 AM*
 - *Bruce- yes and no. I'll discuss this in my presentation.*
 - Scott Phillips says Julie should add in synthesis and technical communication for science needs,
 - [Bill Dennison](#) recalls when Peter Claggett showed high-res data tree

canopy they needed to make decisions if the canopy was over roads, grass, etc. how was this resolved?

- Julie Mawhorter says for land use categories in CB model they have forest and tree canopy over impervious, tree canopy over turf. For outcome indicators they count all categories in urban areas and will see how that works.
- Bill Dennison says his students for next week one of things is access to urban trees and green space so this will have multiple dimensions of environmental and social aspects.
- Julie Mawhorter's second need is to look at existing tools and data to help target tree canopy efforts for env justice goals. They will need to synthesize what's done and in progress then FIND GAPS. They have started talks with CRWG and are learning what they can with Chesapeake env justice and equity dashboard with an existing tree canopy dataset. She has learned of an UMCES report card and will try and share information with this to develop new tools. For Bill's students' American forests has tree equity scores SHE CAN SHARE WITH BILL this will be. populated with urban areas by MAY. There is existing heat mapping work supported by NOAA which works in VA which will be expanded outside of the study area of RICHMOND.
- Kathy Boomer says the nature conservancy works to develop urban canopy tree programs and integrate social sciences. There is concern that tree planting can have possible effects on increased gentrification. Do you have any plans to explore those interactions?
 - Julie Mawhorter says yes. There are many reasons people don't want more trees and that is one. They will need to unpack that more. She asks if Kathy has any research projects on this topic that she knows about?
 - Kathy Boomer says no but there is an awareness that this is an important need which needs to be tied in with social science.
- Julie Mawhorter's third need is for communications and outreach. This is another realm where they are doing research to inform a path forward, Rachel Felver had a GIT funding prop that wasn't funded last year, but she is looking for other paths to move forward. This deals with tree planting communications campaigns within the watershed and tries to use a community based social communications approach to determine why trees were or were not planted. Synthesizing this for what's been done, what's worked and creating communications outreach strategies is the plan. She knows Amy Handen is doing a similar project on social science needs.
- *CHAT*
- *from Britt Slattery to everyone: 10:47 AM*
 - *Julie - I'd be happy to help get folks from Stewardship GIT together with you to discuss the idea for next round.*
- *from amy to everyone: 10:47 AM*
 - *YES I am!*
 - *from amy to everyone: 10:48 AM*
 - *Happy to work with you Julie on this.*
- Britt Slattery is willing to help coordinate with people for the next round of funding regarding the social science piece.
- Scott Phillips says Breck is the keeper of the science needs database, so these will be

added to the database and Breck can help if people need assistance.

10:45 [Land Use Methods and Metrics](#) – Peter Claggett

Action Items:

- The Land Use Methods and Metrics workgroup needs funding and people to complete its projects.
 - Land Use Methods and Metrics will work to better understand the fine scale information provided by higher resolution data and the impacts these data will have on future analyses.
 - Increased communication requirements for the Land Use Methods and Metrics group will be highlighted by a need for increased outreach and tool building for online access to potential users.
 - There is a need to define what is meant by communities as well as how land uses will change and potentially impact these communities.
 - There is interest in determining the reasons for tree canopy loss and bringing this topic up to the PSC or as a STAC workshop.
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- [Peter Claggett](#) says there are large areas of overlap with his and Julie Mawhorter's research so he will touch on similar topics. There is a new classification for TREE CANOPY that happened over the LAST MONTH.
 - Peter Claggett says his needs are the GAPS with no money or people. He lists them as follows:
 - How to increase density of streams and decreased overland flow path length affect the interpretation and modeling for land use and stream flow.
 - Need to understand how we view landscape at higher resolution. We need to change the modeling of nutrient and stream flow.
 - Communication needs to happen on the web with EASY ACCESS to tools that report changes on cover area.
 - Should have maps automated for any geography, local govt, county, state, etc.
 - WILL COST MONEY, don't know how much though.
 - How can land use and change info be BEST communicated to target audiences?
 - Beyond current CBP staff capability they need SUPPORT.
 - What IS MEANT BY COMMUNITIES?
 - Census places, zip codes, low income? NEED TO DEFINE THIS.
 - How does land use and land change impact those communities?
 - Discussions from drafting of outcome. LACK OF DEVELOPMENT is the need for help to find out
 - What causes changes in land use?
 - NEED FIELDWORK to see what's causing changes. Storms, electric companies, mortality, etc. NEED TO TELL IF AG IS INCREASING ANYWHERE?

