Outcome Assessment Round Two Preparation

Thursday, February 20th, 2025

1:00 PM – 4:00 PM

Meeting Materials: Link

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

MINUTES

1:00 – 1:05 PM Welcome, Introductions & Announcements

Meeting Background:

The Executive Council's (EC) Charge for Phase 2 activities directs the Principal Staff Committee (PSC) to complete "[r]evisions to the 2014 Chesapeake Bay Watershed Agreement (Agreement) with modifications to the existing vision, principles, preamble, goals, and outcomes…", and to do so by December 1, 2025. To address this charge, the Chesapeake Bay Program (CBP) modified its Strategy Review System (SRS) process for Workgroups (WGs) and Goal Implementation Teams (GITs) to answer an overarching question ("Big Question") as means to provide advice to the Management Board (MB) on the next step to take with each Agreement Outcome. There are three MB meetings to discuss the Big Question, and the schedule for each outcome is available here. During the MB meeting, each out outcome will have three minutes to provide an elevator pitch in response to the Big Question. This will follow seven minutes for a Round Robin from the signatories and 10 minutes for Advisory Committee and MB members comments and facilitated discussion.

Meeting Objectives:

- Opportunity for Outcome leads to educate participants on their outcome assessment
- Opportunity for participants to familiarize themselves with major points prior to Outcome Assessment Meeting
- Discuss connections between outcomes
- This meeting is not mandatory and no decisions will be made during it

1:05 – 4:00 Outcome Assessment:

Meeting Background:

Description: Each outcome will provide their three-minute elevator pitch presentation, and there will be twelve minutes between outcomes to provide feedback. If discussion is completed before the twelve minutes is over, we will move on to the next outcome.

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Summary:

Here are some of the major points from the discussion that STAR felt needs to be highlighted for all outcomes, and it is pertinent for some coming up in review next week.

1) It is being asked for SMART outcomes, but some outcomes may need to be more directional while their outputs are SMART.
    a) Healthy Watersheds Outcome has proposed some options/language to update to address the overall change we hope to see. They are then proposing to use the products from the land use metrics to make their outputs SMART.
    b) Stewardship Outcome is also stating how their outputs would be SMART and most likely not their outcome language.
2) An outcome can be distinct and stand on its own while also being an output for another outcome. This came up with Land Use Options and Evaluation, Stream Health, Brook Trout, and Stewardship. For example, Stream Health should be its own outcome while it is an output for the newly proposed Watershed Health Outcome. Another example is how a majority of outcomes should have a metric related to stewardship.
3) Some outputs may not be ready/established by December 2025. The discussion raised how we know we need outcomes to be completed by December 2025, but we haven't heard anything about the outputs/metrics to identify progress being established by December 2025. This came up in the Watershed Implementation Plan (WIP) and Stewardship Outcomes that they will need more time to have everything identified/monitoring in place/modeling completed.
4) There are tradeoffs between outcomes. While connections with outcomes may be positive, some connections contradict themselves. For example, with forests vs wetlands, we could be losing coastal buffers but gaining tidal wetlands. Again, just raising the point that we need time and space for these cross-outcome discussions as GITs and as a MB.

Land Use Methods and Metrics Development: *Continually improve our knowledge of land conversion and the associated impacts throughout the watershed. By December 2021, develop a watershed-wide methodology and local-level metrics for characterizing the rate of farmland, forest and wetland conversion, measuring the extent and rate of change in impervious surface coverage and quantifying the potential impacts of land conversion to water quality, healthy watersheds and communities. Launch a public awareness campaign to share this information with local governments, elected officials and stakeholders.*

Peter Claggett (US Geological Survey, USGS): **Our recommendation to the Management Board (MB) is to CONSOLIDATE the Land Use Methods and Metrics Development Outcome.** This outcome was designed to develop data on the conversion rates of natural lands—including forests, wetlands, and farmlands—and to assess the impacts of these land conversions on water quality, watershed health, and communities. This information was intended to lead into the next outcome, which is the Land Use Options Evaluation outcome.

For this outcome regarding methods and metrics, thanks to Environmental Protection Agency (EPA) support and funding, we have been able to create one-meter resolution land cover data with 56 classes for three points in time—essentially for 2013, 2017, and 2021—to examine changes – it examines all types of changes on the landscape over that period.

We also analyzed the effects of these changes on watershed health through the Chesapeake Healthy Watershed Assessment application, assessing their impacts on water quality. By incorporating this information into our analysis, we have developed a variety of metrics, such as those for community tree canopy, riparian buffers, and changes in impervious surfaces.

As you know, the ChesapeakeProgress measures resulting from this outcome have been very successful, thanks to EPA's support and an investment of approximately 6–7 million dollars. This funding is slated to continue through 2029. The process is largely self-sustaining and operating on autopilot, as we have the necessary expertise to maintain it.

USGS is overseeing the project from a technical perspective, while The Nature Conservancy (TNC) and other private groups, to which they have subcontracted, will continue this work into the future. In conclusion, not much additional work is required at this time. We discussed consolidating this outcome into the next two outcomes to ensure it remains highly visible. We want it to maintain high visibility, as it influences approximately 20 other outcomes.

Comment: Anne Hairston-Strang: I support that. When I step back and evaluate our priorities, I believe that the Bay Program's land use metrics are fundamental for progress across local, state, and federal levels. Therefore, these metrics should be clearly emphasized in our outcomes, and given their broad applicability, they can be consolidated.

Q: Julie: I understand that your group has been working extensively on understanding how marshes are migrating. Is that part of the metric development, or is it something standardized by USGS?

- *A: Peter:* I have not yet planned to discuss the new agreement with the Chesapeake Conservancy, which examines not only changes in land cover and land use but also changes in land condition—factors related to marsh migration. If you believe I should address how this has evolved under the new agreement, I certainly can.
- *Response: Julie:* Yes, that would be great, as we rely on the data you provide to support our climate adaptation outcome. Although we are not part of this cohort or the next, we hope that through climate adaptation we can leverage these data sources to identify adaptation options.

Comment from chat: Gina Hunt: So do you see this as being a metric/output to wetlands outcome too? The output would be in multiple places for different reasons.

- **A: Peter Claggett:** Yes—we envision using these data to assess the conversion of wetlands to development, which we report every four years when mapping high-resolution data. With the additional approach Julie mentioned—using spectral metrics from Landsat and Sentinel on a monthly or bimonthly basis over the past 30 years—we can evaluate changes in both land and wetland conditions, such as wetlands transitioning toward open water. We're also considering other metrics, like the unvegetated-vegetated ratio developed by Zafer and Ganju. Although we have not yet mapped all the wetlands in the watershed, a recent goal team funding project piloted the use of remote sensing and machine learning to expedite the National Wetlands Inventory (NWI) update process in collaboration with Meghan Lang, chief scientist of NWI at Fish and Wildlife. While this effort isn't part of the current initiative, we hope additional funding will expand the wetland mapping activity.

