Chesapeake Bay Program

Science. Restoration. Partnership.

Maintain Healthy Watersheds GIT Meeting Minutes

April 14th, 2025 | 11:00am - 1:00pm

Meeting Materials

Attendees

Alanna Crowley, DNR
Alexis Dickerson, Potomac Conservancy
Alison Santoro, MD DNR
Allie Wagner, Northern VA Regional Commission
Angel Valdez, MDE
Anne Coates, TJSWCD
Anne Gilbert, DNR
Anne Hairston-Strang, MD DNR
Arianna Johns, VA DEQ
Ashley Hullinger, PA DEP
Aurelia M Gracia, NPS
Ben Alexandro, CCP
Bonnie Bick, MWS
Caroline Kleis, CRC
Cassie Davis, NYS DEC
Cathryn Soriano, DNREC
Christopher Peters, FPAC-NRCS, PA
Coral Howe, USGS
Daniel Koval, CRC
Debbie Herr Cornwell, MDP
Elizabeth Hoffman, MDA
Emily Beach, CC
Emily Heller, CBPO
Everald McDonald, PA DEP
Frank Rodgers, Cacapon Inst.
Gabriella Vailati, DE DNREC
Garrett Stewart, DC DOEE
George Doumit, DE DNREC
George Onyullo, DC DOEE
Gina Hunt, MDNR
Harry Campbell, CBF
Helen Golimowski, Devereux Consulting
Holly Walker, DNREC
James C. Sullivan, DNREC
James Hutzler, VA Co
Janet Thigpen, Southern Tier Central Regional Planning and Development Board (NY)
Jeff Lerner, EPA
Jeremy Hanson, CRC
Jeremy McGill, WV DOF
Jess Blackburn, Alliance for the Bay
Jim Sullivan, DE DNREC
Joel Cockerham, Cacapon Inst.
Joseph Schell, DNREC
Kathy Stecker, MDE
KC Filippino, Hampton Roads Planning District Commission
Kelly Maloney, USGS
Kevin Du Bois, DOD
Kristin Saunders, UMCES
Laura Cattell Noll, Alliance for the Bay
Lorena Kowalewski, DC DOEE
Marel King, CBC
Marilyn Yang, CRC
Marisa Baldine, Alliance for the May
Mark Symborski, M-NCPPC
Maura Christian, VA DEQ
Meghan Noe Fellows, DE Center for Inland Bays
Melissa Harrison, PA DEP
Meredith Lemke, CRC
Michael B Coverdale, DNREC
Michaella Kuykendall, MDA

Michel Sheffer, MDOT SHA
Michelle Edwards, RRRC
Mindy Neil, WV DEP
Mitchell Smiley, VML
Nancy Nunn, UMD
Nick Staten, CRC
Pat Calvert, VA Conservation Network
Peter Claggett, USGS
Rick Mittler, Alliance for the Bay
Rob Schnabel, CBF
Ruth Cassilly, UMD
Sabine Miller, MDE
Sarah McDonald, USGS
Samuel Canfield, WV DEP
Scott Heidel, PA DEP
Sean C Emmons, USGS
Sophie Waterman, USGS
Teddi Stark, PA DCNR
Tree Zuzzio, PA DECD
Tyler Trostle, PA DEP
William Byrum, FPAC-NRCS
Young Tsuei, DC DOEE

11:00	**Welcome and Announcements –** *Jeff Lerner (HWGIT Chair, EPA)* ● August 19th (9am-12pm) - Local Leadership Workgroup (LLWG) Quarterly Meeting ***Discussion*:** Rick Mittler (LLWG Coordinator): The August LLWG meeting will focus on land use and development, an issue that's critically important to both our groups and local governments. At the meeting, we plan to discuss the resources we need to share, who we should be talking to, and who we need to involve to best support local governments in making well-informed decisions for their communities. The details are still being finalized, but will be shared with these groups once it's ready and we encourage you all to attend.
11:05	**Update on the Beyond 2025 Process and Status of the HWGIT & LUWG Outcomes –** *Peter Claggett (HWGIT Coordinator, USGS)* Jeff and Peter shared an update on the current phase of the Beyond 2025 process, along with an overview of the revised recommendations for the Land Use Methods and Metrics (LUMM), Land Use Options Evaluation (LUOE), and Healthy Watersheds outcomes. These recommendations received consensus from the Management Board on March 27th and were presented to the PSC on March 28th (Presentation slides 3-11). Summary of the revised recommendations: ● Reclassify LUMM under LUOE ● Replace LUOE with the proposed Land Use Decision Support Outcome ● Reclassify Healthy Watersheds as outputs supporting the Protected Lands, Stream Health, and the proposed Land Use Decision Support outcomes

Discussing the Future of the HWGIT –

To prepare for the upcoming agenda items—each aligned with the overarching theme of envisioning the HWGIT's future and its connections with related workgroups and outcomes—Peter and Jeff reviewed the high-level draft goal and outcome language and invited initial feedback (Presentation slides 9-10).