- Bill Dennison asks if the conversion of pasture to row crops can be detected with remote sensing?
 - Peter Claggett says with land satellite data maybe. They NEED TO GROUND TRUTH THAT to know for sure.
 - Bill Dennison asks how Landsat detects pasture vs crop?
 - Peter Claggett says Landsat has 7 spectral bands which provide more information regarding different crop types, plant matter, which can be detected. Within an agricultural footprint they do rely on Landsat for what's what.
 - Bill Dennison asks if Peter needs a combination of field work and Landsat data?
 - Peter Claggett says yes. One of his NEEDS is to determine Land use areas.
 - This entails someone with a MASTERS LEVEL DEGREE working for 6 MONTHS.
- Bill Dennison says loss of 7k acres of trees in PG county is alarming
 - Peter Claggett says they don't know what's going on. Some are roadside falling, aging forests, relic trees, storm and disease kills, they want to know what's causing these falls but do not yet.
 - [Bill Dennison](#) is very concerned this has HUGE implications on many fronts. BILL SAYS THE PSC NEEDS TO BE MADE AWARE and find out what causes this.
- *CHAT*
- *from Kathy Boomer to everyone: 11:08 AM*
 - *In our neighborhood, utility companies are ruthless with cutting down trees. Also neighbors increasingly concerned with liability for fallen trees.*
- *from jmawhorter to everyone: 11:09 AM*
 - *And this is in our state with the strongest tree regulations in the watershed*
- *from Cbisland to everyone: 11:09 AM*
 - *Bill, I totally agree that this is very concerning. We are not capturing tree loss or wetland loss, just restoration gain.*
- *from Kristin Saunders to everyone: 11:10 AM*
 - *Maryland has legislation being considered this year regarding tree loss - not sure where that stands.*
- *from Kristin Saunders to everyone: 11:10 AM*
 - *Chesapeake Bay Commission has been working on it.*
- *from bruce vogt to everyone: 11:10 AM*
 - *I also wonder what role climate change may have with increased storms, temp, flashiness near streams, etc.*
- *from Denice Wardrop to everyone: 11:10 AM*
 - *Having had lost 15 of 17 ash trees on a 5 acre property to emerald ash borer in PA, I can see a plethora of causes*
- *from Cbisland to everyone: 11:10 AM*
 - *Bruce, to me that is why not capturing loss is so disturbing*
- *from Mark Nardi to everyone: 11:11 AM*
 - *Disease and pests are killing oaks and ash*
- *from pjtango to everyone: 11:11 AM*
 - *IF people lose a tree, do they replace a tree is a simple worthwhile question. In the nearwater zones, if you remove a tree it requires replacement of equal or*

more in Anne Arundel County MD for example.

- *from Denise Wardrop to everyone: 11:11 AM*
 - *Same with wetland loss/gain; it's not in-kind type and place*
- *from pjtango to everyone: 11:11 AM*
 - *Right Peter, shift in native to ornamental nonnative species is not uncommon. That is a part of the nursery industry.*
- *from Britt Slattery to everyone: 11:11 AM*
 - *There may have been a fairly recent rule to prevent planting Bradford pear in some counties incl PG*
- *from Kristin Saunders to everyone: 11:13 AM*
 - *MD initiated a "no net loss of forests" policy several years ago, but as you can imagine, it is hard to capture the loss*
- *from Kristin Saunders to everyone: 11:14 AM*
 - *I don't know if other states have similar policy/law to protect against loss*
- *from Garrett Stewart to everyone: 11:15 AM*
 - *Homeowners have a heightened sense of risk regarding tall trees near their homes. I worked with a homeowners association in NOVA where we got requests to remove healthy mature trees all the time especially after the strong storms in recent years.*
- *from pjtango to everyone: 11:19 AM*
 - *Insurance risk versus vulnerability to home impacts, agreed. Security concerns - people want street lights over dark places for personal sense of security in communities. Yes to species specific effects of invasives as we have seen waves of such effects - Dutch Elm Disease affected elm populations, Beech Bark disease, gypsy moths affected oaks, Emerald Ash Borer is widening its impacts, Hemlock Woolly adelgids severely impacting hemlocks - so many waves of impacts. Many considerations.*
- *from bruce vogt to everyone: 11:20 AM*
 - *thinking about science needs and new technologies can AI be helpful?*
- Bill Dennison suggested contacting the tree fall companies for data on where trees are falling and why.
- Peter Claggett says the composition of forests is also changing which is alarming due to replacement of old species with new ones which are homogenizing forests in a potentially detrimental way.
- Scott Phillips says they likely need to explain aspects of this in the science needs and asks for people from the chat to speak up.
- Carin Bisland says this is important beyond tree canopy. In the 2014 agreement they separated restored and conserved so were not capturing conservation in terms of tree canopy and forest buffers. They ended up capturing a lot of park land and NOT CAPTURING places where we lose tree canopy. ALL CAPTURING mainly is restoration. It is critical to find out where they are losing area. Tree canopy only outcome talks about net gain vs restoration acreage. She is not sure why this is not being captured but IS BIG ISSUE.
- Bill Dennison says this is like the amount of SAV planted vs variation annually in nature. They NEED TO CAPTURE variation for tree canopy.
- Kathy Boomer says they need a finer scale for viewing hydrologic connectivity, Ellen

