



## Scientific and Technical Advisory Committee (STAC)

*to the Chesapeake Bay Program (CBP)*

[June 2026 Meeting](#) | Strategic Planning Meeting

June 15-17, 2026 | in-person format, NCTC

Shepherdstown, West Virginia

### Meeting Minutes

#### Attendance:

**STAC Members:** Matt Baker (UMBC), Charles Bott (HRSD), Chris Brosch (New Castle Conservation District), Tony Buda (USDA-ARS), Kathy Bunting-Howarth (NY Sea Grant / Cornell – [W](#)), Elliott Campbell (MD DNR), Shirley Clark (Penn State), Bill Dennison (UMCES), KC Filippino (HRPDC), Ben Hayes (Bucknell University), John Jacobs (NOAA-NCCOS), Jeni Keisman (USGS), Christine Kirchhoff (Penn State), Scott Knoche (Morgan State, PEARL), Yusuke Kuwayama (UMBC – [W](#)), Erin Letavic (Herbert, Rowland, & Grubic, Inc. [HRG]), Molly Mitchell (VIMS), Brent Murry (WVU), Greg Noe (USGS), Efeturi Oghenekaro (DC DOEE), Kevin Orner (WVU), Leah Palm-Forster (UDel), Kenny Rose (UMCES – [W](#)), Robert Sabo (EPA – [W](#)), Larry Sanford (retired, formerly UMCES), Val Were (CIRA), Weixing Zhu (Binghamton University)

**Administration:** Meg Cole (CRC), Tou Matthews (CRC)

**Guests:** Doug Bell (EPA-CBPO), Jess Blackburn (Alliance / Stakeholders' AC), Karl Blankenship (Bay Journal), Melissa Ann Ehrenreich (ICC – [W](#)), Melissa Fagan (CRC), Victoria Ferguson (Monacan Indian Nation – [W](#)), Kaylyn Gootman (EPA-CBPO), Ken Hyer (USGS-CBPO – [W](#)), Julie Patton Lawson (DC DOEE – [W](#)), Kelsey Leonard (Shinnecock Nation – [W](#)), Lew Linker (EPA-CBPO), Lee McDonnell (EPA-CBPO – [W](#)), Mark Monaco (retired, formerly NOAA), Abel Olivo (Defensores De La Cuenca / Stakeholders' AC), Marty Qually (Adams County, PA / LGAC), Martin Saniga (Sappony Tribe – [W](#)), Kevin Schabow (NOAA – [W](#)), Desiree Shelley (ICC), Breck Sullivan (USGS-CBPO – [W](#)), Casey Thornbrugh (Mashpee Wampanoag Tribe – [W](#)), Bob Waring (Brandon Farms / AAC), Maggie Woodward (CBC)

#### Meeting Overview

STAC convened for its June 2026 Meeting to identify science priorities to inform its advice to the Bay Program in the next year and to reflect on STAC's qualities and achievements to guide its future work.

These minutes are organized thematically to connect meeting insights and summarize discussions that continued across multiple sessions.

#### STAC Business

##### **Call to Order, Setting the Stage**

STAC Chair Bill Dennison (UMCES) called the meeting to start at 9:45AM with an overview of the agenda for Day 1. Dennison provided a quick update of major transitions within the Chesapeake Bay Program and partnership over the last year:

- Dan Coogan (EPA) became Director of the Chesapeake Bay Program Office (CBPO) in September 2025.
- Governor Shapiro (PA) became Chair of the Executive Council (EC).
- PSC was renamed to the Policy Steering Committee (formerly Principals' Staff Committee).

- Four Goal Teams were created to support the [revised Watershed Agreement](#) (previously structured as six Goal Implementation Teams [GITs]).
- The Scientific Technical Assessment and Reporting (STAR) Team was dissolved.
- The Management Board (MB) was sunsetted at the [June 2026 MB Meeting](#).

### *Synthesis Project Update*

STAC Staff provided an update from the STAC Science Synthesis Project, “Evaluating the performance of nature-based coastal protection solutions for natural capital accounting in Chesapeake Bay.” The original objective of the project was to develop a framework for evaluating the effectiveness and resilience of Nature-Based Solutions (NbS) in the Chesapeake Bay region by synthesizing existing tools, indicators, metrics, data sources, and modeling approaches. Due to reduced funding available and shortened project timeline, the project objective was revised to developing a guidebook of performance indicators and scalable metrics that links management objectives, NbS functions, and measurable outcomes. The guidebook focuses on four outcome areas: coastal hazard risk reduction, climate mitigation, habitat quality and ecosystem integrity, and socioeconomic benefits.