Comment: *Ken:* while you are consolidating with two other outcomes, the nuts and bolts of what you are doing will stay in course. The intent will be unchanged, especially since the EPA has agreed to support this over the next 5 years. This might be helpful for the MB to know.

Q: *Chris Guy:* How would you consolidate this? Will it become an outcome, or will it be reclassified as an output under an outcome?

- **A: Peter Claggett:** This is an output that would be part of the management strategy for healthy watershed and land use options evaluation. Hopefully, this will also be mentioned in climate resiliency, wetlands, etc. And they all need to call out this effort in their management strategies so the connections are clear.
- **Comment from chat:** *Gina Hunt:* Agreed - it is an output in multiple places for different reasons.
- **Response:** *Chris Guy:* This goes beyond consolidation but more of a case of broadening to other outcomes. This might be something that will require more clarification as to how it will change from outcome to output and how it will exist within multiple outcomes.
- **Comment:** *Gina Hunt:* When you say the position is to consolidate, it implies that it will be under an outcome but your explanation seems more like a reclassification. At the first MB meeting, a lot of people got stuck on the terms. Maybe you should be clear with your language and vocabulary as to how this will fit in these outcomes. I highlight this because I think you will get confusion with the terms.
- **Response:** *Peter Claggett:* I do not mind changing it to reclassify as it sounds like this is more descriptive as to what we are aiming for. Regardless, I will be explicit in my presentation to the MB.
- **Comment from chat:** *Keith Bollt:* Would switching the order of land use outcomes presented help?

Land Use Options Evaluation: By the end of 2017, with the direct involvement of local governments or their representatives, evaluate policy options, incentives and planning tools

that could assist them in continually improving their capacity to reduce the rate of conversion of agricultural lands, forests and wetlands as well as the rate of changing landscapes from more natural lands that soak up pollutants to those that are paved over, hardscaped or otherwise impervious. Strategies should be developed for supporting local governments' and others' efforts in reducing these rates by 2025 and beyond.

Peter Claggett: **Our recommendation for the MB is to UPDATE the Land Use Options Evaluation Outcome.** The Land Use Options Evaluation Outcome involves developing tools and providing information for elected officials. This outcome is designed to enable local governments to make informed planning decisions by using high-resolution data to monitor changes and assess their consequences. The goal is to support better land use decisions—whether through conservation, zoning, or ordinances that protect environmentally valuable areas while concentrating development where services (such as sewer infrastructure) are available to manage pollution more effectively. The need for this outcome is driven by anticipated future changes in land use, fueled by a population growth of roughly one million per decade, which will affect forests, farmlands, and wetlands. These changes, in turn, impact a range of outcomes including sustainable fisheries, stream health, canopy cover, riparian buffers, water quality, wetlands, and climate resiliency. Land use planning coupled with land conservation is the most cost-effective way to minimize land conversion—avoiding conversion is far less expensive than restoration.

The Bay Program should be involved because we have committed to consistently monitoring land use and land cover change at high resolution, supported by continued funding. As a partnership, we have the capability and capacity to develop locally relevant planning tools and information for better local decision-making. However, there are challenges: the outcome is currently phrased more like an output. While it aims to reduce the rate of land conversion, that goal is not explicit in the wording. Early on, the evaluation of policy options, incentives, and planning tools was largely addressed through a 2017 project and the Healthy Watersheds Force Retention Project in Virginia, which informed legislation to better retain forests for carbon sequestration and other ecosystem services. Moreover, the team overseeing this outcome—primarily from water quality departments at the local and state levels—is more accustomed to regulatory options than to planning.

To resolve these issues, the recommendation is to rename the outcome as "Watershed Planning" and update its language to focus on continually reducing the per capita rate of land conversion to development in the Bay watershed. In addition, it should develop and disseminate locally relevant information on land suitability for conversion and the associated environmental consequences for organizations involved in planning.

Land Use Methods and Metrics would be consolidated under this outcome, which would also lead the implementation of the Bay Program's land use strategy—an approach approved by the Land Use Workgroup and the Healthy Watershed GIT and presented to the Water Quality GIT.

- **Q:** *Gina Hunt:* Between the two Outcomes, it isn't necessarily clear to me how they are distinct outcomes. Land use and watershed health are so synced, shouldn't they just be one in the other? Why are they separate?
    - **A:** *peter Claggett:* They're separate because reducing the rate of land conversion has been a consistent priority since the 1987 work, the 2000 agreement, and the 2014 agreement. Keeping that focus prominent required it to stand alone. Watershed health is much broader, encompassing land protection and metrics related to stream health. While it might be possible to combine them, we wanted to emphasize reducing the rate of land conversion as its own outcome.

- **Comment:** I have a tactical suggestion to preempt questions from the MB and avoid a semantic rabbit hole. Present the outcome first by explaining the changes you're making to broaden it and then describe how land use methods and metrics fit under that umbrella. Essentially, you're consolidating two components while keeping land use methods and metrics as an output for multiple outcomes. Given the close alignment, it might be best to present them back-to-back as a package so that the discussion isn't sidetracked by debates over whether it's a reclassification or consolidation.

    - **Comment from Chat:** *Chris Guy:* Yes, It makes sense to go in the updates first then consolidate.
    - **Comment from chat:** *Ken:* good advice, Katie to present them both together before discussion.

- **Q:** *Adrienne:* I agree with Katie's suggestion. I also want to note that some comments from other signatories have centered on the states' inability to influence local government policies. Be prepared to answer questions about shifting the language from "improving local capacity" to directly reducing land conversion. That aspect is equally important for your presentation and preparation.

    - *Peter Claggett:* I totally agree that factors such as macroeconomic and cultural influences—which are beyond our control—play a major role in the rate of land conversion. Our strategy is to reduce that rate through building capacity and other measures. I had some uncertainty, but Katie's examples—like riparian buffers and community tree canopy—helped clarify that although many forces affect landscape change, we can only control a small part. Still, we aim to contribute to this larger outcome.
    - *Katie:* We are always identifying things that are outside of our control but that doesn't preclude us from setting ambitious goals of where we want to be. We're tracking it because it is our priority but we acknowledge that some things are simply out of our control.