- **Draft Proposed Watershed Health Goal Language** (To Update the Healthy Watersheds Goal): *Protect and sustain waters and watersheds to achieve and maintain high ecological value.*
- **Draft Land Use Decision Support Outcome Language** (To Replace the Land Use Options Evaluation Outcome): *Develop and disseminate locally-relevant and actionable information to organizations involved in the land use planning process on past, present, and future landscape conditions and the potential environmental consequences of landscape change.*

Discussion:
Rob Schnabel (in chat): Like "Sustain Waters" given water "Quantity" is becoming more of an issue. Many BMP's simply focus on sediment and nutrients, secondary impacts, where water Quantity / hydrology is a primary source. For example Impervious acres / MS4's

Anne Hairston Strang: I think this draft language gives us room to move and be flexible and sets us up for the next thing to do.

Kevin Du Bois (in chat): Does the use of the word "locally" limit perceptions of who is involved in planning? I'm thinking of DoD...and their role in local land conservation

Peter Claggett: It shouldn't. By "local" we also mean local to bases and other installations.

Kevin Du Bois: Why not just say relevant?

Peter: We could just say relevant, but I think locally relevant was included in the Land Use Methods and Metrics outcome to emphasize the need for higher-resolution information rather than 1 sq kilometer generalizations of what's happening on the landscape, which is not relevant to local level decisions.

Kristin Saunders (in chat): I think locally-relevant does give an important nod to the fact that decisions are within local purview.

KC: I don't think it excludes other decision makers and locally is important and fits here.

Laura Cattell Noll (in chat): I have heard from LGAC members that it's important to have data/tools/resources that are 1) at a local government scale and 2) relevant to local

	governments in different states/regions. I think the term 'organizations' is open-ended enough to include local governments, land trusts, DOD bases etc. Jeff Lerner: I wonder if we could change the language to something along the lines of relevant and actionable information to organizations involved in the local and regional land use planning process. Kristin Saunders: The recognition of local is important here, but thinks that locally relevant could be interpreted differently. Maybe include locally in front of land use planning. Kevin Du Bois (in chat): I like your solution Jeff. "local land use planning..." Anne Coates (in chat): I like local and regional. Since many local decisions are regional Anne Hairston Strang: I would ensure that landscape conditions are something that you clarify at an implementation level. Some of the stuff that we're trying to do even at a local level brings in landscape scale data and actions that may cross county, regional, and state boundaries. Jeff Lerner: That's a good point, I think what we're trying to do here is marry these different scales of looking at the landscape, while also making sure the information is relevant to local land use decision-making. Providing additional context to these scales could be helpful, but we still need to recognize the primacy of the local land use decisions that are happening.
11:25	**Metrics and Targets for the Land Use Decision Support Outcome -** *Peter Claggett (HWGIT Coordinator, USGS), Sarah McDonald (LUWG Coordinator, USGS)* To set the stage for the following brainstorming session on metrics and target language for the Land Use Decision Support outcome, Peter provided an overview of the draft language and recommendations. He highlighted the first recommendation which includes reconstituting the Land Use Workgroup as a community of practice for land use planning. Since 2012, the group has focused on developing land use data for the Phase 6 watershed model, but with refined high-resolution data now available, the focus is shifting to delivering actionable information to planners, potentially requiring changes to the group's focus or membership. Additional recommendations include implementing the Bay Program's land use strategy, sharing relevant data to support local planning and conservation, and integrating land use mapping and metrics into broader strategies across related outcomes (Presentation slides 10-13). ● **Draft Land Use Decision Support Outcome Language** (To Replace the Land Use Options Evaluation Outcome): *Develop and disseminate locally-relevant and actionable information to organizations involved in the land use planning process on past, present, and future landscape conditions and the potential environmental consequences of landscape change.*

Example Metric: Cumulative number, variety, and geographic scope of land use information use cases (reported annually).

Example target: Continually increase the number, variety, and/or geographic scope of use cases for land use information.

Discussion:
KC Filippino (in chat): I'm still advocating for a land use technical advisory committee to continue to vet the data for those in the partnership that are technically inclined and willing. This could run through the Modeling WG.