### *Previous Meeting Minutes*

STAC members received a consent agenda of minutes from the September 2025 Meeting, November 2025 Meeting, February 2026 Meeting, and April 2026 Meeting and minutes from STAC Executive Board calls from August 2025 through May 2026. Approval of the consent agenda occurred electronically following June 2026 Meeting.

**DECISION:** Consent agenda with minutes from September 2025 – May 2026 Meetings and Executive Board Calls approved electronically following the June Meeting.

### *Member Lightning Talks*

Throughout the meeting, in-person STAC members delivered short lightning talks to highlight their expertise and current work, showcasing STAC’s breadth of knowledge and experience for fellow committee members and Bay Program partners.

### *Membership & Expertise*

A call for nominations for At-Large membership was sent out in Winter 2026 but the selection process was subsequently placed on hold due to uncertainties about resources to support new members. STAC received 10 nominations and the committee considered nominees with respect to needed expertise: multi-sector dynamics modeling, decision-making under deep uncertainty, fisheries, agriculture, public health, climate science, and emerging contaminants and toxicology. Once the STAC budget is finalized, members will score nominees using the membership rubric and will vote to approve top candidates.

**DECISION:** STAC will revisit at-large membership nominations as funding and capacity to support additional members become clearer.

### **Context Setting: STAC Operations**

All Advisory Committees (ACs) were expected to be funded through a single grant by the end of 2026. This grant was expected to reduce financial and staff support to STAC and would impact STAC activities and operations going forward. Dennison asked the committee to begin thinking more strategically about how STAC can continue to provide value to the partnership in this changing and uncertain environment.

## Collaborating Across the Partnership

### **Representation on Goal Teams**

Breck Sullivan (USGS) provided an overview of the updated organizational structure within the Bay Program. The restructure was an effort to simplify and streamline the partnership while aligning with the revised Watershed Agreement. Significant changes include the elimination of the Management Board and the assignment of Goals and Workgroups under four Goal Teams: Thriving Habitat, Fisheries, & Wildlife; Clean Water; Healthy Landscapes; and Engaged Communities. A lead from each of the Goal Teams – Kevin Schabow (NOAA), Lee McDonnell (EPA-CBPO), Ken Hyer (USGS), and Julie Lawson (DC DOEE), respectively – formed a panel that presented on the work of each Goal Team.

To strengthen collaboration across the partnership, the Bay Program requested one or more non-voting STAC representatives on each Goal Team. Representatives would attend Goal Team meetings and share updates with STAC and the Goal Teams, serving to connect aligned efforts. The Goal Teams hope that AC representatives will help advise on priorities and draw attention to blind spots. On Day 3 of the meeting, STAC members were invited to indicate which Goal Team(s) they might be interested in contributing to, though a formal call for representatives would follow electronically after the meeting.

**ACTION:** STAC Staff will circulate a call for members interested in representing STAC on Goal Teams and working with the other advisory committees.

### **Partnering Efforts with Advisory Committees**

Though each Advisory Committee (AC) brings different expertise and perspectives to the Bay Program and partnership, the committees can align overarching messages to have a greater impact. STAC was joined by representatives from each of the other ACs discuss ways for the committees to collaborate.

#### *Stakeholders' Advisory Committee*

STAC was joined by Abel Olivo (Defensores De La Cuenca), Chair of the Stakeholders' AC, and Jess Blackburn (Alliance for the Chesapeake Bay [Alliance]), Coordinator of the Stakeholders' AC. The Stakeholders' AC is interested in speaking across disciplines and breaking down silos. Particular topics the committee would like to explore are long-term public health costs, quantification of costs for water quality benefits, and job training and workforce development.

#### *Local Government Advisory Committee (LGAC)*

STAC was joined by Marty Qually (Adams County, PA), past Chair of LGAC. One of the most important topics to local government is economics. The discussion emphasized the importance of economics to local governments and the opportunity for ACs to help bridge science and government by explaining how science can inform cost-effective decisions.

