Scientific Technical Assessment

and Reporting (STAR) Team Meeting

Thursday, May 22nd, 2025

10:00 AM – 11:00 AM

Meeting Materials: [Link]

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

ACTION ITEMS

- ✓ Brainstorm how to highlight the indicator framework throughout the partnership.
- ✓ Think about how the indicator framework will align with any future updates to the Strategy Review System (SRS).
- ✓ Continue the conversation on indicators and Beyond 2025 in future STAR meetings.
- ✓ Continue the conversation on John Wolf and Gabriel Duran's work on connectivity within the Chesapeake Bay Program.

MINUTES

10:00 – 10:05 AM Welcome, Introductions & Announcements – *Ken Hyer (US Geological Survey, USGS), STAR chair,* **Breck Sullivan** *(USGS), STAR Coordinator,* **Peter Tango** *(USGS), CBP Monitoring Coordinator.*

Announcements:

- *Decisional Item: Approve new Criteria Assessment Protocol (CAP) Workgroup Leadership – co-Chairs Tish Robertson (Virginia Department of Environmental Quality, VADEQ) and Matthew Stover (Maryland Department of the Environment, MDE).*
  - o Descriptions of Tish and Matt can be found on [the calendar webpage].
  - o These candidates received a lot of support from the STAR members and faced no objections. **This marks the approval of Tish Robertson and Matt Stover as the new CAP WG Co-Chairs.**
- The EPA Mid-Atlantic administrator is visiting the EPA Chesapeake Bay Program office today.

Upcoming Conferences, Meetings, Workshops and Webinars

- [Capital Hill Ocean Week] – June 2-5, 2025, Washington, DC.

- [Coastal and Estuarine Research Federation (CERF) Conference](#) – November 9-13, 2025, Richmond, Virginia.

10:05 AM – 10:20 AM [Progress of Indicator Communication and Outreach Plan for 2025](#) – *Doug Bell (Environmental Protection Agency, EPA)*

Description: Receive an update from Doug Bell, Indicators lead, on the progress of communication and outreach plans for 2025 as first introduced in the [January 2025 STAR Meeting](#). With primary focus on which indicators are being updated and communicated in association with the updated watershed agreement in 2025.

Doug Bell: From the outreach in January, 16 outcomes were planning on updating their indicators in 2025. The Enviromental Literacy and Student outcome has been published. The Watershed Implementation Plan (WIP)/Modeled Loads Reduction Indicator (MLRI) is close to being published. Half of the updates are being worked on right now. The schedule can be seen on the "Indicator Status" slide. Rachel and Jake have put together the initial publication schedule, which is represented in green.

Rachel and Jake decided that press releases will accompany every update, including information pertaining to Beyond 2025 for that outcome/indicator. Each of the outcomes that do not have indicator updates will also have a press release focusing on the outcome status in the Beyond 2025 process.

We don't believe there would be a unique, holistic way to do a specific 2025 update on ChesapeakeProgress. We have decided that the press releases would be our strategy for disseminating that information. Several indicators will have a completed status, such as Oysters, Public Access, and Forage Fish. Those announcements will go out through the combined press releases. This was the best way we could figure out how to speak to everything going on this year while being flexible and not overwhelming ourselves.

Comment: Jake Solyst: There will also be some webinars that will help get the word out on specific topics and before the public comment period.

Comment: Kristin Saunders: I want to put in a parking lot item for you all to think about. When we designed the Strategy Review System (SRS) calendar, we tried to match the indicator releases to when those outcomes were reporting so the Management Board (MB) and Goal Team Chairs would have the most recent indicator information to report through the SRS. I know that schedule changed over the last iteration of the SRS and that the SRS will be under review after the changes are made to the Agreement, but it might be worth looking into the communication strategy for outcomes and indicators in

light of the changes that will be made in the SRS. We can try to make it so we only have to communicate the information all at once, rather than multiple times for the different things. I know the communications office has a calendar and you have that for the calendar year. For streamlining and simplicity, it might lighten our load, if we can tie those together and communicate them as batches through the SRS calendar. I wanted to add that as a suggestion when thinking about post-2025.