Jeff Lerner: It sounds like KC is suggesting that there still needs to be a focus on the land use data. However, we're also pivoting to emphasize that it's not just the data itself, but how the data is used that's important.

Sarah McDonald: I definitely agree with that, KC. I think that would be a separate group from how the LUWG pivots that we would spin off on an as needed basis

KC Filippino: Since I left as chair, we have been trying really hard to make the data more actionable. We don't have the right people at the table, we need the right people at the table so we can get the best use cases. LUWG has evolved over time, and we need to figure out how to get better use out of that data in a more meaningful way.

Gina Hunt (in chat): I like seeing ecosystem service info. It was prominent in B25 comments and report, but I haven't seen it as we are revising outcomes.

Peter Claggett: Quantification of ecosystem services relies heavily on LULC data, so it is a natural fit with this outcome, and that's often what local governments are concerned with. Like flood control, for example.

Laura Cattell Noll (in chat): I'd suggest revising bullet 3 to say 'local and regional planners'. That will help to clearly distinguish it from the Local Leadership workgroup, which is focused on local elected officials, local appointed officials and senior staff

Kristin Saunders (in chat): The program still struggles with operationalizing this because no one owns the next steps for ecosystem services

Jeff Lerner: I think what we're trying to say is that it's not just planners, we're also talking about others who operate at the local level. We should include planners working at different local and regional scales, as well as other local officials, since they're an important part of the decision-making process too.

	Peter Claggett: For example, sometimes you're dealing with the Department of Public Works and that group would be the group that's acting on the information, not necessarily the planning department. Laura Cattell Noll: I think you're on the right track, and I really like the idea of a community of practice. I just want to make sure that's front and center, that those are the key folks you're envisioning engaging with. From the Local Leadership Workgroup, we know that planners, stormwater engineers, and others operate within different networks than local elected officials. It's important to recognize that distinction and think about how those groups can work together effectively. Peter Claggett: We'll definitely revisit the local officials statement in bullet 3 and try to broaden it and be more inclusive of all different groups. Jeff Lerner: As we are thinking about this, who are the players in that and how can we support them? Anne Coates (in chat): Planning Commission Districts. Soil and Water Conservation Districts Frank Rodgers (in chat): E. G. Regional economic development councils Elizabeth Hoffman (in chat): Soil and Water Conservation Districts are often plugged into AgWG, would need to ensure we don't splinter this conversation. Planning related to land uses is often discussed in sector workgroups. Anne Coates (in chat): SWCD are not Ag only. Some do very little Ag. Some do a mix. Elizabeth Hoffman (in chat): Understand. Just suggesting to make sure there is coordination between groups so all are on the same page. Jeff Lerner: I wanted to flag the second bullet about the number, variety, and geographic scope of use cases. If a local or regional entity integrates watershed health into planning, we might count that area as positively influenced. We don't have set metrics yet, and while there's some hesitation about being too specific, we've also been encouraged to be as specific as possible, so we're looking for this group's feedback. Peter Claggett: Does anyone have heartburn over this strawman language? Anne Hairston Strang: I think we're heading in the right direction. If there's a way to highlight key factors, like habitat, impervious surfaces, or other elements we know are critical to outcomes, it might be worth considering. I'm not sure if that needs to be added here or just kept in mind as we move forward.

	Gina Hunt (in chat): What is the overall language or did I miss that. I would think that is where you could include Anne's language. Marilyn Yang (in chat): Draft Land Use Decision Support Outcome Language (To Replace the Land Use Options Evaluation Outcome): *Develop and disseminate locally-relevant and actionable information to organizations involved in the land use planning process on past, present, and future landscape conditions and the potential environmental consequences of landscape change.* Laura Cattell Noll (in chat): Could website analytics be a metric? For example, x number of downloads of data or y number of tool users? Peter Claggett: We could consider adding a parenthetical statement after "use cases" with example types, since it's not always clear what that means. Sarah McDonald: But we want to be careful to not make that exclusionary if someone doesn't see their use case listed. Peter Claggett: As for tracking usage, website analytics like download numbers can be helpful, but they don't necessarily show whether people are actually using the data. That kind of insight is valuable, though it might not rise to the level of a formal metric or target just yet. KC Filippino (in chat): Can you drill down to # of plans that use the data, # of grants applied for that use the data, studies, etc? Be a little more specific? Laura Cattell Noll (in chat): Good point Peter. Something for the Management Board to consider. Do they want to track how many folks have ACCESSED the data/tool or how many folks have USED the data/tools KC Filippino (in chat): Having a more formal place to report on use cases could be helpful to help you gather metrics too. Right now I think it's via email or a form. A portal tied to the data download site may be useful. Peter Claggett: From the USGS perspective, when we talk about land use information, we often think more broadly. We use other data, like 1-meter resolution topography (digital elevation models), height information, and forest structure derived from LIDAR, to complement land use data. Additionally, we have high-resolution hydrography data. For this outcome, we're considering high-resolution data that characterizes the entire watershed landscape and informs local-level decisions, beyond just the 56-class land use dataset. Sarah McDonald: In this case instead of saying "land use" we could refer to it as "landscape information" and then have a parenthetical of land use, hydrography, elevation, etc.