#### *Agricultural Advisory Committee (AAC)*

STAC was joined by Bob Waring (Brandon Farms), Vice Chair of the AAC. The AAC prioritizes farm viability and profitability, which are influenced by yield and closely tied to soil health. STAC and the AAC have discussed a joint workshop around soil health; a STAC soil health workshop was previously proposed for FY25.

During the Day 2 *Breakout Session*, a group of STAC members and meeting participants further discussed soil health efforts. Waring shared farm practices that have shown to improve soil health and the group produced recommendations to further understand and incentivize these practices. STAC

could choose to have a topical meeting to refine the focus and outcomes of a potential soil health workshop.

### [Across All Advisory Committees](#)

STAC is able to offer space for the ACs to discuss shared interests in its topical meetings. One topic that all ACs are interested in is the impacts of the use of artificial intelligence. Participants identified the impacts of artificial intelligence as a shared interest and expressed support for a joint annual advisory committee meeting, preferably over multiple days for the ACs to meet individually and then have joint plenary sessions and field trips.

STAC will consider the following potential next steps:

- Prioritize cross-committee collaboration discussion early in the STAC Summer 2027 Meeting agenda so it can develop over multiple days.
- Explore joint workshop on soil health: STAC would contribute scientific expertise, and the AAC would contribute on-the-ground farming perspectives.
- Connect urban soil health workshop proposal team with the broader soil health group.
- Plan a field trip, potentially a wastewater treatment tour, and invite advisory committee partners to join.
- Develop accessible, plain-language communications around technical work to build public and elected-official support.

On Day 3 of the meeting, STAC members were invited to indicate which Advisory Committee(s) they might be interested in working with, though a formal call for representatives would follow electronically after the meeting.

### [Broadening Perspectives](#)

#### **Panel: Indigenous Science and Tribal Perspectives**

Aligning with the [Bay Program's acknowledgement of Tribes as formal partners](#), STAC continues to build relationships and collaborate with Tribal nations. The committee seeks to braid different ways of knowing to provide scientific and technical advice for conservation efforts in the Chesapeake Bay watershed. Desiree Shelley (ICC) presented background on Tribal history within the watershed and a brief introduction to Indigenous science, then facilitated a panel of Indigenous scientists who shared best practices for braiding Indigenous knowledge and science with Western science frameworks.

Shelley introduced Melissa Ann Ehrenreich, Executive Director of the ICC, and the panelists: ([presenter and panelist bios here](#)).

- Victoria Ferguson (Solitude / Fraction; VT) – *Monacan Indian Nation*
- Kelsey Leonard (University of Waterloo) – *Shinnecock Indian Nation*
- Martin Saniga ([Yesa:sahj Language Project](#); Upper Mattaponi Indian Tribe) – *Sappony Tribe*
- Casey Thornbrugh (Just Collective; VA DCR) – *Mashpee Wampanoag Tribe*

Ehrenreich shared background on the [Indigenous Conservation Council \(ICC\) of the Chesapeake Bay](#) and its conservation efforts. She recommended STAC consider the [Wiederkehr and Tupponce \(2026\) paper](#) for examples and best practices of Tribal-Federal-State coastal watershed partnerships. Shelley provided examples of Tribal Nations' work supporting conservation and restoration goals in the Chesapeake Bay watershed. Shelley then provided a brief introduction to Indigenous Knowledge, Indigenous science, and data sovereignty.

Panelists drew on their experiences and perspectives to discuss considerations for engaging with Tribal scholars and Indigenous science. Thornbrugh described Indigenous Knowledge as a high-context (community-based and place-based) science. Panelists provided examples of braiding Indigenous science into their work and how Indigenous science has informed stewardship, conservation, and restoration planning in their communities, as well as challenges they have faced working with academic and research institutions. All panelists strongly recommended co-producing research and projects with Tribal scholars from the beginning of the project, rather than consulting or inviting them to participate after research questions have already been decided. Leonard advised that partnerships should strengthen the capacity of the communities they are intended to benefit.