- *Peter Tango:* It seems like the outcome is to reduce land conversion. Should the name be more something along the line of "reduce land conversion" instead of "Watershed Planning" since this is more in line to your goal and watershed planning can fit more into your language/supporting item? Additionally, is it assumed that everyone understands what "land conversion" means? For instance, if an area transitions from urban to

reforestation, is that seen as negative? Is it implicitly understood that we're concerned with conversion from forest to urban, or should we clarify that more explicitly?

- o *Response: Peter Claggett:* The new outcome language is two sentences and the first sentence concerns the per capita rate of land conversion. For instance, we emphasize the per capita rate because while growth in well-planned suburban areas like Prince George's or Montgomery County is expected, we want to discourage sprawl that removes forests and farms. And that sprawl results in the loss of forests and farms. I completely understand your point. We have received some pushback from LGAC and others, I don't want the Bay Program to be seen as opposing development—because we never have. That's why we use "watershed planning" as a softer way to describe our involvement in this arena. And that's also why we refrained from calling it a "land use planning" outcome—because we don't do land use planning per se; we focus on watershed management, and that's our core mission.
- o *Comment from chat: Julie Reichert-Nguyen:* I feel that it is important to be on the slide about reduction of land conversion to development.
- o *Comment from chat: Keith Bollt:* To Peter C's point, LGAC was against "conservation" not conversion. I was at that LGAC meeting in July 2024 where the confusion took place, I think that was caused by a misunderstanding by LGAC about what "conservation" means and why there is a push to add conservation to the Bay Program alongside restoration. The reason being conserving what we already have is a different, more human centric and cheaper way of doing our work than only focusing on restoring what has been degraded.

Healthy Watersheds: *100 percent of state-identified currently healthy waters and watersheds remain healthy.*

Peter Claggett: **Our recommendation to the MB is to UPDATE the Healthy Watersheds Outcome.** The healthy watershed outcome is problematic, and we need to update it. Currently, the outcome states that 100% of state-identified healthy waters and watersheds remain healthy. However, with expected future changes in land conditions and climate, our restoration investments could be undermined. Although significant efforts are underway to restore streams and landscapes, development upstream can negate downstream progress. This is especially critical for areas already in excellent condition, as restoring a system based on biological indicators is extremely challenging once it degrades.

The Bay Program should be involved because watersheds cross jurisdictional boundaries, requiring consistent data and assessment criteria to allocate resources and develop state strategies effectively. Regulatory programs, conservation initiatives, and planning efforts would all benefit from centralized information sharing.

There are several issues with the current outcome. Variable state definitions for healthy watersheds hinder comparable assessments and progress reporting. For example, West

Virginia defines healthy watersheds as just stream segments with protection on either side—effectively considering them complete—while other states have entirely different criteria. Additionally, healthy watershed and stream health assessments are not integrated and are computed at different scales, leading to confusion (e.g., a watershed might be labeled healthy even if it contains impaired streams). There are also insufficient resources for repeated stream monitoring, and land protection monitoring suffers from poorly attributed data and local control over land use decisions. Collectively, these challenges have resulted in a lack of commitment from the partnership to this outcome.

The recommendations are to clarify that the outcome focuses on watershed health and to eliminate the term "healthy watersheds." Instead, we should rebrand it as "Watershed Health," which represents a continuum of condition rather than a fixed end state. This revision would involve not only the outcome but also the overarching goal. The goal should be to protect and sustain waters and watersheds with high ecological value. The updated outcome would be: "Maintain watershed processes and landscape conditions contributing to ecosystem services, where healthy aquatic ecosystems support the conservation, restoration, and management of natural and working lands—such as floodplains, riparian areas, and timberlands." Additionally, watershed and stream health metrics should be aligned to inform stream health outcomes with consistent messaging, establishing both short-term and long-term goals.

Q: Gina Hunt: I just reviewed the two-pager and, while I don't have a problem with the language overall, I'm not convinced it fits. The draft language for the outcome doesn't appear to include SMART (Specific, Measurable, Achievable, Relevant, Timebound). I assume you plan to incorporate outputs as measures, but as it stands, the language seems lacking. I struggle with the concept of healthy watersheds because it's hard to pin down what the end outcome should be—it's not as tangible as some of the others. We likely won't resolve this now; I expect the Management Board will ask similar questions about the language. We're not expected to present fully finalized language, just a direction we can refine later. Also, regarding stream health: while its connection to healthy watersheds is clear, I see stream health as only one component of the overall narrative. We'll measure it in several ways, but I don't want it to appear as if stream health is the entirety of our story—it might serve as an outcome on its own or as an output to the broader watershed health outcome.

- *A: Peter Claggett:* I agree. The challenge we're all facing is articulating an outcome that reflects cumulative landscape or behavioral changes resulting from numerous activities. If you specify it too narrowly—say, by stating an outcome to maintain the health of five specific watersheds—it risks becoming an output rather than a true, broad outcome. Furthermore, lands that drain tidal waters should be included under the watershed health outcome, which underscores some fundamental differences. For instance, if we look at the previous agreement, we could propose a metric like "100,000 breeding black ducks," but determining the appropriate level of reduction in the per capita rate of land conversion will take several years. Similarly, developing a more precise measure for

watershed health will require time—it depends on the level of investment. Without increased investment, our future progress may be limited to only a few funded projects.

- *Q: Katie:* Could you highlight the Chesapeake Healthy Watersheds Assessment and the metrics you've already compiled? There's a significant effort underway to evaluate the landscape characteristics that support watershed processes, and you've organized that information systematically. Pointing to this framework could demonstrate how we make this outcome SMART—even if specific targets aren't established yet—by showing that we have the scientific tools in our toolbox.
- *Response: Peter Claggett:* I've been on several calls with the stream health workgroup. They're incorporating biological stressors to assess how landscape and near-stream factors affect biological health, working to tie stream health more closely into watershed health. We're aiming to achieve the same convergence from the watershed side. There is a robust scientific framework for doing this.
- *Comment: Ken:* I was surprised at how deeply the Management Board drilled into details last Thursday. Although, you might not need to finalize all the language right now, it's great to have a framework and conceptual direction, even if the language isn't fully set. What resonated with me about watershed health is that, while many of our outcomes focus on aquatic systems, this one emphasizes the terrestrial condition of the watershed. It's not solely about stream health, brook trout, or fish passage—it's about the overall terrestrial condition, which makes it distinct and vital for our future strategies.
- *Comment: Breck:* I want to revisit Gina's point: the proposed outcome language isn't SMART, but the outputs we plan to use are. We've discussed in previous STAR meetings that while outcome language might be broad, our tracking measures—our outputs and indicators—will be specific and measurable. We need to bring this up with the Management Board so they understand that, although our outcomes might not be SMART in themselves, our outputs will be.
- *Response: Peter Claggett:* I'm not entirely sure where all this terminology fits—specifically, how the indicators come into play, since they're what make the outcomes SMART. Some indicators may be outputs, but clarifying the language between outcomes and outputs—and how we judge a SMART outcome based on its outputs and indicators—would add much-needed clarity for everyone involved.