Walls paper emphasizes hydrologic alterations by humans. She says we need to think NHD is a regulatory data, so we need to be aware of the potential implications for more detailed maps FOR REGULATORY frameworks which are established. She comments on research NEEDS that the Foundation for food and ag research they provide grants and encourages a MOVE AWAY FROM DEVELOPING DATASETS AND TO HYPOTHESIS BASED RESEARCH PROJECTS. This may bring in more money. One thing they are TRYING TO DEVELOP is advancing an understanding of where restoration practices can be most useful and limitations of TERRESTRIAL WATER STORAGE and the distribution of agricultural, aquatic, and forest systems. She wants to bring in new research projects which she feels need funding but have the talent available.

- Peter Claggett says these are good suggestions, he is currently in a group now discussing waters of the US group with EPA region 3 which helps foster relationships. INFORMING management actions, he's been telling states this data is valuable for INFORMING ON THE GROUND MANAGEMENT actions. These data are LESS pertinent to WSM and SPARROW. Due to course calibration of these models these data may NOT IMPACT until those models evolve. EVENTUALLY we'll get to the point where we look at the watershed and say WHO NEEDS TO implement BMPS otherwise it will not be cost effective.
- Bill Dennison says this lends itself well to STAC WS
- Kathy Boomer agrees.
- *CHAT*
- *from jmawhorter to everyone: 11:21 AM*
 - *@Kristin -other Bay states don't have state level policies promoting forest conservation or tree canopy, with the exception of Virginia which has some code that both allows and limits what local govts can do to set canopy requirements within the development process. VA had legislation this session to expand these caps, it is deferred to allow for an in-depth stakeholder process around it. There has been and is still resistance from homebuilders associations*
- *from Scott Phillips to everyone: 11:24 AM*
 - *Julie and Peter, lot's of interest and potential follow-up on loss of tree canopy, and associated causes. Seems like a very high priority science need. Let's look in more detail about what is being done, and gaps to be addressed.*
- *from William C Dennison to everyone: 11:25 AM*
 - *This topic of tree canopy has multiple dimensions!*
- *from Kathy Boomer to everyone: 11:31 AM*
 - *Peter, I meant to share: Iowa State U and USDA-ARS have done a lot of work to improve precision of GIS-based ag land characterizations.*

11:10 [Land Use Options Evaluation](#) – Renee Thompson

Action Items:

- Land Use Options Evaluation workgroup will collaborate with Outcomes Tree Canopy, and Land Use Methods and Metrics to increase capacity.
- Land Use Options Evaluation workgroup will look to address a lack of communication capacity and increase dissemination of knowledge to relevant stakeholders. This can be accomplished in part by finding partnerships with existing communication structures.
- Renee Thompson says they need to translate science materials to local governments and to help her come up with science needs she has broken her needs into different categories. They are as follows:
 - Land use metrics
 - Climate
 - DEIJ
 - User experience and research
 - Synthesis and communication
- *CHAT*
- *from gina Hunt to everyone: 11:34 AM*
 - *Maybe a silly question... but how is public access defined? Is there an access layer? Does this include fishing access?*
 - Renee Thompson answers that the datasets for existing public access and separate for areas they want to put public access, then dream list.
- *CHAT*
- *from jmawhorter to everyone: 11:36 AM*
 - *In case folks didn't see these articles on a really interesting project about an EAB-devastated urban forest that is the focus of a community-based restoration partnership:*
<https://www.baltimoresun.com/features/bs-fe-stillmeadow-church-environment-20210315-zx3gj4bkjzcr5lat2dpqlcxnfa-story.html> and https://www.bayjournal.com/news/wildlife_habitat/baltimore-church-converts-neglected-urban-forest-into-peace-park/article_0630fe16-7859-11eb-8070-7f0cf5e3f3ec.html
 - <https://www.baltimoresun.com/features/bs-fe-stillmeadow-church-environment-20210315-zx3gj4bkjzcr5lat2dpqlcxnfa-story.html>
- *from Kristin Saunders to everyone: 11:39 AM*
 - *Per Gina's question, public access does include fishing...and there are data layers*
https://www.chesapeakebay.net/what/goals/public_access
- *from jmawhorter to everyone: 11:39 AM*
 - *Renee - this is very helpful the way you've laid it all out in these categories!!*
- *from AHANDEN to everyone: 11:37 AM*
 - *That is great Renee! So glad to hear that we are still using what we learned at the social marketing training!*
- *CHAT*
- *from jmawhorter to everyone: 11:39 AM*
 - *Can someone share more about the UMCES translation partnership?*
- Julie Mawhorter likes Renee's way of breaking things out into groups as well as building