### **Activity: Framing and Futures**

The *Framing and Futures* Activity was designed and led by Christine Kirchhoff (Penn State) and Ellen Kohl (UMBC), co-leads of the [Social Science Workgroup](#) (SSWG). The SSWG provides a platform for integrating social science perspectives into the Chesapeake Bay Program's efforts, holding one-on-one conversations to better understand each other and leading capacity building activities to introduce and explore social science concepts. At the [June 2025 Meeting](#), the SSWG led a *Ways of Knowing* activity that prompted STAC to think about interdisciplinary and alternative ways of knowing, reflect on their own ways of knowing, and identify how exclusion of ways of knowing can hinder production and quality of knowledge in decision making. The SSWG planned the [February 2026 Topical Meeting](#), which brought in panels to talk about how social science is integrated into large-scale watershed restoration programs and how different programs are co-producing science for policy and decision making. Recommendations for next steps for STAC and the Bay Program to integrate social science are provided in the [February 2026 Meeting Synthesis](#).

### *Ice Breaker Activity*

All in-person participants received a role (e.g., waterman, coastal resilience planner) to embody. Participants were tasked with talking to others about the Bay and ultimately finding other people with the same role. However, the rules disallowed revealing the assigned role or explicitly saying how the role would use the Bay. While reflecting on the activity, participants commented that it was difficult to speak around terminology, their interpretation of the role was influenced by personal assumptions and biases, and conversations would first try to find similarities before looking for differences.

### *Mini Lecture*

Kohl gave a brief presentation on framing and imagined futures to prepare STAC for the next exercise. Frames are tools which shape how we understand our political, cultural, and social systems; how a problem is framed influences the solutions considered. Frames can draw attention to some aspects of a problem while obscuring others. Imagining different futures (preposterous, possible, plausible, projected, probable, preferable) is being used in the environmental field as changing environmental conditions make it harder to use what has happened in the past to understand what will happen in the future. Kohl highlighted, "by imaging different worlds, we begin to understand not only the process through which our world was created, but different ways for us to use the world we want to live in."

### *Case Studies on Imagined Futures*

In-person participants worked in groups. Each group received a scenario that describes the present and was tasked with defining the problem, then imagining a future where the problem is solved and a future where the problem is not solved. For each of the futures, the group was asked to describe what that future looked like and how it was arrived at.

Participants reflected on how the framing of the problems influenced the solution and futures imagined. Some groups received a scenario that was framed primarily by natural and physical sciences, and both positive and negative imagined futures focused on ecological impacts; similarly, groups that received a scenario framed primarily by social sciences created imagined futures focused on social impacts. For groups that received a scenario framed by both natural/physical and social sciences, positive futures featured collaboration and integration while negative futures examined impacts to both ecological and social environments.

### **Social Science Breakout Group**

During the Day 2 *Breakout Session*, members of the SSWG discussed next steps for the workgroup. The group acknowledged reductions in STAC support and resources would impact the workgroup as well; however, the SSWG will continue to make progress in capacity building through activities and discussions with STAC. The SSWG could explore incorporating social science considerations into workshop guidelines and criteria and could recommend a general structure for topical meetings that incorporates social science. The group also suggested collaborating with sister programs on one topical meeting each year.

### [STAC Upcoming/Future Activities](#)

#### **Phase 7 Model Review**

The Bay Program uses a suite of models to set targets, plan practices, and track progress across the watershed. The models receive a major update about every decade which incorporates new data, scientific advances, and partner feedback. The newest developed suite of models – Phase 7 – is intended to improve input reliability, representation of real-world practices, and scientific accuracy. The Bay Program will request STAC to perform rigorous, unbiased, science-based reviews of the tools and models associated with Phase 7.

Larry Sanford, who will be leading the Phase 7 Review efforts, provided an overview of the tools and models and the anticipated review process for each.

- The **4-D Interpolator** is a statistical tool that interpolates water quality monitoring data across space and time to support water quality criteria assessments. It is intended to incorporate additional data sources and improve upon the current inverse distance weighting approach. The tool would also assess monitoring data adjusted to reflect changes predicted by Estuary Model scenarios.
- The **Watershed Model** is a system consisting of the [Chesapeake Assessment Scenario Tool \(CAST\)](#), which predicts effects of best management practice (BMP) implementation; CalCAST, which informs calibrations to the CAST model; and the Dynamic Model, which spatially and temporally calculates loads. A variety of data and models provide inputs to the Watershed Model, with the output being nutrient and sediment load by land-river segment and land use.
- The **Estuary Model** takes the outputs from the Watershed Model and calculates how changing loads from the watershed affect water quality. The Estuary Model has transitioned to a Semi-implicit Cross-scale Hydrosience Integrated System Model (SCHISM), which allows it to analyze very shallow water and resolve living resources habitat conditions.
- The **Living Resources Habitat Suitability Model** (LRHSM) analyzes the outputs of other model systems to assess degradation or improvement of living resources habitat. This model was conceived through the recommendations from the [Comprehensive Evaluation of System Response \(CESR\) report](#) and STAC members Kenny Rose (UMCES) and [emeritus] Mark Monaco (formerly NOAA) have been heavily involved in the development of the model.