Q: Keith Bollt: Based on the feedback regarding the priority action and the MB's engagement with our outcomes, do you feel you've addressed resource justification adequately? Does this also speak to broader interest in our outcomes?

- *A: Peter Claggett:* I did structure the presentation with multiple slides to provide a framework and address management concerns. There's a knee-jerk reaction from the MB asking, "Why are we doing this?" All we can do is present our best, most sound arguments. I'm excited for this next round because there are so many connections among the outcomes being presented. I know the MB will eventually dedicate time—perhaps in a lengthy session—to fully explore these relationships, and that's great. But the sooner we can emphasize how these outcomes interconnect, the better. In our last

agreement, the relationships among outcomes weren't clear, but many tangible connections do exist. With these upcoming presentations, I hope we can clearly hammer home those interrelationships.

Stewardship: Increase the number and diversity of trained and mobilized volunteers with the knowledge and skills needed to enhance the health of their local watersheds.

Britt Slattery: **Our recommendation to the MB is to UPDATE the Stewardship Outcome.** The stewardship outcome falls under the stewardship goal. Currently, the goal and outcome are nearly identical: the outcome states that we increase the number and diversity of trained and mobilized volunteers who have the knowledge and skills to enhance the health of their local watersheds. Initially, no metric was established; however, a survey conducted in 2017 and repeated in 2021 produced an index based on a complex set of questions about stewardship behaviors, volunteerism, civic engagement, and the likelihood of adopting such behaviors. The index scores out of 100—with 100 meaning that everyone does everything possible each day for stewardship—but our numbers remain very low.

We are working on a different method to measure progress. In doing so, we're rethinking how the outcome is structured. The new version should leverage the power of the Bay Program and its networks to scale up stewardship across the watershed to achieve greater impact—this is a more current, social science–informed approach. We would also broaden the definition of stewardship actions. Currently, the focus is on actions like picking up dog waste or trash, but there's a much larger suite of activities—such as forest stewardship— that we want to align with outcomes directly benefiting water quality, tree canopy, forest buffers, wetlands, land conservation, and stream health. Of course, we would also make the outcome SMART by identifying shorter-term milestones, perhaps in three- to five-year increments, along with supporting key factors.

The EC charge clearly calls for engaging communities as active stewards. That intent is inherent—it emphasizes benefits to people throughout the current agreement. This is reflected in the TMDL focus. There are also references in the Eastern Research Group (ERG) and Comprehensive Evaluation of System Response (CESR) reports. They are asking the MB to consider whether we should better reflect these additional considerations in our goal. Our partners practice stewardship all across the watershed and will continue to do so.

The added value for the Bay Program is the collective impact from sharing best practices across organizations and partners. Our network shares what works, identifies opportunities to scale up, breaks down jurisdictional silos, and utilizes the tools available through the Bay Program. That's the direction we're heading.

Comment from chat: *Julie Reichert-Nguyen:* It would be great to include critical areas and buffer zones around stewardship - what it means to live in a critical area.

- *Response: Britt:* The devil is in the details of making this function. Without enumerating every outcome and establishing reciprocal metrics, it becomes challenging. My expectation is that the outputs piece will be developed later.
- *Comment: Breck:* I'd like to note that this connects with our discussions on climate resiliency monitoring and assessment—ensuring that a metric or output is tied to climate resiliency, even as we address other outcomes.

Comment: *Jeremy:* I am curious to see where the MB goes with your recommendation since your work fits into almost everything that we do.

Comment from chat: *Nick:* Active Chesapeake Bay program satellite in each county? Satellite is a community of practice and organizes their volunteers based on the county's needs? Just a thought.

Comment from chat: *Peter Tango:* If we are gearing work towards more living resource endpoints, people are the number one influence on invasive species distribution trends. Stewardship of our resources offers a direct link to bay, watershed, living resource health - might have a home within Stewardship and education at all ages. Good thinking and directions on your proposed directions.

Stream Health: *Continually improve stream health and function throughout the watershed. Improve health and function of ten percent of stream miles above the 2008 baseline for the Chesapeake Bay watershed.*

Chris Guy: **Our recommendation to the MB is to UPDATE the Stream Health Outcome.** The current outcome is to continually improve stream health and function of 10% of stream miles above the 2008 baseline for the watershed. We identified this as being SMART because it had a terminus at 2025. We were able to keep it on track, whether we actually met it or not because of the way monitoring works on that, we don't know and we won't know for a while now. We are due in 2027 to have information on this.

We would like to update this to recommend a more holistic approach, and this falls in line with what the last presentation was highlighting – Healthy watersheds. Our goal is to improve ecological integrity of stream systems and stream health based on sound science coupled with land management planning and protection to improve stream health. We're expanding the outputs and outcomes to go beyond Chessi Bibi as we are currently defining our stream health based on Chessi Bibi which looks at a stream counting the insects that are in there and the relationship in their functional groups and then basing the health on what reference stream would be with good water quality and good health.

We have found that this is really an incomplete metric for picturing a healthy stream. We think there's some physio chemical measures and metrics that need to be added to this. We have been through a series of GIT funding over the course of the next couple of years and we will have the ability to actually look at this and which metrics are key to healthy streams.

We are thinking about having a percentage moving forward and revise our language to be more temporal in nature.

Comment from chat: Nick Staten: Original Draft Language: Continually improve and protect stream health and function ecological integrity throughout the watershed based on sound science, coupled with land management, planning, and protection. Improve health and function of X percent of stream miles above the Y start time for the Chesapeake Bay watershed.

Draft Language Chris Referenced: Continually improve and protect stream health and ecological integrity throughout the watershed based on sound science, coupled with land management, planning, and protection. Annually improve health and function of at least 1% of stream miles to reach 100% by 2050.

- *Comment: Gina:* Chessi Bibi is not an indicator that would capture all that is being recommended in the updated outcome.

Comment: Nick: Chessie BIBI data isn't very granular as we have 1 data point per 5 years which is why we would need more indicators.

Comment: Gina: This outcome fits with many other outcomes but it needs to stand alone as an outcome. Need to do more leveraging across GITs and the team is on track to do that.

Comment: Joe Wood: I'm sorry if this is an uniformed question, but are all non-tidal rivers included within the context of this outcome? And if so, was there any consideration in revising accordingly? Or is this outcome specific to a certain HUC?