Comment: Chris Guy: Wetlands and Black Duck are listed together, but they are currently two separate outcomes and indicators. They will be merged in the future. We just finished wetlands, but we don't think we are going to do a press release because it is a very minor update. Black Duck hasn't been updated since 2015, so this will be a major change, which we are working on now. We used to do population surveys, and those ended because the data was no longer available. We shifted it to available habitat and came up with the Black Duck decision tool, which we will use to see what we have been doing in the last 10 years. We will work with Jake and Rachel on that, once we finish the data analysis. This will be a great story for 2026 because this is where the rubber meets the road. This applies greatly to the people and culture of the Chesapeake Bay Watershed. We will be looking for a lot of support to write this story.

- *Response: Peter Tango:* The issue of not losing wetlands seems like an important note. If we had no net losses, that would be great to highlight.
- *Response: Chris Guy:* I agree, but this will not be included because it was not part of the outcome. It was only focused on gain. For the next one, we will address the net loss.

Q: Ken Hyer: The first two bullets I understand that there will be the press releases for each indicator and the updates to the agreement. Can you unpack the third bullet more? I understand we are not preparing new content, but are we looking for opportunities to repackage and accompany the 2025 Agreement? We are going to be refreshing and reusing the indicator content to present with the update to the Watershed Agreement, correct?

- *Response: Catherine Krikstan:* There will be communication about the new agreement on ChesapeakeProgress. What are you thinking?
- *Response: Ken Hyer:* I see there is an opportunity with the new agreement to pull data from ChesapeakeProgress and use it in the press releases as examples. I was wondering if by "no unique summary" you mean we are going to ditch the old press releases or if we are going to use some of the old press releases and highlight some examples. A lot of people care about progress while talking about the new agreement.

- *Response: Doug Bell:* We didn't want to do structural development of ChesapeakeProgress with the uncertainty of where the outcomes would land and what needed to be represented. Each outcome will still be living there, and we have considerations on how to archive things. There will be live access points between press releases. We are trying to have a stance of if there is a 2025 designation in the outcome, we want to write about that.
- *Response: Ken Hyer:* I wasn't proposing additional updates to ChesapeakeProgress. I was proposing using the information that is there with the updated indicators to tell our story. It seems like we are on the same page.

10:20 AM – 10:55 AM Discussion of Indicator Framework for Beyond 2025 –
Ken Hyer (USGS), Catherine Krikstan (UMCES), and Jake Solyst (Alliance for the Chesapeake Bay)

Description: In coordination with STAR, Strategic Engagement Team (SET), and the Web/Communications team at the Chesapeake Bay Program (CBP), we will discuss with STAR Workgroups and members on how we see new updated outcome language and targets affecting indicators in 2026 and beyond. Please refer to the Chesapeake Bay Program Indicators Framework for a brief overview.

Discussion Questions:

- *How do we want to track progress toward new Beyond 2025 goals and outcomes?*
- *What is the relationship between a Watershed Agreement Target and an Indicator?*
- *What do we want to communicate to our audiences about our work toward these goals and outcomes? Which Outcomes need a new indicator? What can we present alongside already existing indicators?*
- *Do we want to retain "historical" content for outcomes we're no longer working toward?*

Presentation: Doug Bell: I have two slides on the indicator framework, which was established in 2015. There was one that went back to 2005 or 2006. This concept has been in the Program for a while. There are three types of indicators. Nearly all of ours are performance based. There are a few influencing factors, like Bay population for Land Use Methods and Metrics (LUMM). Some of the Water Quality Standards Attainment and Monitoring (WQSAM) indicators are influencing factors for Submerged Aquatic Vegetation (SAV).

There is also an alignment of the decision-making process of adaptive management with the indicators.

Comment: *Denice Wardrop:* The decision framework, the indicator framework, and the SRS system were all in development together. It was initiated because earlier on there were about 120 indicators. They were all condition indicators and no diagnostic indicators. If something wasn't happening, you had no idea why. That's how the whole thing evolved together.

- **Response:** *Doug Bell:* Credit goes to Doreen for keeping a lot of these archive materials. There has been a lot of good historical information to go off of. There is a correlation between influencing factors and performance progress. We don't want to say that correlation equals causation. Every outcome having multiple indicators, influencing factors, performance indicators, and outcome indicators is a grand vision. It has a lot to implement. From 2015 to 2025, a lot of effort was spent making indicators and a lot of outcomes had challenges with that.

Comment: *Ken Hyer:* I have never seen this before and it was super helpful to me. I think we should give this increased visibility throughout the partnership. Also, I love the connection to the adaptative management cycle. To me, this is essentially the logic model and outputs that we had been thinking about for our outcomes/targets. When we were creating our logic model for the WQSAM outcome, we had so many influencing factors that we had to restrain ourselves a bit. To me, some of those influencing factors are more formal indicators that will be included in ChesapeakeProgress while others are in this subgroup that won't be included on ChesapeakeProgress.