	Peter: That's true, that might be better. Kristin Saunders: I feel like the approach you're taking makes sense for the way the outcome language is structured, however, there I know there is difficulty in collecting and reporting these use cases. Given this, I'm wondering if we could track trends, like land conversion rates to measure the impact. This could help us determine if the dissemination of actionable science is having the desired effect on land use decision-making and resource conservation, without putting extra burden on staff to track down use cases. Michelle Edwards (in chat): Agreed, I think uses cases would be woefully under reported Gina Hunt (in chat): The CC would be willing to have a designated webpage to upload use case studies. We'd be happy to discuss this and other options for data sharing. Kevin Du Bois (in chat): That's a great thought Kristin! Peter Claggett: To rephrase what you're saying in the realm of use cases, there are certain use cases that directly affect the densification of development. While densification isn't for everyone and isn't always appreciated, it is one of the main ways to accommodate growth while minimizing land conversion. The land use workgroup or management strategy for this outcome could focus on a subset of applications that support smarter, denser development. If this happens, it could count towards a reduction in the rate of land conversion, but whether the overall rate is reduced or not is beyond our control. As the states mentioned, macroeconomic forces at play are outside of our control, but we can do what we can to minimize it and that would be through densification. Anne Coates (in chat): Has there been a Needs Assessment or Survey to local and regional groups to determine what uses they may need interested in? Kristin: Since we're connecting this outcome to both land use and land conservation, I wonder if we could look at acres of conserved land in high-value areas. This could tie into what the Protected Lands Workgroup tracks right now and provide a combined metric that reflects both land use decisions and conservation efforts. It would give us a better indication of whether the science and tools are having the intended impact, rather than just counting interactions or downloads. It's a bit of a stretch, but it might be worth considering as a way to measure true impact. Kathy Stecker (in chat): Agree that metrics and targets should reflect what you can control. KC Filippino (in chat): I had the same thought Kristin but I don't know how you can say 'impervious acres avoided' because of this data or 'acres conserved or restored' because of this data can be quantified easily. There are many reasons why projects are implemented, this would be one aspect, but it's worth pursuing, possibly through the use cases.

	Kevin DuBois (in chat): Reporting use cases would be informative for other localities and approaches could be adopted. Could this reporting happen as presentations at LGAC or other local outlets? Jeff Lerner: There might be a way to track this spatially, but we want to be careful not to add extra reporting burdens for everyone involved. Ben Alexandro (in chat): I am intrigued by Kristin S's idea.
11:45	**Reconstituting the LUWG Membership –** *Peter Claggett (HWGIT Coordinator, USGS) and Sarah McDonald (LUWG Coordinator, USGS)* To prime the group for this brainstorming session, Peter proposed the following questions for the group to consider (Presentation slides 14-15): ● What groups and voices should we work to incorporate and elevate in a reconstituted LUWG? ● How will our target audiences and work change under the proposed Land Use Decisions Support Outcome? ● Any suggestions on people or organizations we should consider? ***Discussion*:** Jeff Lerner: So far we've already heard a few of these ideas including regional and local planners. We've also discussed the potential involvement of soil and water conservation districts. We're looking for more feedback on those ideas and whether there are any other key players we should reach out to or include. Ruth Cassilly: I suggest including developers. I think we need their voice in the conversation. If we want more intense development, we need to understand what support is necessary to make that happen. Most of this is about economics, so having that perspective in the conversation is important. Kevin Du Bois (in chat): Sentinel Landscape Coordinators might be a voice that hasn't been traditionally thought of - since they're mostly new. Tidewater and Potomac SL, Kittatinny Ridge SL. KC Filippino (in chat): State, local, and regional planners, APA, SWCDs, conservation groups, etc. Yes to developers! Anne Hairston Strang: Do we know if there's anything similar with the American Planning Association? About 30 years ago, we were talking about similar issues, and it's still a challenge. We need to include developers, organizations like Maryland Association of Counties, and Maryland Municipal League. These groups face the same challenges but bring different perspectives on what's needed to deliver solutions.