- *Comment: Gina:* Yes, all streams.
- *Joe Wood:* My question was just centered around the idea some will interpret "Stream Health" to include only a select set of non-tidal waters and that some clarification may be in order. If it is all non-tidal waters perhaps "River and Stream health" would be more clear. If it is limited to a certain size, than clarifying that might help people understand the focus.
- *Gina:* With the current metric of the Chessie Bibi it is defined as an index for freshwater streams and small, wadable rivers in the Chesapeake Bay watershed. So not rivers. I don't think adding the other metrics to be more holistic will change that - though not sure.

Comment: Katie Brownson: We will also have to grapple with what counts as a "stream" in the context of our new higher-density stream network (which also includes channels/ditches/gullies that aren't streams).

Comment: Peter Claggett: Trying to map all perennial streams and how climate is impacting ephemeral to perennial streams. We wouldn't want to only focus on perennial parts of streams. Chris said this is how he is thinking about it too.

Comment: Keith Bolt: Definitely recommend spending time on the value section of your outcome- the value of why the work is important (many partners do this work whether it's in the Bay Program or not), but specifically why it needs to stay in the Bay Program itself and not just be done by Bay Program partners outside of the Bay Program. Chris stated that he agrees because it started with stream health was the best Best Management Practice (BMP) for water quality, but it is critical to determine what is a healthy stream.

Comment: Nick Staten: Another perspective within the workgroup is how would we define healthy with other indicators. It is uncertain whether it is appropriate to include other indicators as major determinants of what makes a stream healthy. Example would temperature have the same weight as BIBI.

Brook Trout: Restore and sustain naturally reproducing brook trout populations in Chesapeake headwater streams with an eight percent increase in occupied habitat by 2025.

Dan Goetz: **Our recommendation to the MB is to UPDATE the Brook Trout Outcome.** We want to update our outcome because it has been commonly recommended to remove/consolidate due to the current occupancy base outcome restricts our state jurisdictions and their monitoring.

Efforts to only detect presence and absence and for the record, without our state representatives and resource level biologists, we would not have a functional workgroup because they are the boots on the ground, do the sampling and the monitoring to collect the data that we need to track our outcomes over the last 10 years. All the states focus their monitoring and sampling efforts on detecting presence/absence in their work. We are unable to implement or initiate any other monitoring efforts geared towards improving overall abundance, population level resiliency or habitat improvements.

We would like to update our outcome to add levels of resiliency and/or abundance. This gives the ability to implement a systematic monitoring approach that includes elements to improve habitat in abundance within the watershed. To that end, Brook Trout connect and amplify many of the BMPs across multiple outcomes and workgroups (WGs). Other WGs, like Fish Passage and Riparian Buffers have similar outcomes that could be counted as outputs for the Brook Trout WG, such as planting trees or removing stream barriers that would again increase resiliency within occupied Brook Trout watersheds. This would give us the ability to communicate and cross coordinate across other WG outcomes and outputs to achieve our outcome.

Comment: Kaylyn: I really like that you bold the important words in your presentation and a great way to draw attention to the important things that the MB members should be aware of.

Comment from chat: Keith Bollt: Would recommend changing the slide text "4/7 bay partners" to "4 of 7 CBP jurisdictions"

Forest Buffers: *Continually increase the capacity of forest buffers to provide water quality and habitat benefits throughout the watershed. Restore 900 miles per year of riparian forest buffer and conserve existing buffers until at least 70 percent of riparian areas throughout the watershed are forested.*

Katie: **Our recommendation to the MB is to UPDATE the Forest Buffer Outcome.** The partnership has a long history of providing leadership around riparian forest, buffer restoration and conservation, and the outcome is really foundational to the Program. Although the outcome has been pretty consistently characterized as being off track, this detracts from the impressive progress that we've seen in recent years thanks to strategic investments. Especially in flexible landowner friendly buffer programs. Knowing that our funding landscape is shifting, we're going to need to be creative in coming year to develop solutions to help maintain funding and focus on the programs that are important.

Although our outcome is specific, measurable and time bound, whether it's achievable and realistic is questionable given the numbers that we've seen in recent years. But it is important to note that the states have even more ambitious goals for forest buffers and their WIPs, recognizing the important role they play in improving water quality. This suggests that we really do need to remain ambitious if we want to meet our water quality goals as well as multiple other goals in the watershed agreement.

The forestry workgroup is recommending that the program update the forest buffer outcome, and we've identified a few considerations for that update. We want to revisit both the minimum riparian forest cover component of the goal as well as our annual planting goals. 70% was always meant to be a minimum amount of riparian forest cover at the whole watershed scale, but setting a more ambitious long-term goal might be merited based on what we're seeing in the Chesapeake Healthy Watersheds Assessment. Achieving a balance between what science says we need to support clean water and living resources, and what we realistically can do. There is also a lot of interest in strengthening the focus on conservation, for example by adding language or target specific to the maintenance and permanent protection of buffers.

Q: Chris Guy: Did you address not being in Water Quality anymore? Katie: Forest Buffer aligns with a lot of the GITs such as Vital Habitat and Watershed Health. Chris Guy: This could be an output for other outcomes. With the update they are recommending, it could align more with the Vital Habitat GIT.

Comment: *Anne:* Forests are foundational so it should continue to be an outcome.

Q: Julie: There are tradeoffs for wetland migration and forest and a lot of connection with resiliency. What will happen and where do these tradeoffs fit within the outcomes. Katie: Suggestions from the workgroup is to cut tidal wetland areas as what is considered as buffer-able. There will need to be a bigger conversation around the tradeoffs when updating the forest buffer target, especially due to climate change. Julie: maybe it could

lead to prioritizing areas. Anne: it also aligns with the statement in their presentation on updating to re-establish reasonable targets and timelines that are grounded in science.

Tree Canopy: Continually increase urban tree canopy capacity to provide air quality, water quality and habitat benefits the watershed. Expand urban tree canopy by 2,400 acres by 2025.

Anne Hairston-Strang: **Our recommendation to the Management Board is to UPDATE the Tree Canopy Outcome.** It started as an expansion of the forest buffer strategy, understanding that even if you have good riparian buffers in urban areas, you need trees beyond that. Trees are part of the foundation of natural condition in a watershed and making the watershed livable, controlling heat and shade. The goal is to increase the urban tree canopy, shift urban to community more broadly, and use the data to set up a new numeric planting goal. This is vital for water quality, watershed health, habitat, human health, and community wellbeing. The GIT is considering expanding the Tree Canopy outcome to the community involvement because it's in everyone's backyard. That makes it a tool for public engagement and building public support. Participating in this outcome is easier because it has a low barrier to entry. It was first added in 2003 and had its first numeric goal in 2014. Since then, the goal has been blown out of the water. New high resolution land cover data allowed the workgroup to understand the degree of lost and learned the watershed had a substantial amount of loss. A new goal could be moving towards net gain. This points out the need for conservation. We can replant and regrow trees, but it takes time, especially in replacing older trees. Regional collaboration has helped jurisdictions make improvements and share capacity. There is a strong consensus in support of this outcome.