- ✓ ***Action Item:*** Brainstorm how to highlight the indicator framework throughout the partnership.

Comment: *Kaylyn Gootman:* It would be helpful to know out of the current set of indicators, which ones are tagged as diagnostic versus performance. I struggle to understand what makes an indicator an indicator. I know we have the framework and the steps, but to me a 'capital I' Indicator is different than a 'lowercase i' indicator or a tool. I would consider MLRI as an Indicator (capital I), while an expected total reduction indicator is a tool. I feel like I don't have a grasp of the definitions and categorizations.

- **Response:** *Peter Tango:* For the WQSAM Outcome, we have been trying to allow for flexibility between those two different types of indicators. We had this strict definition of 'did we meet standards or not?' and that is very binary. We don't daylight much of the nutrient limitation information that we get out of the evaluating progress in the hypoxic volume assessments. They are complementary but not coincidental to the water quality standards. We have many other parameters that are affecting progress, but they are not rising to the surface. I would like to see a balance of those to help inform our progress.

- *Response: Denice Wardrop:* For the original SRS process, the factors were the things you use to build a conceptual model. On one axis you had outputs and on the other you had performance. You drew a line based on how those things were related. If your data was off that line too much, you would go back and look at if you had the right factors and conceptual models. To me, the only thing that should be on ChesapeakeProgress are those Indicators (capital I) or performance indicators. The rest is what you use to tell the story. Theoretically, you shouldn't be able to go through the SRS process if you don't have indicators in each of those blue circles.
- *Response: Kaylyn Gootman:* This makes me think of the nestedness of the 'capital I' and 'lowercase i' indicators or tools.
- *Response: Denice Wardrop:* I wouldn't call them tools because I think all indicators are tools. They are all indicators; just different types of indicators used in different ways. This is a logic model. That's how the indicator framework was developed to go along with the decision framework.
- *Response: Kaylyn Gootman:* They are all tools. It's just a matter of where they fall.
- *Response: Denice Wardrop:* If you went through the exercise of having everybody look at every indicator you've got and figure out if you have filled those three buckets, if you have too many in one bucket. We did this decades ago. You go through all the indicators you have, categorize them, and learn a lot.
- *Response: Ken Hyer:* I am not confident that we have been doing that across our outcomes. This is helping us think about it more structurally. We should get through this in a strategic way.

✓ ***Action Item:*** Think about how the indicator framework will align with any future updates to the Strategy Review System (SRS).

<u>Discussion</u> – This is the beginning stage of this discussion. STAR hopes to continue this discussion in future meetings.

<u>Discussion Question:</u> *Do we want to retain "historical" content for outcomes we're no longer working toward?*

Comment: *Kaylyn Gootman:* Yes, we want to keep historical content archived and accessible.

Comment: *Catherine Krikstan:* I wanted to know if we could put some boundaries on the historical content kept accessible. In the past, we had those 100+ indicators available on ChesapeakeBay.net. When we created the new agreement and created ChesapeakeProgress, we took that information off, put it onto ChesapeakeProgress and limited it to the indicators directly relevant to the goals and outcomes. If everyone

agrees that we should keep historical content, that's awesome. It does require work and maintenance. As we think about what we are going to do we should brainstorm whether we are only going to keep relevant data? If an outcome goes away, then maybe there is a reason. What defines relevance? I don't know if I want to keep a copy of everything on ChesapeakeProgress that could be accessed because that is a lot of work. Moving forward, how do we define relevance? How do we make a decision about what we need to hold on to?

- ***Response from chat:*** *Chris Guy:* Maybe worthwhile we have an annual Bay program training on this for new people including Management Board members.
- ***Response:*** *Kaylyn Gootman:* That's a good point. One possibility could be tying it to prior watershed agreements. Maybe we could have a simpler, shorter version. I think historical information should still be preserved even if it isn't directly relevant.
- ***Response from chat:*** *Megan Thynge:* Catherine - this would be a good point to consider when reviewing the "Data Archiving" guidance we are developing as part of the Data Governance workgroup efforts.