a database around losses. Her needs overlap with Renee and Peter, so collaboration is crucial to increase capacity.

- Scott Phillips says science needs could add potential for linking people with projects. They also share these needs with STAC to get more academic inputs.
- Kristin Saunders says she underscores the synthesis and translation needs since she has tried to stand up a local engagement group with communications experts and recognized that they DON'T HAVE CAPACITY IN COMMUNICATIONS SIDE TO synthesize highly technical data and translate it to be easily understood.
- CHAT
- from William C Dennison to everyone: 11:41 AM
 - Here is an example factsheet:
- from William C Dennison to everyone: 11:41 AM
 - <https://www.umces.edu/ian/publication/nutrient-trends-and-drivers-in-the-chesapeake-bay-watershed>
- from gina Hunt to everyone: 11:42 AM
 - Thanks Kristin. I was just thinking that as we develop a fish habitat Assessment, indicating a condition of habitat, it would be good to connect it with access. Suggesting access where there is good habitat - not poor conditions with few fish. Not sure how that is done. I have not connected with that team.
- Kristin Saunders says many jurisdictions feel they are doing great on local engagement and CBP is looking for closer linkage of technical work and systems for local engagement systems to tie this to BROADER GOALS of the CBP agreement. Communication staff LACKS THIS CAPACITY. If this is filled, they can accelerate dissemination of research to relevant decision makers.
- Bill Dennison says this is relevant when EXPANDING beyond water quality TMDL nutrient reductions that the 2014 agreement has the CBP doing.
- Greg Barranco says this will be on the Management Board agenda in 2 weeks. It is apparent WE DON'T HAVE SUPPORT to help jurisdictions help themselves get this work done. They have networks to reach the local level but the CBP partnership isn't taking advantage of these.
- CHAT
- from Kristin Saunders to everyone: 11:45 AM
 - Gina, connect with Britt.
- from Britt Slattery to everyone: 11:47 AM
 - LGAC is hosting a forum in June that may help with some of this
- from William C Dennison to everyone: 11:48 AM
- edX link:
<https://www.edx.org/professional-certificate/usmx-environmental-management-for-sustainability?index=product&queryID=ff13dda013b24aee1a0b2793dfff61507&position=1>
- from jmawhorter to everyone: 11:48 AM
 - Well stated Renee!
- Kathy Boomer says there is an URGENT NEED for a technical communications expert, SHE CANNOT do this herself. She thinks STAC should be the MOST effective way to communicate this science.
- Scott Phillips says IAN specializes in that; it costs money but USGS has a contract to make fact sheets with them. He thinks there should be other opportunities for different

groups to do the same.