Q: Breck: Your current outcome states urban tree canopy capacity, but your recommendation is to update with new reasonable numeric targets. Is it both? Is it trying to make sure we're increasing the amount of tree canopy while also increasing capacity to plant?

- *Anne:* I think how the goal is meant to be read is that we are trying to increase urban tree canopy. The urban tree canopy's capacity is what provides the air quality, water quality, and habitat benefits. We're not saying that we'd like to increase the capacity to deliver. We're saying we want to increase the tree canopy which will increase the capacity of the benefits.
- *Katie:* The use of the word "capacity" is built into a lot of outcomes in a similar way, including the forest buffer outcome. It seems to be a format that's been used in the agreement commonly.
- *Anne:* If we need to clarify that, we should. I think there are more capacity building activities in tree planting strategies but it's not in the goal. When we had the 30m land cover we couldn't get a good picture for either of the buffers or the urban tree canopy. Now we have a pretty decent ability to track and target.
- *Breck:* And that is a great sentiment to the importance of the Tree Canopy Outcome.

- *Anne:* As a resource manager, having the data is crucial. We need to understand that the productive capacity of the Bay has national strategic interest. What we're doing here supports that. We need to be able to say that we are providing for the community and having the basics of clean air and clean water.

Peter Tango: This reminds me of the Brook Trout Outcome, where there is a goal set for 2014 but with all current data and findings, we've learned that starting with just maintaining what we had is a good place to start. I'm wondering if you are thinking about this in the plantings and natural pruning. Is the data telling us our challenge is to maintain what we have. Is there a set urban footprint you are starting with and bringing in the new and changing data?

- *Anne:* The goal is broad enough that we are not trying to parse out what is old versus new. There was a dynamic in some of the studies that said you lost some forest but gained tree canopy because you fragmented what you had. The major loss is still development. Another part of the loss is losing old trees. We have a lot of 80–100-year-old trees which is wonderful but a forest health issue. One thing we've discussed is having a separate planting goal to show the progress of the plantings.
- *Julie Mawhorter:* We have worked with Peter on the tree canopy indicator that we share for progress. That was defined as the census places in the more developed areas which is the target of this outcome. We have been using the 2010 census data to track change over time. There is a lot of change outside that ties to new places being developed. We do need to track and incorporate that in the relevant outcomes that are beyond the urban footprint.

Water Quality Standards Attainment and Monitoring: *Continually improve the capacity to monitor and assess the effects of management actions being undertaken to implement the Bay TMDL and improve water quality. Use the monitoring results to report annually to the public on progress made in attaining established Bay water quality standards and trends in reducing nutrients and sediment in the watershed.*

Ken Hyer: **Our recommendation to the Management Board is to UPDATE the Water Quality Standards Attainment and Monitoring Outcome.** These are the load and trend results that most of you have seen, tidal or non-tidal. This is where we can ask about our sediment and nutrient loads and dissolved oxygen levels. Back in 2004, we adopted common monitoring and analysis which was huge to evaluate the watershed progress commonly across states. This was a framework for accountability. This gives us both modeling and monitoring data. For challenges, the current outcome language is that it is not a SMART outcome. Also, it refers to activities (monitoring) and outputs (calculating trends and things). It doesn't directly address whether we're obtaining water quality standards or targeted loads. It also doesn't align well with the Water Quality Goal text, but it is classified under that. The Water Quality Goal refers to reducing pollutants, broadly, and protecting aquatic and public help. However, this outcome only focuses on TMDL. We would like to update this and create a stronger connection with attaining water quality standards and

attaining targeted load levels. Through discussions, we've found that some people think we should broaden monitoring such as bacteria and toxic contaminants, especially things that are in public interest. There has also been a connection between this outcome and WIP outcome. The teams are considering combining the two. The team hasn't decided, instead they want to take these possibilities to the Management Board and ask for their opinions and guidance.

Gina Hunt: When you say updating and broadening the language you mean updating outcome language because the goal tells you to? Meaning this outcome never fit the goal language so we should change one or the other.

- *Ken:* Yes. We have the goal text, a preamble, and the outcome text. The outcome is only focused on nutrients and sediments despite the goal language. Within the discussions, some people think that having it more focused is a strength of the outcome while others think it should be broadened. We don't want to present that one is better than the other. It seemed like last week at the MB meeting broadening any outcome wasn't well accepted.
- *Gina:* It didn't seem like modifying goals wasn't a popular way to go either. I am not agnostic, but I am trying to be. It seems like what you are doing is aligning well with what the CESR is telling us to do.
- *Ken:* That's a fair interpretation. I see the CESR results as being consistent with the concept of broadening this to focus the approach on ecosystem response.
- *Peter:* Given there are two camps and we haven't broached the opportunity for considering other outcomes, an option could be to stick with the camp that has been consistent about TMDL focus and asking MB to reflect better on the goal.
- *Ken:* Great point. We've seen a lot of folks talk about how outputs under one outcome may be listed under other outcomes. That's a hybrid way to look at this as well. We have the stream health and riparian buffers.
- ***Comment from chat:*** *Gina:* Couldn't this be a broader outcome with the WIP outcome and the water quality monitoring is an output of it?
- *Ken:* That has come up. Tracking WIP could be defined as an output.
- *Gina:* I was trying to split the baby. We can broaden or keep it what it is while continuing the current activities as an output.
- *Ken:* In discussions, everyone wants to keep what we are currently doing but broadening would require more resources. The MB didn't seem too into ideas like that last week.

Comment from chat: *Amanda Shaver:* I'm not sure the graphic is effective because of the size. I would recommend removing it.

Jeremy: The goal language and outcome language highlights some inconsistencies in the agreement. The preamble is more specific to the outcome while the goal is broader and could apply to other outcomes too. I think this is something that should be highlighted to the MB and considered when revising the rest of the agreement. Do we want to keep this as

it is or clarify? There is a lot of overlap between outcomes. If the decision makers decide to stay focused on TMDL, we should be clearer about that in the language.

Ken: We'll continue to keep this up. We added more comments and considerations based on the learnings from last week's MB meeting. We added more information on options and potentially what it will look like when we update this outcome.