	Jeff Lerner: I know the American Planning Association did have people thinking and talking about green infrastructure planning, nature based solutions. I think we could engage with individual APA chapters. These members are professional planners who are part of the APA, so I could see us going back to them and asking for an overview of the landscape of planners who are focused on this. Kevin Du Bois (in chat): Who are the implementers for 30x30? Laura Kowalewski (in chat): https://www.apascd.com/ The APA-SCD is your one-stop shop for education, resources, and insightful thinking about planning for more sustainable communities. Anne Hairston Strang: 30 by 30 is implemented way beyond Maryland Jeremy Hanson (in chat): Associations or trade groups may help with including developers. Ben Alexandro (in chat): Chesapeake Conservation Partnership has been supporting 30x30 efforts but encompasses all the work of folks doing conservation throughout the watershed no matter who they are (gov agencies at every scale, land trusts, tribes, private landowners, etc.)
12:00	**Setting the Watershed Health Output Metric and Target Language under the Protected Lands Outcome –** *Jeff Lerner (HWGIT Chair, EPA), Peter Claggett (HWGIT Coordinator, USGS), and Aurelia Gracia (Protected Lands Coordinator, NPS)* To provide context for the discussion, Peter did a quick analysis and found that 54% of the forest in the Bay watershed is within watersheds or sub-watersheds that are considered to be in good condition according to the watershed assessment. Of that, about 40% is protected, and 60% is unprotected. Peter reviewed two possible options for draft watershed health output language under the Protected Lands Outcome: ● By 2040, maintain or improve the health of an additional __ % of the basin's highest functioning sub-watersheds to ensure long-term ecosystem resilience. ○ To fill in the percentage here, we would need to map those high-functioning sub-watersheds and determine what percentage we want to maintain or improve. ● By 2040, target _% of the protected lands outcome acreage goal in the highest functioning sub-watersheds to ensure long-term ecosystem resilience. ○ Essentially, this metric would align with the protected lands outcome, assuming a larger goal—say, 2 to 3 million acres by 2040. Some of those acres would be targeted for healthy watersheds, urban areas, or other specific goals. This approach essentially divides the larger goal into more achievable

pieces, and might be more feasible in the short term than setting a precise target as in the first bullet.

Key Discussion Questions/Considerations: How are we going to identify the highest functioning sub-watersheds? What level of protection is sufficient to say we maintained these areas? Note that 54% of forest in the Bay watershed is within watersheds with relatively high levels of health and 39% of those forests are protected (Presentation slides 16-17).

Discussion:
Jeff Lerner: For context, most people on this call are likely aware that the Protected Lands Workgroup is currently working on identifying sub-goal priorities underneath the Protected Lands Outcome for priority areas of focus such as forests and wetlands. This is a work in progress, and it presents an opportunity for us to overlap healthy watersheds or watershed health needs with their outcome. With that in mind, are there any thoughts specifically on the language Peter has presented here or any of the questions we've raised?

Kevin Du Bois (in chat): To be consistent with the draft Watershed Health goal language, why isn't the language 'maintain the health of the highest functioning sub-watersheds and improve lower-functioning sub-watersheds to ensure long term ecosystem resilience'.?

Ruth Cassilly (in chat): What is being used to measure/indicate "watershed health"?

Ben Alexandro: As we're thinking about these targets, does there need to be any language to ensure we are supporting and getting the data that is needed to track these things? Due to changes at the federal level, how can we make sure we can still track these goals

Jeff Lerner: I don't think we need to clarify that in this outcome language, but it's good to start thinking about how we will incorporate these elements in the future logic models and action plans associated with what we're doing.

Aurelia Gracia (in chat): I feel like that's part of the 2 year action plan or just the workgroup's methods. Not something you'd see in outcome language

Kristin Saunders: I like the second bullet as it aligns with the PLWG, but I also like the first one. I wonder if we can treat it as a longer-term goal, since we need more time to gather data on the highest functioning sub watersheds. I suggest we don't choose one over the other, but instead sequence them. We can start with the second bullet, which is more achievable, and work towards the first one as we gather more data. But don't lose the first, it's really important information and ultimately where we're trying to move towards.