- Bill Dennison says that CRC represents another opportunity to train people to communicate. They have a science communications course online which can be audited for free.
- Renee Thompson appreciates the science communications training, but she has taken on many things herself out of necessity but that we need to figure out how to reduce people's workload to people workloads tailored to their areas of expertise.
- Greg Barranco says STAC and its capacity to focus more on behavioral sciences were in a recent discussion. Amy Handen had the idea that STAC membership should focus on having BOTH social and hard science skills set. He thinks it's very difficult to find these dual experts and suggests a separate workgroup under STAC to provide that expertise.
- Bill Dennison says this is a good question to think about.
- *CHAT*
- *from AHANDEN to everyone: 11:49 AM*
 - *They don't*
- *from bruce vogt to everyone: 11:49 AM*
 - *What can we do to better help communities develop strong science based funding proposals to implement projects? for example NFWF climate resilience fund. Going beyond fact sheets to technical assistance*
- *from Breck Sullivan to everyone: 11:50 AM*
 - *@Renee - To help with your climate budget, Julie is in the works of planning a joint meeting with the Wetland Workgroup on marsh migration (design planning, modeling, current efforts). If you are interested, we could invited a subject matter that helps fill a gap for your climate budget or you are welcome to join to learn about the updated science.*
- *from Kristin Saunders to everyone: 11:50 AM*
 - *This may be a situation where we need contract support either with IAN/UMCES or another provider to do the science communication until we have more capacity*
- *from AHANDEN to everyone: 11:50 AM*
 - *They don't have to have both areas of expertise, but social scientists should be integrated into our work.*
- Breck Sullivan added her chat comment that the CRWG is starting a joint meeting with the wetland WG. and are inviting subject matter experts on wetland migration and if this can help Renee, they could invite a subject matter expert to help address her own science needs at that meeting?
 - Renee Thompson says yes.
- *CHAT*
- *from Renee Thompson to everyone: 11:51 AM*
 - *Do Diversity or Local leadership have science needs?*
- *from Kathy Boomer to everyone: 11:53 AM*
 - *As incoming chair of STAC, I am looking forward to integrating social sciences (and managing in the face of climate change) as important threads to all of our discussions.*
- *from bruce vogt to everyone: 11:53 AM*
 - *@Breck here is link to oyster ecosystem services tech memo I mentioned at*

beginning of call to share with team

<https://spo.nmfs.noaa.gov/sites/default/files/TMOHC8.pdf>

- *from Breck Sullivan to everyone: 11:54 AM*
 - *Diversity does have science needs. They are in the Stewardship Cohort. The local Leadership outcome does not have any science needs at the moment.*
- *from Breck Sullivan to everyone: 11:54 AM*
 - *To view other science, again here is the link to the database:
<https://star.chesapeakebay.net/>*
- *from Breck Sullivan to everyone: 11:55 AM*
 - *We are currently working with the Web Team and Doreen Vetter to create a home of the database and SSRF on Chesapeakebay.net and some information on Chesapeake Decisions.*

11:35 Addressing [PSC request](#) to improve monitoring networks - Peter Tango (USGS) and Scott Phillips (USGS)

As part of the SRS process, STAR monitoring identified a loss of capacity in several of the CBP monitoring networks, including the tidal and nontidal water-quality networks. The concerns about monitoring capacity were presented to the Principal Staff Committee in March, and they requested information on how to improve monitoring networks. : Action: This agenda item will provide an overview of the next steps being considered to address the PSC request.

Action Items:

- Peter Tango is in the process of developing a work plan to fill the PSC request by creating a new team, and a STAC workshop. This process will hopefully be finished by the end of 2021.
- Scott Phillips has a working document containing various workgroups who can help address the PSC monitoring request.
- Monitoring network improvement efforts will accept names of modelers outside of the Bay Program who might use monitoring data.
- Scott Phillips found some networks capacity was declining, lost due to inflation and flat funding. PSC asked STAR to give status to networks and what needed to improve them.
- Peter Tango takes the group through ideas for how to IMPROVE THE MONITORING NETWORK.
 - Peter Tango is in the process of developing a work plan to fill the PSC request by creating a new team, and a STAC workshop. This process will hopefully be finished by the end of 2021.
- Scott Phillips says many workgroups are in place to address this request. They currently have in progress a 2-page document which will be altered as plans develop. They will

next move to let the MB know what STAR will be doing to address this PSC request.

- Greg Barranco says they are first on the agenda for the April 8th management board meeting.
- Bruce Michaels says this is a great opportunity and there is a need to get the management board to see the slight degradation of the monitoring program over time. This will show the issues MANY jurisdictions will encounter with level funding.
- Bill Dennison says another aspect to this is the INCREASED DEMAND ON MONITORING that is taking place. There will be new workgroups focused on water quality which will want this data and demand is another factor in doing this. Bill says this will need to be done quickly and should move outside of the monitoring team and assess what other monitoring data users will want from this network.
- Scott Phillips says the monitoring needs are already in the databases, so we have them compiled. The challenge is they won't be able to fulfill all those needs but will be able to get priorities and meet highest priority ones.
- Bill Dennison says we need to reach out further than the existing CBP partnership.
- Kathy Boomer asks for the inclusion of modelers, especially those who develop decision making tools to inform restoration efforts.
- Peter Tango says have Gary and Lew from the CBP modeling WG in support of the work. They have also gotten fisheries folks identified to invite them in.
- Kathy Boomer says they need simple models too. She wants to see who else might be a good fit.
- Peter Tango says that he welcome names.
- Bill Dennison says the Bob Hirsch method used by Rebecca Murphy will be good input for data analysis.
- Scott Phillips says more is to come.