Comment from chat: *Breck Sullivan:* WQ Preamble: Restoring the Bay's waters is critical to overall watershed restoration because clean water is the foundation for healthy fisheries, habitats and communities across the region. However excess amounts of nitrogen, phosphorus and sediment in the Bay and its tributaries have caused many sections of the Bay to be listed as "impaired" under the Clean Water Act. The Chesapeake Bay Total Maximum Daily Load (TMDL) is driving nutrient and sediment reductions as described in the Watershed Implementation Plans (WIPs), adopted by the states and the District of Columbia, and establishes the foundation for water quality improvements embodied in this Agreement. These plans set nutrient and sediment reduction targets for various sources—stormwater, agriculture, air deposition, wastewater and septic systems.

Comment from chat: *Peter Tango:* Considering the broadening, key might be by how much, to what, and do we have those additional elements in hand - e.g., we have chloride and conductivity data, we report them in publications about stream conditions, but they are not CBP indicators of salt trends, salt management - yet. But it could be an easy lift. So, broadening considerations but possibly constrained to measures we have but don't report because they are not part of our CBP WQStds portfolio of reporting yet, now.

Watershed Implementation Plans: *By 2025, have all practices and controls installed to achieve the Bay's dissolved oxygen, water clarity/submerged aquatic vegetation and chlorophyll a standards as articulated in the Chesapeake Bay TMDL document.*

Suzanne Trevena: We want to present the 2017 and 2025 Outcomes together. **Our recommendation to the Management Board is to REMOVE the 2017 Watershed Implementation Plans Outcome.** This was a check point with goals set. Phosphorus and sediment goals were met. Nitrogen was not. Then Conowingo developed phase 3 WIPs which laid out their strategies for achieving nutrient and sediment goals. Moving forward we'd like to build in these checkpoints as outputs under the outcome. **Our recommendation to the Management Board is to UPDATE the 2025 Watershed Implementation Plans Outcome.** Reducing nutrients and sediments has been a main focus of the Bay Program since the beginning. There is more work to do. We are not going to meet our 2025 goals, but we should continue working towards them and set new goals. How can we do a better job of balancing monitoring and modeling to get a holistic picture? We want to show how the actions on the land are contributing to local water quality improvement and attainment of water quality standards. We have been talking with STAR about how we can work with the WQSAM Outcome. We want to give this outcome a new name in focusing on monitoring and modeling. The WIP name focuses more on the BMP

implementation aspect. Name ideas are in the two-pager. I think we are in a good place on updating this outcome by the end of the year, but we won't have all the details ready. We know we are getting the Phase 7 modeling updates, new targets, and the living resource matrix. These results are in the works and will inform our outputs. We can create the outcome language but may not be ready to define the outputs this year. We also discussed broadening the goal beyond nutrients and sediments. While there seemed half and half support, we decided to recommend keeping it to nutrients and sediments to make it more SMART. It would be hard to update and communicate the progress with the various pollutants. Because of that, we recommend keeping the outcome focused on TMDL, but we plan on proposing new outcomes under the Water Quality Goal. We put out some options on language to consider when updating this outcome to help people visualize these decisions. We didn't include this in our two-pager but have been thinking about it. As mentioned earlier, the time bound piece will not be ready to define by the end of the year. Ultimately our outcome may not be viewed as SMART, but the outputs developed will be SMART. We are not comfortable defining the timebound part yet but if the MB wants to, they are welcome.

Jeremy: With not being able to set a deadline, we can assume a date or have the decision makers decide if we must, it just wouldn't be completely scientifically informed. There has been a desire to have a commitment for implementing phase 3 WIPs.

Suzanne: That could likely be an output. We can create outcomes around existing WIPs but I would expect that to be updated with updated planning targets. We don't have all of the answers right now. That will be part of evolving and learning. We do have ideas fleshed out for outputs, but we don't have all of the specifics right now.

Gina: I don't think we have discussed this with the MB about creating a new language by the end of the year and we have just been introduced to outputs. I didn't think that had to be done by the end of the year. I thought of it more as adaptive management. Stream Health is in the same boat on wanting to add more as outputs. Is that ok? I don't know because that hasn't been discussed. We are thinking about having outcome language, but output language could be coming out later. There haven't been conversations about this yet, you are the first one to point that out.

- *Suzanne:* There are so many questions with this that we can't answer right now. We need to know we are in a place where we are not going to have the answers to all of our questions by the end of this year.
- *Gina:* Peter put something in the chat about meeting metrics that are already being measured to try not to ask for more. At Stream Health that is what we're trying to convey. We don't have the outputs yet but we're looking at things that are already being measured.

Britt: I am glad to see that there is a science focused outcome that is pushing back on the metrics because the stewardship related ones have never had metrics before. We haven't

been able to put in the time and detail that's needed. There seems to be a one-week turnaround time to create these metrics once those decisions are made. I didn't know we were allowed to say that we weren't ready. I wasn't at the last MB meeting so I may not know everything that's been discussed. Could we say that the SMART pieces of the outcome language and say they will be part of the outputs that will be figured out later? I hate the thought that a lot of us are going to rush this because there is a deadline to meet.

- *Suzanne:* We need to figure some things out first to get that SMART piece into the outputs, but it won't necessarily be in the outcome language. They are the MB they can tell us if we need to create those now.
- *Jeremy:* Yeah, it's about whether we are making a scientifically backed decision or throwing darts at a dart board. Was there some MB language that mentioned the possibility of not having it ready by the end of the year? Something like "to the extent possible" that gave us some flexibility.
- *Chris:* That's exactly right, Jeremy. In Phase 1, when we were coming up with these charges there was a lot of pushback and concerns with the year timeline. We added the language 'to the extent practical," but it seems like that has fallen out a bit. In conversations there has been a push to have it done by 2025. I have asked for placeholders for things like this in MB meetings and haven't gotten a lot of support for it. We've heard that we have to move forward. I don't have an answer necessarily, but I wanted to provide some context. It may be bad to assume we have a placeholder, but there isn't a no either.
- *Breck:* I think we've had these discussions in STAR meetings. We could have an outcome that isn't SMART but the outputs are. The outcomes might not be the best place for the SMART language. The MB hasn't had the luxury of having those conversations so maybe the GIT chairs need to elevate this and say that outcomes may not be the best place to have the SMART language. To fill you in, Britt, at the last MB meeting we learned that they want our ideas for revised language and ideas. That isn't what we were asked for, but that is what they are expecting.

Britt: I am seeing a lot of updating. Is there a chance that the MB decides that we didn't cut enough and then makes decisions based on that and starts cutting?

