Scientific, Technical Assessment and Reporting (STAR) Team

Thursday, April 23rd, 2026
10:30AM – 12:00PM

Visit the meeting webpage for meeting materials and additional information.

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

Minutes

I. Welcome, Introductions & Announcements (10:30 – 10:45)

Lead: ***Ken Hyer*** *(U.S. Geological Survey, USGS) STAR Chair,* ***Breck Sullivan*** *(USGS) STAR Coordinator, and* ***Peter Tango*** *(USGS) CBP Monitoring Coordinator.*

Upcoming Conferences, Meetings, Workshops and Webinars

- Choose Clean Water Conference – May 18-20, 2026. Lancaster, Pennsylvania.
- Chesapeake Community Research Symposium – June 1-3, 2026. Annapolis, Maryland.
- Restore America's Estuaries' 2026 Coastal & Estuarine Summit – September 22-25, 2026. San Francisco, California.

II. STAR Workgroups and Updated Governance and Structure (10:45 – 11:15)

Materials: STAR Structure and STAR Scope and Function

Breck Sullivan: The Chesapeake Bay Program (CBP) is undergoing a structural reorganization, moving STAR team's and workgroups (WG) to four newly defined goals: Thriving Habitat, Fisheries & Wildlife, Healthy Landscapes, Clean Water, and Engaged Communities. Central to this shift is the evolution of the Water Quality Goal Implementation Team into the Clean Water Goal Team (CWGT). This team will oversee three key outcomes: Reducing Excess Nitrogen, Phosphorus and Sediment (RENPS), Toxic and Emerging Contaminants (TEC), and Water Quality, Standards Attainment and Monitoring (WQSAM). While WQSAM has traditionally sat under the water quality umbrella, its supporting scientists and WGs once under STAR are officially shifting to the CWGT to better align organizational logic.

This structural migration is grounded in a logic model designed to seamlessly connect programmatic inputs to environmental outcomes. By combining WQSAM WGs with those under the CWGT, the program aims to streamline operations and foster closer collaboration. Furthermore, placing these modeling- and monitoring-focused WGs directly under the CWGT is intended to elevate the visibility of monitoring efforts and ensure that field data is more effectively incorporated into predictive models. Additionally, the former Climate Resiliency WG is being renamed to *Adapting to Changing Environmental Conditions* and relocated to the Healthy Landscapes Goal Team.

Under the proposed model, several key WGs will experience shifts in alignment, renaming, or consolidation:

- **Modeling and Data Integrity:** Both the Modeling WG and the Data Integrity WG will transfer directly to the Clean Water Goal Team while retaining their current structures.
- **Criteria Assessment Protocol (CAP) and Integrated Trends Analysis Team (ITAT):** CAP and ITAT will both shift to CWGT, though their final names and exact configurations remain undecided.
- **Monitoring Networks:** The Integrated Monitoring Networks will transition over to CWGT, but the broad group will be reorganized to better represent core networks. Meanwhile, the Status and Trends WG will be sunset; its responsibilities will absorb into an internal Bay Program team focused strictly on indicators.

The co-chairs of the CWGT have proposed dividing the new structure into two functional categories: implementation and technical support WGs. Implementation WG will be primarily policy focused and will include Agriculture, Urban Stormwater, and Watershed Technical among others. The Technical Support WGs will house DI and core monitoring networks, such as Submerged Aquatic Vegetation (SAV), Benthics, and Community Science, alongside specialized teams like the Bay Oxygen Research Group (BORG) and the Hypoxia Collaborative. This division ensures that scientists can focus on generating high-quality data to directly inform regulatory and policy decisions.

Because the CWGT is not traditionally composed of members who have worked closely with STAR, leadership is actively seeking feedback from its scientific community before final decisions are made in May. Several operational questions remain open, such as whether ITAT should remain a standalone technical group or combine with tidal science teams to avoid being diluted by policy-heavy implementation meetings. Additionally, leadership is evaluating how to streamline core monitoring without creating redundant groups for SAV or Benthics, whether the Nontidal Network (NTN) requires separate technical and implementation tracks, and how to best maintain cross-program collaboration so that information flows smoothly across all organizational charts.