	Peter Claggett: The next thing we will discuss is recommendations for watershed output language underneath the Stream Health Outcome, so hopefully the SHWG will work with us to define where the highest functioning sub watersheds are, through integrating landscape information with information on the stream corridor and many other factors such as chemistry, acid mine drainage, etc. I hope the Management Board will be flexible with the possibility of putting a placeholder here until we can complete this step. Mark Symborski: I agree with the line of thought Kristin was following. Both bullets are important. The second one seems like the action item that would drive activities and projects, while the first bullet, once we identify the highest functioning sub-watersheds, can track their status. If they aren't being maintained or improved enough, we can shift focus to the second bullet, increasing efforts where needed. It creates a feedback loop, using the first bullet to monitor and guide the activities from the second. Sarah McDonald: I almost kind of read them as the second bullet being "maintaining" and the first bullet being "improving" where we can. If the second bullet is targeting areas that are already doing well, then I feel "maintain" should be there. The first bullet should focus on areas that could be doing better, and we'll put effort into improving those areas, making these two separate targets. Peter Claggett: If we have them as one, it feels like you're saying you can do either one and still meet the objective. Both are good, but if we're focusing on watershed health, we should maintain a strong commitment to preserving the best areas and then complement that with a goal to improve others. Cassie Davis (in chat): There is an opportunity here to include habitat connectivity in this outcome or we could include it in the action plan Gina Hunt: Responding back to Peter's comment about the Management Board's flexibility with developing metric and target language, for both of these metrics we are saying that we will not have the metric by the end of this year. Is that correct? The Management Board likely wants this language finalized within this year and so we may need to change the language to adjust towards reaching this goal. Peter Claggett: If we are allowed up to November to construct these, both the SHWG and PLWG are needed to put meat on the bones of these. I can't answer that by myself. Jeff Lerner: Optimistically, we could get this done by the end of the year. If we have additional time over the summer and into the fall, optimistically we could do it, but not in the next two weeks. Circling back to Cassie's comment in the chat, that's a great point and gets to this idea

	of landscape integrity, which is part of what helps make these watersheds functional and healthy. Peter Claggett: Along those lines maybe we say “to ensure long term ecosystem resilience and integrity” because resilience by itself doesn’t necessarily imply connectivity, where integrity does a bit more. Ben Alexandro: As we are thinking of how we crosswalk this with other groups, has it been decided that 2040 is the new target date like 2025 was? Do you know if other groups are doing 2050, or other dates? Jeff Lerner: I think we’re hoping to follow the date that the Protected Lands Workgroup is using of 2040. Ben Alexandro: But has the Bay Program/Management Board officially decided that 2040 was the date? Aurelia Gracia: I haven’t heard anything yet from the Management Board about aiming for a specific year, but rather we were left to kind of decide the metric and year target based on our own outcome language. Kristin Saunders (in chat): We have not been given a clear signal on the time horizon yet Some of us keep pushing on behalf of those asking..... Gina Hunt: There is no one size fits all for a year Jeff Lerner: 2040 is at least more than 10 years. Like with all of these outcomes and targets, we always have the ability to reevaluate, and that could mean adjusting as we go. We’ve got a large portion of forested areas in the Chesapeake Bay watershed that are unprotected but still fall within what we’d consider healthy watersheds. When you add up the acreage, it’s millions and millions of acres and I don’t think we currently see it as realistic to protect all of those lands in just a 15-year period. Important Update on the Time Horizon**:** On April 22, the coordinators and staffers received the following guidance from the Management Board: “A time horizon of 2040 has been suggested for target achievement. This is being proposed to determine the feasibility of establishing a uniform time horizon. A final date will be discussed and agreed upon by the Management Board and Principals' Staff Committee.”

	Rob Schnabel (in chat): "Protected Lands" does not necessarily improve watershed health depending on what you are protecting, say monoculture cornfields without forested stream buffers. The Forestry Workgroup has discussed upping Ag Preservation criteria to include protecting existing forested stream buffers and while also requiring forested stream buffers in order to get public funding. One way to stop the trend of net loss of forested stream buffers. Aurelia Gracia: As a final note, I just wanted to mention that the PLWG is also developing similar bullet points under the Protected Lands outcome for forests, wetlands, tribal lands, and agricultural lands—just as we discussed today for healthy watersheds/watershed health.
12:30	**Discussing Potential Watershed Health Output Language for the Stream Health Workgroup to Consider under the Stream Health Outcome –** *Jeff Lerner (HWGIT Chair, EPA) and Peter Claggett (HWGIT Coordinator, USGS)* Peter and Jeff facilitated a discussion around potential watershed health output language for the Stream Health Workgroup to consider during their meeting on April 18th. To kick off the conversation, Peter said from the watershed health perspective, one recommendation is to use a holistic, multi-metric assessment of stream and watershed health as an output under the Stream Health outcome to help us clearly answer questions like: Where do we have the highest-functioning watersheds, and where should we prioritize protection for those with the highest ecological value? Another recommendation is to identify restoration and conservation opportunities in small watersheds based on how land conditions impact stream health, particularly for aquatic life like bugs and fish. Does anyone from the Stream Health Workgroup have thoughts on this? (Presentation slides 18-19). ***Discussion*:** Allison Santoro: I like these, they do coincide with what we're working on. My initial thought is that we will have more work to do, but I am concerned that they might not be measurable or time bound. Kristin Saunders (in chat): the key words from Alison "I like them" Gina Hunt: These recommendations are absolutely something we need to do, but they are written like actions and not metrics. For watershed health to be a metric within the stream health outcome, it needs to be framed as a metric, not as an action. We need to figure out if there is language for watershed health that could function as a metric. The land use metrics previously discussed might crossover into watershed health. Both watershed and stream health are influenced by similar land use factors, and the metrics for both could be related. Whatever language we use, it needs to be an actual metric to sit within the stream health outcome. The format set by the MB has overarching outcome language, with the metrics as