Comment from chat: *Denice Wardrop:* Hershner, C., Havens, K., Bilkovic, D.M. *et al*. Assessment of Chesapeake Bay Program Selection and Use of Indicators. *EcoHealth* **4**, 187–193 (2007). https://doi.org/10.1007/s10393-007-0109-1. Wardrop, D.H., Hershner, C., Havens, K. *et al*. Developing and Communicating a Taxonomy of Ecological Indicators: A Case Study from the Mid-Atlantic. *EcoHealth* 4, 179–186 (2007). https://doi.org/10.1007/s10393-007-0108-2

Comment: *Jeremy Hanson:* I agree with Kaylyn's point and think anything from the previous agreements should be prioritized. Some other things could get consolidated or removed.

Discussion Question: *What is the relationship between a Watershed Agreement Target and an Indicator?*

Comment: *Breck Sullivan:* What Denice said earlier about how ChesapeakeProgress hosts more of the performance-based indicators makes me think of question 2. Not every target we wrote down would necessarily be on ChesapeakeProgress. For the WQSAM Outcome, we have a target to maintain monitoring networks. That doesn't speak to performance in the ecosystem, so it wouldn't become an indicator even though it's a target in our outcome.

- ***Comment:*** *Catherine Krikstan:* I want to provide an example of a factors influencing page that does have an indicator (below). I think you are right. We could limit the public progress website to Indicators (capital I). We wanted factors influencing to

be more central to the conversation with the indicator framework and decision framework. However, those factors influencing pages are buried in the architecture of the page. There is not a standardization of the way different outcomes talk about factors. I don't know where we will be headed for the future. If we continue to handle factors where they are up to each group, that's fine, but if we, STAR, or other groups want to elevate those factors and try to make it more central to the conversation, I think there is an opportunity to change the architecture of how information is structured on ChesapeakeProgress. That way we could communicate factors in a more standard way, so you could publish data and not have it buried within each outcome. It could be a collection of things that affect the indicator or multiple indicators. It depends on the role factors play in the management strategies.

- o *Comment from chat:* *Catherine Krikstan:* Example of a Factors Influencing page *with* an indicator: https://www.chesapeakeprogress.com/conserved-lands/land-use-methods-and-metrics-development/factors
- *Comment from chat:* *Kaylyn Gootman:* Might be helpful to use "Factors" pages to engage with partners and work together on the content.
- *Comment from chat:* *Denice Wardrop:* What you are trying to do is simply give people a trail of breadcrumbs
- *Comment from chat:* *Jeremy Hanson:* I agree w/ Breck's point about #2, and I think there are a number of data points or information that we can acknowledge in our SRS materials/narratives as we work on targets/outputs. Not everything rises to "Indicator" for ChesapeakeProgress

Q: Doug Bell: Gabriel and John, when you did your assessment, how many influencing factors did you find? Were there some that came up a lot? I imagine funding would come up a lot. Were there others that came to mind?

- *A: John Wolf:* The factors influencing outcome achievement was a knowledge graph that we built. You are correct that vocabulary is completely inconsistent from one outcome to the next. Funding was one of them. Impervious surface was one that affected multiple outcomes. There was a lack of consistency. I would love to further that effort with a more standard approach across outcomes. It would be interesting to see which outcomes influence a range of factors.

Breck Sullivan: Thank you everyone. We will be circling back to this conversation and bringing it back to John and Gabriel, as well.

10:55 AM Adjourn

Attendees: Kaylyn Gootman (EPA), Denice Wardrop (CRC), Allison Welch (CRC), Alex Fries (UMCES), Douglas Austin (EPA), Katie Ayers (EPA), Petra Baldwin (CRC), Doug Bell (EPA),

Keith Bollt (EPA), Breck Sullivan (USGS), Carl Friedrichs (VIMS), Catherine Krikstan (UMCES), Gabriel Duran (CRC), Chris Guy (USFWS), Amy Handen (EPA), Jeremy Hanson (CRC), Ashley Hullinger (PA DEP), Ken Hyer (USGS), Jake Solyst (Alliance for the Chesapeake Bay), Julia Fucci (CRC), Kristin Saunders (UMCES), Laura Cattell Noll (Alliance for the Chesapeake Bay), Liz Chudoba (Alliance for the Chesapeake Bay), Matthew Kierce (IWLA), Tou Matthews (CRC), John Wolf (USGS), Ruth Cassilly (UMD Cooperative Extension), Sophie Waterman (USGS), Susanna Pretzer (UMCES), and Angie Wei (UMCES).