Ken Heyer: Over the past few months, extensive behind-the-scenes discussions have taken place to update the program's governance, management, and organizational structure. The overriding priority during this restructuring is to maintain continuity, preventing unintended consequences, operational disruptions, or new analytical gaps while transferring major structural components.

Historically, STAR's governance-mandated mission has been to coordinate monitoring, modeling, and analysis to explain ecosystem conditions across all watershed agreement goals. Moving forward, the partnership’s adaptive management framework will shift away from the traditional Strategy Review System (SRS), yet the core concept of adaptive management remains vital. STAR will continue to support the partnership through every phase of this cycle, from identifying environmental stressors and designing monitoring networks to analyzing data and managing assessments. While many water quality-centric WGs are migrating to the new CWGT, STAR's central purpose as a cross-cutting science coordinator will endure.

Reflecting on STAR’s history, the team occasionally functioned as an organizational "kitchen junk drawer," which provided tremendous flexibility and strong alignment with the Scientific and Technical Advisory Committee (STAC), but created operational challenges. Notably, most housed WGs never directly reported to STAR, causing a disconnect between overarching awareness and

the specific tasks being executed by the science branch. Additionally, a structural separation previously existed between the monitoring world (housed in STAR) and the modeling world (housed in the goal teams). The ongoing reorganization aims to bridge these gaps, fostering a tightly integrated narrative between monitoring and modeling.

The revised Governance and Management Framework (GMF), driven and authored by the agreement's signatories, formalizes these updates. The GMF establishes two distinct entities to support the goal teams and WGs: an engagement support team and a science support team (the evolution of STAR). Under this framework, the science support team is explicitly tasked with coordinating science providers, synthesizing ecosystem-level data for management decisions, maintaining a direct connection to STAC, and addressing complex, cross-goal technical topics that fall outside the scope of any single WG.

Operationally, the restructured science support team will feature a joint leadership model co-led by a member of the USGS and a representative from the Science Analysis and Implementation Branch to ensure lockstep cooperation. Unlike other rigidly defined committees in the Bay Program, membership will remain a broad "community of the willing" composed of partners dedicated to supporting watershed science. The team plans to adjust its meeting cadence to at least six public meetings per year. The team will continue to leverage external science providers and Bay Program Office resources to fulfill technical requests when internal capacity is limited.

A preliminary structural model illustrates how the four new goal teams will intersect with this centralized technical support group to feed priority data up to the Principal Staff Committee (PSC) and Executive Committee (EC). As the partnership transitions, STAR will pivot away from Beyond 2025 planning and ask individual WGs to take a stronger hand in prioritizing their own scientific needs. Acknowledging that reporting logistics and information flows are still being worked out, leadership is planning dedicated agenda items for May and June to further refine the science support framework, and they are actively encouraging partners to submit feedback regarding vital team linkages that must be preserved.

Discussion:
Q: *Peter Tango:* SAV and benthics work squarely in thriving habitats, but they also have goals that are captured in water quality standards attainment assessments. They probably also contribute information to the Healthy Landscapes interaction at the interface between the watershed and the Bay. So, it's interesting to think about whether there is another structure that lends itself to understanding the distributed nature of groups such as that. Benthics is a key piece of the forage for the fisheries, but we also have it representing aquatic life use in the clean water world. These are very distinct needs, yet we're saying that it's going to live here. It raises a question in my mind about whether this is a proper presentation for groups that have very distributed applications in their work and products, or if there is a better model?

- ***A:*** *Ken Heyer:* The goal going forward is not to break things. We need to identify where those disconnections occur, think about solutions, and as always, we'll be improving as we go forward. We need to not lose the really good pieces, and we don't want to do harm in this process.

Comment from chat: *Liz Chudoba:* I think it is helpful for the Chesapeake Monitoring Cooperative (CMC) to be part of the CBP org chart. It is really helpful to have a direct connection

to the CBP structure to know where CMC data is going, how it's being used, and where our team needs to be plugged into. It helps clarify the role of community science data.

Q: *Peter Tango:* Some of the goal teams and operations seem to sit under the Partnership and Accountability Branch, too. Is there a thinking that maybe we need to mesh both of those leadership connections to foster and enhance support across the board?