- *Suzanne:* We haven't gotten a clear answer. We were meeting with STAR and thinking to say update and consolidate but we didn't want to make those final decisions when there are a lot of options. We've had some of those conversations but we wound up not putting that forward because maybe once they hear from Ken and Breck, they may not want to go in that direction. I understand there is the desire to want less but there are also a lot of situations where people want new outcomes. There are a lot of new ideas out there. There hasn't been a lot of clear direction around that. We had been thinking about that a lot too, especially in our conversations with STAR.
- *Chris:* This is just a Chris Guy observation. Early on, there was a push and we saw the exercises of "can we get to 16?" There was that idea and thought about cutting. As we progressed in that thought, we started having conversations with the MB and had the

EC language too. I think "tweak" the agreement meant the idea around expecting that most outcomes would be keep or update, which a lot of them are. A lot of them have small edits, only a few needed a face lift. That should be the expectation, and we can make that clear. I think we are seeing what we would expect. If you were looking at a 3000 foot view, you wouldn't expect these changes. I have had conversations with Martha and Lee where we don't expect that people working on an outcome will say that they want it to be removed. These people can put this in the place where it belongs. For the most part, those who wrote the 2014 agreement were pretty smart. The world has changed since then, so we expect those tweaks. If we come out with 25 or 30 that's where we'd expect to be. If there is any other expectation that would be a surprise. I think we can see this clearly because we work on it 40 hours a week and we need to help others see that. We are working on the charge, and this is what needs to be done. I would be surprised if they just cut 10 out.

- *Ken:* I have heard nothing about a targeted number of outcomes. We're not cutting a tremendous number, but we are removing a few. We have had great discussions with Goal Team leads and outcome leads about understanding why you can't just slam two groups together. We're finding there are nuanced reasons why, primarily that there are two different communities of people. What I think we are going to find is that we need to articulate why there is a difference and why we can't just stick two groups together. The MB isn't going to know this. The outcome leads need to articulate this. Anna Killus mentioned the other day that we need to characterize the distinctions between two teams on why you can't combine them. On cases where they can, and it makes sense we should. We need to focus on telling that story on why it would or would not work for the MB.

- *Ruth Cassilly:* I think this is a restructuring comment. I think to keep in mind that even if outcomes aren't being combined, meeting more with workgroups together will help in collaboration. Like having a co-workgroup maybe quarterly, for the groups that have related outcomes. One example is that Katie Bronson and I have a Chesapeake Agro-Forestry network, and we had a yearly meeting that brought the groups together. This was really meaningful and every had unique insight to add.

- *Ken:* I think that is well said and I agree with you completely. We need to have these discussions on individual outcomes but also talk about how the outcomes connect. I think GIT 6 is trying to launch some of these structures and governance discussions. How do we map those connections so going forward, so it is not just individual outcomes?

Comment from chat: *Jeremy Hanson:* "Proposed revisions should be considered as they are being reviewed, with every effort to complete most reviews and revisions by the end of calendar year 2025." There is similar language I was thinking about but it's in reference to structure: "The Chesapeake Executive Council charges the Principals' Staff Committee with recommending this simplified and streamlined partnership structure and processes to the Chesapeake Executive Council in as much detail as possible by December 1, 2025..."

Comment from chat: Katie Brownson: I have also been thinking that it is really challenging to know if new outcomes are needed before we have a sense of what is happening with the majority of our existing outcomes.

Comment from chat: Ruth Cassilly: is the creating a stronger connection between modeling and monitoring mostly alluding to the monitoring data being used to calibrate Phase 7 of CAST?

- *Response: Ken Hyer:* I would say no, it's more about ensuring that we are using both the modeling but also analyzing and working directly with the monitoring data as the observed/measured patterns. Both are important and have come up in WIP 2025 and WQSAM discussions

Comment from chat: Nick Staten: Is e. coli covered in the outcomes or proposed new ones? I know in DC urban runoff increases ecoli concentration and makes water unsafe for swimming.

- *Response: Peter Tango:* bacteria were among the metrics discussed in the potential considerations for broadening. There is a lot of community science data base with a lot of bacteria, there are beach closure monitoring for a data set, so, we can constrain the integration for example to existing monitoring, e.g., consolidate and track beach closures for bacteria just as an off the cuff form of a possible example.
- *Response: Suzanne:* I've heard folks say there should be a bacteria outcome, but I don't know if there has been a champion working on it. I have been advising folks to essentially go through this same process to think through the Big Question if you (or others) want a new outcome.
- *Peter Tango:* I think this also plays into Outcome or indicator supporting, for example, a "Water Quality Outcome" including some new indicators. I think outcome level is the big piece; indicators however give us room for technical blends of important measures and may be more malleable versus the outcome level additions.

Open Discussion: If all outcomes have gone prior to 4PM, we can use the remaining time for open discussion on cross outcome connections, follow up questions, etc., or we can end the meeting early.

4:00 PM Adjourn

Next Meeting – Based on feedback from this meeting we may restructure the agenda, so we are still waiting to finalize the times.

- *March 7th:* meeting for third group of outcome assessment (link).

Attendance:

Peter Tango (USGS), Chris Guy (USFWS), Allison Welch (CRC), Keith Bollt (EPA), Nick Staten (CRC), Kaylyn Gootman (EPA), Jeremy Hanson (CRC), Julie Mawhorter (USFS), Gabriel Duran (CRC), Adrienne Kotula (CBC), Greg Allen (EPA), Angel Valdez (MDE), Ann Foo (UMCES), Anne Hairston-Strang (MD DNR), Julie Reichert-Nguyen (NOAA), Douglas Austin (EPA), Breck Sullivan (USGS), Katherine Brownson (USFS), Bryce Bailey (RES), Dan Goetz (MD DNR), Cassandra Davis (NY DEC), George Doumit (DNREC), Emily Young (ICPRB), Gina Hunt (MD DNR), Ashley Hullinger (PADEP), Ken Hyer (USGS), Arianna Johns (VADEQ), Joseph Wood (CBF), Julia Fucci (CRC), Katie Ombalski (W&W Consulting), Caroline Kleis (CRC), Dede Lawal (CRC), Meredith Lemke (CRC), Marisa Baldine (Alliance for the Chesapeake Bay), Joseph Morina (VADEQ), Ruth Cassilly (University of Maryland Cooperative Extension), Amanda Shaver (VA DEQ), Britt Slattery (NPS), Erin Sonnenburg (CRC), Nick Staten (CRC), Sushanth Gupta (MWCOG), Suzanne Trevena (EPA), Melissa Fagan (CRC).