bullets underneath. Therefore, the watershed health language needs to be written like a metric, not an action, to align with this structure.

Corresponding format from the MB that Gina provided in the chat:

High level outcome language. (The change in state we aim to influence or the future state we aspire to reach as a consequence of our actions and their outputs.) This language does not need metrics.

- Bullets of **measurable targets** or objectives. These are shorter-term steps and results: this is the place to be as specific, measurable, achievable, relevant, and time bound (SMART) as possible to ensure we are tracking our work, learning from the results, and being publicly accountable.
- These could be more direct measures of our efforts and whether we are following through on plans and commitments.
- Interim steps and tiered targets acknowledge what is realistic in a set period while leaving space for what we ultimately know is needed for the healthy watershed we envision.
- Targets that are not thoroughly flushed out can be listed as "under construction."

Rob Schnabel (in chat): Watershed health to watershed "function" ? gets at the hydrology

Peter: Going back to what Sarah was suggesting of separating "maintaining" and "improving" and like what Rob put in the chat, land protection doesn't necessarily improve stuff unless you do something else like plant trees etc. Maybe if we take out the language about "to improve" in the watershed health output language under the protected lands output and carry that over into the stream health output language so that you create a metric to improve low-hanging fruit watersheds that can be improved significantly through efforts like riparian buffers, then maybe that could be a focus of a metric or target under stream health. Such as "measurably improve x percent of stream miles in marginally healthy watersheds.."

Alison Santoro (in chat): We would want to incorporate improvements within all of the watersheds, not just the best ones.

Gina Hunt: Alison, can you put what the SHWG has as language in the chat? They are coming up with a bullet that is a metric. I am just looking for an additional bullet that speaks to watershed health more broadly than just streams. The SHWG sent out an email this morning with a Google form requesting feedback because they have a meeting on the 18th to work on language. We could take some comments from people on this call if they want to fill out that form.

	Alison Santoro (in chat): Continually improve and protect stream health and ecological integrity throughout the watershed based on sound science, coupled with land management, planning, and protection. (High Level Language) Annually improve health and function of at least <X>% of stream miles each year. (Measurable Target) Alison Santoro (in chat): SHWG Outcome Survey https://forms.gle/EsHbzBbcoM2JjyEC8 Kevin Du Bois (in chat): intact floodplain? Jeff Lerner: Could there be a parallel or complimentary statement about protecting health and function? Instead of improving, talk about protection? Gina Hunt: How do you measure “protected”? From the land use metric? Jeff Lerner: Well there would be actually protected land, but also through the designation of outstanding water. So, Pennsylvania or another state says, we've surveyed these different areas and we consider these areas to be supporting trout populations or outstanding natural resource waters, getting additional designations of those. Gina Hunt: Before I would say have a separate bullet on protection, to me, the easier way is somehow what is being proposed in the Protected Lands Outcome .Just if the state says it's protected doesn’t necessarily mean it is. We should know how we are collecting and measuring this. Alison Santoro (in chat): I don't know if we should focus on specific characteristics or functions in the output. We probably won't get consensus on the most important ones. Alison Santoro: I’m hoping the Healthy Watersheds Assessment can help answer that, and from there we could include a general improvement metric. I’d avoid getting too specific, we likely won’t agree on which metrics matter most, and we risk overlapping with other outcomes like water quality or stream buffers. It just gets tricky fast. Peter Claggett: Another way to look at the connection between watershed health and stream health is by focusing on impairments. Some impairments are in-stream, but others are tied to the surrounding watershed. For example, if the main issue is altered flow regimes, that requires watershed-level work—like reducing runoff and increasing recharge. If it's a temperature issue, you need both recharge and shade trees along the stream. So maybe we could think about outputs under stream health that highlight the need for broader watershed actions, not just stream corridor work. Alison Santoro (in chat): We've started talking about Biological Stress Identification. Could it be a focus on Landscape Biological Stressors?