- ***A:*** *Ken Heyer:* The partnership branch is so important to all of this because adaptive management, indicators, and the Bay Barometer are some of those things that live under the partnership side. However, I don't understand fully yet how the partnership branch will fit in. There is a third support team called Governance and Operations WG. I'm not sure what all is going to be in that box or whether the partnership branch is still a separate, standalone box, but absolutely, we need to be inclusive there and build that collaboration.

Comment: *Julie Reichert-Nguyen:* The presentation focused exclusively on the CWGT, but STAR WGs have historically been designed to support scientific needs across all goal teams. Specifically, ITAT has significant potential to assist other goal teams with living resource assessments, such as those originating from the CESR (Comprehensive Evaluation of System Response) report.

- ***Response:*** *Ken Heyer:* A majority of STAR WGs are migrating to CWGT because they historically supported the WQSAM outcome, but their interdisciplinary utility will not be lost. STAR will continue to operate across all four new goal teams and all agreement outcomes. The expectation is that these shifting WGs will maintain a reciprocal relationship with other teams, allowing cross-program data to still inform outside outcomes like living resources and environmental adaptation.

Comment: *Julie Reichert-Nguyen:* I know you mentioned there is less focus on the science needs database, but my hope is that STAR can still provide information and guidance on funding opportunities. That is one way we've been able to get our adaptation work done, by connecting us with these external funding opportunities like the University of Michigan. The Science Needs Database actually served our outcome well in the past because it was publicly visible. We had university partners reach out to us and say, "Hey, we want to help you with this science need of yours." That generated more commitment than just participating in the adaptation work on paper. My hope is that even though there's maybe less focus on the science needs database itself, there's still an opportunity to connect across the partnership and bring in those new partners to help us with our science needs. That was such a strength for our work under adaptation, and STAR really helped connect us to those opportunities.

III. Updates from the Chesapeake Bay Program: Plastic Pollution Action Team (PPAT) (11:15 – 11:45)

Kelly Somers (Environmental Protection Agency, EPA): The Plastic Pollution Action Team (PPAT) grew out of a 2019 Chesapeake Bay STAC workshop. This initial workshop focused on assessing the state of microplastic science through an Ecological Risk Assessment (ERA) framework, ultimately identifying severe data gaps regarding plastic impacts on living resources. Recognizing the need for a dedicated entity, the Chesapeake Bay Program Management Board (MB) officially authorized the creation of PPAT in 2020. The board issued specific foundational directives to guide the team's long-term blueprint, including the development of preliminary risk assessments, science strategies, monitoring policies, and source reduction plans.

In 2021, PPAT initiated its first major projects, beginning with a uniform classification and unit terminology guide to ensure that stakeholders could share comparable monitoring data across the watershed. Under this framework, the team standardized the definition of microplastics as ranging

from 5 millimeters (mm) down to 1,000 nanometers (nm), while nanoplastics were defined as 1 to 1,000 nm. Simultaneously, the PPAT partnered with Tetra Tech to develop a conceptual ERA using the Potomac River as a model. Using a broad definition of microplastics as an environmental stressor, the team selected juvenile striped bass as the biological endpoint due to the species' abundance, wide distribution, and presence in the Bay Agreement. The resulting food web model mapped how microplastics travel from sources like urban runoff and wastewater treatment plants into lower trophic organisms, threatening the growth, behavior, and survival of juvenile fish through ingestion and physical blockages.

Building on these conceptual models, PPAT expanded its research in 2022 by updating the Potomac River ERA to focus on specific lower-level taxa, specifically mysids, amphipods, and bay anchovies, while factoring in plankton regime shifts. The team also produced a linkages report to evaluate how microplastic pollution directly threatens the broader goals of the 2014 Chesapeake Bay Agreement, specifically regarding SAV health and blue crab and forage fish abundance. A critical field study in the Anacostia and Potomac rivers validated these ecological concerns, revealing a microplastic occurrence rate of over 25% in young-of-year Striped Bass, with microfibers emerging as the dominant particle type across all examined trophic levels. Researchers noted that these ingestion rates could negatively impact future fish recruitment success, which is particularly concerning given recent recruitment declines in Maryland and Virginia.