12:00 Report out on [STAC workshops](#) for 2021-2022 - Annabelle Harvey (CRC)

Report out on which STAC workshops for 2021-2022 were accepted. Action: STAR will discuss which workshops we may want to learn about in one of our upcoming meetings.

Action Items:

- The Comprehensive evaluation of system response (CESR) project will continue collecting text from the estuarine watershed and living resources groups to create a draft report. This draft should be finished by the end of September and the project should be done by the end of 2021.
- Annabelle Harvey says full proposals are not available on the STAC website, but she pulled them into the following google drive for STAR:
<https://drive.google.com/drive/folders/1kNq2590nh0AMJVA3bEtlvMfFkcChPpyc?usp=sharing>
- Annabelle Harvey says STAC funding for this financial year runs from Jun 1st, 2021 to May 31, 2022. She also adds that STAC workshop types have been changes too two

categories:

- Programmatic
- State of the Science
- Annabelle Harvey says that STAC APPROVED ALL THE PROPOSALS RECEIVED they are:
 - Improving the understanding of Science activities for PFAS
 - Evaluating a Systems approach to BMP crediting
 - Improving modeling and mitigation strategies for poultry ammonia emissions across CBW
 - Rising watershed and Bay water temperatures
 - Advancing monitoring approaches
 - Special sessions for COVID impacts as mini-workshop sessions (THIS WAS NOT A PROPOSAL BUT MAY BE INTERESTING)
 - Bill Dennison says the COVID miniseries should start with where the pandemic has pushed people to live.
 - Annabelle Harvey is happy to do that as a session after she sees how the first few go,
 - Bill Dennison agrees to start with three.
- *CHAT*
- *from Kristin Saunders to everyone: 12:27 PM*
 - *Scott and Bill, what is the latest on the STAC CESAR effort?*
- Annabelle Harvey says the estuarine watershed and living resources groups involved and each has some drafted text. At the March meeting each group had crossover and breakout time, but they are all in different places. Moving forward they want all WG's to be brought to the same point of getting text down.
- Bill Dennison says they are really looking for a complete draft in September with this finished by the end of the calendar year. 2021 should see the end of CAESAR.
- Scott Phillips says if you come to a good time getting preliminary recommendations to others this is a good idea.
 - Bill Dennison says they can do these piecemeal or together but should have some by the end of the summer.
- *from Scott Phillips to everyone: 12:29 PM*
 - *Comprehensive evaluation of system response (CESR)*
- *from Kristin Saunders to everyone: 12:29 PM*
 - *Will there be any interaction with chairs or MB members to have a sense of what is coming, or what would be helpful to come out in that report?*
- *from Kristin Saunders to everyone: 12:30 PM*
 - *In the "no surprises" category*
- *from Annabelle Harvey to everyone: 12:31 PM*
 - *MB has received updates in program updates and had a few presentations early on, but we will make sure to get another presentation in front of them! Thanks Kristin!*

12:30 Adjourn

Next Meeting Dates: April 22, 2021 (10:00 AM – 12:30 PM)

ATTENDEES:

Greg Barranco, Garrett Stewart, Bill Dennison, Breck Sullivan, Scott Phillips, Amy Handen, Annabelle Harvey, Briana Yancy, Julie Mawhorter, Douglas Austin, Denice Wardrop, John Wolf, Julianna Greenberg, Britt Slattery, Mark Nardi, Bruce Vogt, Peter Tango, Justin Shapiro, MArisa Baldine, Liz Chudoba, Peter Clagget, Dorene Vetter, Kristin Saunders, Gina Hunt, Jackie Pickford, Hilary Swartwood, Renee Thompson, Mandy Bromilow, Megan Ossmann, Katheryn Barnhart, [Laura Cattell Noll](#), Bill Jenkins, Nora Jackson, Meg Cole, Qian Zhang, Andy Fitch, Olivia Wisner, Kathy Boomer, Carin Bisland, Lee McDonnell, Mandy Bromilow, Rebecca Murphy, Carl Friedrichs, Caroline Donovan, Dave Parrish, Katie Brownson.