Sanford laid out an approximate timeline for reviews, starting with the 4-D Interpolator review from October 2026 to January 2027, then the Watershed and Estuary Models review from February 2027 to June 2027, and finally the LRHSM from July 2027 to be completed before the end of 2027. Though the reviews do not overlap in the proposed timeline, the products are connected to each other; reviewers of each model must think about how it interacts with the other models.

Prior to the model reviews, STAC will have to plan and document the process with reference to applicable EPA peer-review guidance. The design of each review will depend on regulatory status of the model, availability of resources, and partner confidence. Draft review questions have been submitted by the model developers.

Discussion among STAC members and meeting participants clarified the role of the 4-D Interpolator in the Phase 7 Model Review and considered logistics for the review panels. Rose raised concerns that reviewing the Living Resources Habitat Suitability Model within the proposed Phase 7 Model Review timeline would be premature; STAC agreed.

During the *Day 2 Breakout Session*, a group of STAC members and meeting participants further discussed the Phase 7 Review process. From this discussion, Sanford drafted a response to the Bay Program's request for reviews which emphasized:

- A rigorous review is essential for the future use of these tools.
- Continued discussion is needed for the scope and contents of the reviews.
- The Bay Program should recognize the need for appropriate support – both personnel and financial.

**ACTION:** STAC will submit a letter to the CBPO in response to the draft review requests outlining considerations for the Phase 7 reviews, including review scope, process, and staffing and funding needs.

### Artificial Intelligence Breakout Group

During the *Day 2 Breakout Session*, a group of STAC members and meeting participants reviewed the draft April 2026 Meeting Synthesis and then discussed how STAC can contribute to further conversations around artificial intelligence (AI) and machine learning (ML). The group focused on responsible use and application of AI/ML within the Bay Program; Participants suggested that STAC further examine the use of AI/ML within the Bay Program, highlighting the need for guardrails around validation, uncertainty, and privacy, and proposing STAC synthesize information on the energy and water demands of data centers.

### Workshops and Topical Meetings

Reflecting on discussions throughout the June 2026 Meeting, STAC identified potential topics for workshops and topical meetings. Members used Mentimeter to rank each list. The highest-ranked workshop topics were soil health/farm viability, applications of sandboxing, and sister program synthesis focused on Tribal, legal, and data-sharing issues. The highest-ranked topical meeting topics were a data center panel, data sovereignty, and a tiered TMDL for the watershed. Full rankings are shown in Figures 1 and 2.

**DECISION:** STAC will revisit the workshop and topical meeting rankings and confirm topics at the September Meeting, based on available resources and capacity.

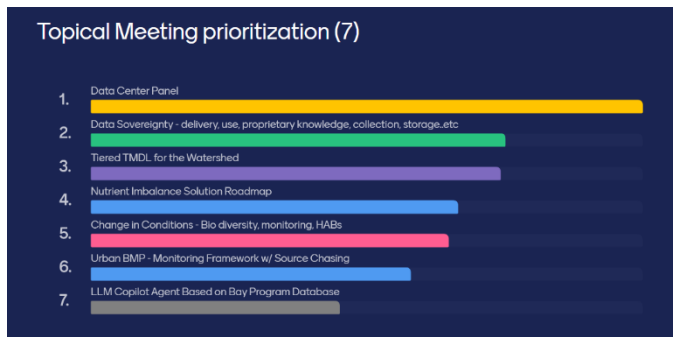


Figure 1. Mentimeter rankings of potential STAC topical meeting topics from the June 2026 Meeting.



Figure 2. Mentimeter rankings of potential STAC workshop topics from the June 2026 Meeting.

## [Meeting Summary \(Public Webinar\)](#)

The final session was open for the public to join virtually. Dennison provided an overview of the meeting activities and discussions. The meeting summary is available to view on the [meeting website](#).

The [STAC September Workshop Meeting](#) will take place virtually on Tuesday, September 15, 2026.