Between 2023 and 2025, PPAT, EPA, and Tetra Tech finalized a comprehensive framework for monitoring plastics in the Chesapeake Bay. This framework avoided creating redundant systems by strategically identifying opportunities to integrate microplastic sampling directly into preexisting state, local, and regional monitoring programs. To ensure data transferability across jurisdictional lines, the document featured field sampling and laboratory reference guides as technical appendices. Key near-term and future recommendations from this framework include adding water and sediment plastic analysis to current programs, estimating total bay loads, monitoring plastic types in 20% of samples to identify product sources, and executing targeted food web and chemical toxicity vector studies.

During this same period, PPAT encountered mixed results with several targeted field and laboratory initiatives due to external resource constraints. A planned project to expose juvenile striped bass to microplastic-dosed mysid shrimp successfully completed its field-sampling component in the Patuxent and Potomac rivers, but the laboratory exposure phase was prematurely terminated due to circumstances beyond the team's control. Concurrently, a preliminary source tracking pilot study conducted with the EPA’s Office of Research and Development analyzed bulk storm flow samples across various land uses in the Potomac River Estuary. Though the study's scope was limited by funding, microplastics were detected in every single sample taken; cellulose was the most abundant material overall, while polyethylene dominated wastewater samples. To improve future source tracking, the team recommends increasing the number of sampling stations and shifting from bulk samples to inline pump filtration or net sampling.

Moving into 2026, PPAT is executing the final components of its original MB charge by launching a source reduction strategy in partnership with the contractor RTI (Research Triangle Institute). Through the spring of 2027, this project will deliver a comprehensive literature review of regional and international reduction methods, an inventory of active plastic pollution reduction efforts within the watershed, and a final strategy outlining voluntary management, single-use plastic prevention, education, and extended producer responsibility. In parallel, a new project spearheaded by Virginia Department of Environmental Quality (DEQ) and the Virginia Institute of Marine Science (VIMS) is commencing to quantify and characterize microplastics in the gut

contents of 60 archived fish collected during the EPA's National Coastal Condition Assessment Program. Expected to conclude in the summer of 2027, this study aims to identify spatial hotspots of contamination; furthermore, project leaders are actively seeking funding and partnerships to expand this methodology to 102 similar archived fish samples currently sitting in Maryland.

Discussion:

Q: *Breck Sullivan:* For the monitoring framework that you mentioned, since it's been a few years, have you seen people execute that framework or provide case studies utilizing it?

- ***A:*** *Kelly Somers:* Not yet. It was published last summer and we have not gotten a chance to trial any of it. There were a couple of recommendations we wanted to pilot; it's just a matter of identifying funding and partners. Some of our partners have made piecemeal efforts; for instance, Virginia is doing this gut content study, and Pennsylvania Department of Environmental Protection (DEP) has done some preliminary microplastics investigations as well. However, there hasn't been a synthesized movement yet toward the framework recommendations where we actually leverage those existing Bay monitoring programs.

Q: *Peter Tango:* Going forward, isn't there an indication of a focus on plastic sources and doing some accountability there?

- ***A:*** *Kelly Somers:* That's definitely something from our original charge from the MB. It's one of the lingering things we have to meet for that original charge, alongside continuing to update and refine the risk assessment we've been working on since 2021. The source reduction strategy project that just got started is going to be at least the first step in addressing that, and the outcomes should provide achievable voluntary actions that partners can take to start. One of the near-term actions floated from the framework that we were interested in piloting was seeing if we could add microplastic collections to the RIM (River Input Monitoring) stations. There was interest in trying to integrate the collection of water and sediment samples into those existing monitoring programs, and we are still interested in figuring out how to accomplish that. It will take partner support and funding, but members of PPAT would be excited to see it happen.

Q: *Kaylyn Gootman:* One question for you from the STAR perspective: are you aware of one, or hopefully more than one, lab in the Chesapeake Bay watershed or EPA Region 3 that has the capability of doing the kind of analysis you need? I'm trying to think about who's available so we can start looking at costs and where to get funding for that work.