	Alison Santoro: I think we're on a good track here, I think especially if we have an "under construction" by the April 28th deadline and work on the language for the rest of the summer, I think it's a great start Kevin Du Bois (in chat): To Peter's comment, you can have an incised, poorly functioning stream within a protected landscape (due to upstream conditions) Jeff Lerner: I think this is a good place to stop, we knew going into this that we wouldn't have final language from this output, but rather would lay the groundwork here.
12:45	**Discussing the Overlap and Working Relationships Between Other Groups and Outcomes** – *Jeff Lerner (HWGIT Chair, EPA) and Peter Claggett (HWGIT Coordinator, USGS)* Jeff and Peter led a broader discussion around the following theme: How can the Healthy Watersheds GIT, Land Use Workgroup, Forestry Workgroup, Protected Lands Workgroup, Stream Health Workgroup, Local Leadership Workgroup, and Local Government Advisory Committee work most effectively together to support each others' outcomes? (Presentation slides 20-21). ***Discussion*:** Jeff Lerner: Referring to slide 21, what we really want to do here is lay out some of the connections. In the initial presentation about the potential four categories in the Bay Partnership, the one focused on land and the physical landscape ties in really strongly with the watershed goal we've developed. We've already begun conversations with some workgroups we haven't traditionally worked with, and this is a good opportunity to hear your thoughts on how we can move forward more collaboratively. Anne Coates (in chat): Possibly add Roundtables to list of regional groups (James River Roundtable, York). Also River Basin Commissions (Rivanna RBC, Rappahannock RBC). Frank Rodgers: Thank you, Peter and everyone down there. This has been a very enlightening calland thank you very much. Rob Schnabel (in chat): Watershed "function", hydrology the key for healthy watersheds. Stream construction projects often do not address the source of the problem, water volume / quantity as a result of impervious surfaces. The CESR report highlighted the need of functioning shallow water habitats and biology. I hope this is paramount in the stream health workgroup. I bring it up all the time in the forestry workgroup. Thank you! Alison Santoro (in chat): We've been stalled in our discussions from the CESR and the stream restoration STAC workshop because of the SRS and Beyond 2025 work. Michelle Edwards (in chat): LLWG's work with the planning community seems a great space to partner with LUWG

	Peter Claggett: Slide 21 suggests a structural recommendation for how we group or interact. We've talked a lot about increasing collaboration across workgroups, but we need new, effective ways to work together. Without innovative ideas, we risk creating new silos. If anyone has suggestions for models that promote collaboration better than the current Bay Program structure, we'd love to hear them. Kevin Du Bois (in chat): Where do wetlands fit in here? Rob Schnabel (in chat): Absolutely key as it moderates hydrology, reducing flooding during storm events and providing base flow to streams during drought. Gina Hunt (in chat): I would add fish habitat to your diagram Ruth Cassilly (in chat): I am not sure if this is the time to bring this up- but soil health has been supported as a topic that crosses outcomes, workgroups and GITS, so I would like to suggest that also be considered as an output or indicator of watershed health in collaboration with these other groups Anne Coates (in chat): Agree with Ruth. Soil Health (Urban and Rural) important to Watershed and Stream Health Jeff Lerner: One point we want to make is that there's no perfect construct for these outcomes because they're interrelated. What we're trying to convey through the goal teams is the need for more cross-team collaboration. Wetlands are a good example—they fit into both living resources and watershed health. Similarly, forests are part of both habitats and the physical landscape. The Forestry Workgroup is moving to combine the tree canopy and forest buffers outcome into a more holistic "Healthy Trees and Forests" outcome, so especially now it's crucial that we continue to engage with them as they move forward. Kevin DuBois (in chat): Maybe the visual concept is one of connected cogs - movement on one influences others. Gina Hunt: If this process has done nothing else, it has certainly highlighted the connections between other outcomes and watershed health. We need to be mindful that I don't think there's an appetite for adding more outcomes. What we've heard is that people want more joint meetings. So, when you have a metric affecting another group's work, include that part of the meeting. You don't need to invite them to everything, but it's important to identify those connections. Moving forward, it's up to us to continue this work and hold these meetings. Jeff: Well said, any other last thoughts? Seeing none, thank you to everyone for listening and hanging on while we covered many of these topics. I'm looking forward to these other meetings coming up to continue these conversations.

1:00	**Adjourn** *Next HWGIT Meeting*: Monday, June 9th (11:00 AM - 1:00 PM)