- ***A:*** *Kelly Somers:* Two of our PPAT members have equipped, clean labs and clean spaces. Dr. Seeley's lab at VIMS is one, and she's going to be doing some of the upcoming work with Virginia. Dr. Davidson from Catholic University also has a lab, and he is a member of the PPAT. His lab was funded through a unique mechanism via the Clean Water SRF (State Revolving Fund) using some toxics money. One of the ideas floated around PPAT for a potential future presentation where we do a virtual lab tour for our members to showcase the spaces of the folks on PPAT who have these capabilities. Whether it's an in-person field trip or a virtual tour, they can show us their instrumentation, capabilities, and the different quality assurance mechanisms they have in place in their clean spaces. Getting the word out that this analytical capability now exists is important because that was always a barrier in the past. Now that we have it here in the region, we want to highlight it.

- ***Q:*** *Peter Tango:* just one more point from the EPA side regarding inspiration for innovation: the Fort Meade facility used to have a wide range of capacities. Is there any space or potential

to build out there, or is it more complicated to interact with that location because it's a Fort Meade landscape?

- ***A:*** *Kelly Somers:* They really needed the filters to be a lot cleaner, so there were some barriers there. I'm not aware if Fort Meade has the analytical equipment or the expertise to run it.

Q: *Ken Heyer:* Under the new governance structure framework, PPAT was set up as an action team. Am I correct that it is becoming a WG now? The idea is that action teams have natural sunset dates and go away, whereas WGs are permanent and standing. Is it becoming a WG, and is it going to remain under the toxics outcome?

- ***A:*** *Kelly Somers:* it's TBD. The partnership needs to make a decision on that before it can happen.

Comment: *Peter Tango:* It sounds like there is synergy for our Nontidal Network WG (NTN) to connect with the PPAT and ask, given the infrastructure we have at the RIM sites, what it would take. Whenever we ask our monitoring teams to do something, I respect that they are normally stretched to capacity just managing their current sampling. However, tidal groups in the past have always championed efforts to add additional capacity and support if it just meant dipping a bottle of water and passing it along. It just depends on the magnitude of the need and working with the group to see what we can add.

- ***Response:*** *Kaylyn Gootman:* This really puts things into focus as we're thinking about structure, how monitoring touches all of our goals, and the opportunities to work with groups like the PPAT to leverage our existing networks. It helps us think about how we might propose alternative options to the structure.

IV. Adjourn **(12:00)**

Next Meeting: *May 28th, 2026, from 10 AM – 12 PM.*

Attendees:

- Peter Tango (USGS).
- Allison Welch (CRC).
- Breck Sullivan (CRC).
- Gabriel Duran (CRC).
- Julie Reichert-Nguyen (NOAA).
- Pat Thompson (EnergyWorks Group).
- Kelly Somers (EPA).
- Keith Bollt (EPA).
- Kaylyn Gootman (EPA).
- Matthew Robinson (EPA).
- Coral Howe (USGS).
- Tou Matthews (CRC).
- Cynthia Johnson (VADEQ).
- Amy Handen (EPA).
- Chris Guy (USFWS).
- Ken Hyer (USGS).
- Carl Friedrichs (VIMS).
- John Wolf (USGS).
- Mary Stack (ICPRB).
- Rebecca Murphy (UMCES).
- Caroline Kleis (CRC).
- Alexandra Fries (UMCES).
- Emily Young (ICPRB).
- Ann Foo (UMCES).
- Melissa Fagan (CRC).
- Christina Garvey (CRC).
- Meg Cole (CRC).
- Katie Brownson (USDA).
- Alex LoCurto (Alliance for the Chesapeake Bay).
- Marisa Baldine (Alliance for the Chesapeake Bay).
- KC Filippino (HRPDC).
- Liz Chudoba (Alliance for the Chesapeake Bay).
- Ashely Hullinger (PADEP).
- Joseph Morina (VADEQ).
- Normand Goulet (NVRC).
- Nick Staten (CRC).
- Petra Baldwin (CRC).
- Jessica Blackburn (Alliance for the Chesapeake Bay).
- Auston Smith (EPA).
- Sophie Waterman (USGS).
- Megan Thynge (EPA).
- Rick Mittler (Alliance for the Chesapeake Bay).