



Chesapeake Bay Program

Science. Restoration. Partnership.

Maintain Healthy Watersheds GIT Meeting June 13, 2023

11:00 am-1:30 pm

[Meeting Materials](#)

Renee Thompson, USGS
Sophie Waterman, CRC
Jeff Lerner, EPA
Kristen Wolf, PA DEP Chesapeake Bay Watershed
Restoration Division
Brock Reggi Virginia DEQ
Anne Hairston-Strang, Acing State Forester, MD
DNR Forest Service
Kelly Maloney, USGS
Katie Walker, Chesapeake Conservancy

Debbie Herr Cornwell, Maryland Dept of
Planning
Laura Cattell Noll, Local Leadership Workgroup
Coordinator
Bianca Boggs, Skeo Solutions
Alison Santoro, MD DNR, SHWG Co-chair
Cassie Davis, NYS DEC
Mark Hoffman, Chesapeake Bay Commission
Faren Wolter, USFWS
Sean Emmons, USGS
Bonnie Bick

[Updates on Chesapeake Healthy Watershed Assessment 2.0 Project; Progress on 2022 Protected Lands Indicator/update on protection of healthy watersheds](#) – Renee Thompson, USGS, Coordinator HWGIT.

Renee gave a presentation on a general update on GIT funding 2022 progress, progress on Chesapeake Healthy Watersheds Assessment 2.0, progress on the Chesapeake Bay Protected Lands Indicator (2022), an update on Protection of Healthy Watersheds, and then opened a discussion on the next steps on applications reporting progress on Healthy Watersheds outcome.

2022 GIT funding:

CHWA 2.0 was a 2022 GIT funding project that hired contractor Innovate inc. The CHWA 2.0 is the newer version of the CHWA. The 2.0 version development has taken more time to get to know the stakeholders and do more user needs analysis and research. A more robust geodatabase with new metrics is being incorporated into the 2.0. The final deliverable will be a new website with the 2.0 and accompanying video tutorials.

Updating the CCP priority Habitat dataset of the Chesapeake Conservation Atlas: Scoping project was the other 2022 GIT funding project that the HWGIT was involved in. Bill Jenkins, John Wolf, and Renee Thompson worked with Skeo Solutions and a small project action team to better understand what it would mean to update the high-value habitat data set. The project aimed to get input from stakeholders and habitat experts. The project's final report will be out this summer.

Progress on Chesapeake Healthy Watersheds Assessment 2.0:

The development of the 2.0 is built off the backs of multiple other Chesapeake Healthy Watershed Assessments, including the Maryland Healthy Watershed Assessment, which used a random forest

model to predict watershed health. 2.0 will be a scaled-up version of the MDHWA that includes new metrics. Stakeholder insight has led to a better understanding of what people want from the tool, and the 2.0 process has included a lot more stakeholder feedback collection. The 2.0 version has incorporated new data and is harnessing code and model developed from the MDHWA. The CHWA 2.0 is going to be crucial in charting the course for the development of an indicator to inform progress toward the healthy watershed's outcome and understanding our watersheds as we approach 2025.

Progress on the Chesapeake Bay Protected Lands Indicator (2022):

The protected lands indicator is helping track the total goal of 2,000,000 additional acres with a total reporting number of 1,307,876 as of 2022 (about 65% toward the goal). The preliminary data shows that we have lost protected lands, but that is not really the whole story. The federal lands footprint has cleaned up and cleaned up DoD lands, removed inholdings, reservoirs, and federal lands NOT managed for conservation purposes. While there is a dip in federal lands due to the cleanup, we are seeing increases in other sectors of protected lands, such as state lands. One of the next steps with the indicator is asking the question, what is the percentage of protected healthy watersheds?

Next Steps:

Indicator development (form a smaller action team?): Analyze CHWA 2.0 results Aug – Sept 2023; work with the CBP Indicators team to develop draft indicators Sept – Nov 2023; share results with HWGIT and obtain feedback Oct 2023; develop indicators and Report progress toward outcome Dec 2023—Jan 2024.

Discussion:

Renee mentioned that she has taken a deep dive into EPA's ATTAINS database, which has been recommended to her before to help look at the connection between 303 D waters and whether they are meeting attainment standards. That database also has some robust information about types of pollution stressors. Kaylyn Gootman (EPA) has been working on summarizing this data across the Chesapeake Bay Watershed. There is an opportunity for us to develop a metric within our CHWA, and better connect our monitoring data to progress.

Jeff asked if the ATTAINS database is connected to this, so crediting the conservation concept. Renee noted that no, not necessarily. Jeff also asked if we are able to calculate water quality benefits from all the protected lands we are conserving. It could be beneficial for communication. This is a question that Peter Claggett and the land use team are starting to look into. That question falls under the Land Use Outcomes more so than the healthy watershed watersheds.

Anne Hairston-Strang made a comment about how when MD DNR did forest conservation estimates a few years back, they did not include federal lands due to not identifying what they are conserving. The updated protected lands layer with what federal lands are being conserved would be an improvement. Renee noted that is something that we can further tease out.

Jeff noted that this information has the potential to be useful to local governments but heard at the LGAC meeting that they might need/want some hand-holding when it comes to teaching about our data and tools (ie the CHWA2.0). The upcoming "protect local waterways" website that the Bay Program is creating could be a good place to house some tutorials. Laura Cattell-Noll noted that 2-minute

instructional videos are ideal for local jurisdictions. Anne noted that these tools need to be in the hands of “explainers”. A real need for “train the trainer programs.”

Assessment of Tier II waters in Maryland and opportunities related to federal funding and targeting (investigation of methods and results) – *Sophie Waterman, CRC, HWGIT Staffer*

Sophie gave a presentation on some of the questions that HWGIT has been asking and how we can use the data to help target funding. Sophie walked through maps that answer the question of “where are the healthy watersheds in Maryland?” “Of those healthy watersheds which have a high protection? Which have low protection?” and “Which healthy watersheds are threatened by development?”

The MDHWA also provides an opportunity to examine the degraded watersheds within the MD state-identified watersheds. Pairing the identified degraded watersheds with EJ communities can help locate where funding can be targeted for restoration work in normally forgotten communities.

Sophie has been working with MD DNR to demonstrate how the MD Healthy Watersheds assessment metrics, data and results can be utilized and combined with other relevant dataset related to Most Effective Basins, EJ communities and other funding programs to demonstrate vulnerable watersheds and areas where grants and other resources could be targeted.

The next steps for this work include looking at where healthy watersheds are located in proximity to disadvantaged communities to help with targeted conservation funding, creating a white paper that details the maps that Sophie created, and getting HWGIT input on other questions to ask.

Discussion:

Jeff asked the group if these questions are leading us in the right direction and as we get new data is there an interest for us to look at other jurisdictions with their specific questions. Sophie noted the other side of that and asked if jurisdictions even realized that we have the data to ask questions that were really hard to ask even a couple years ago.

In the chat Anne wrote “This year's Forest Conservation law, SB 526, has greatly changed mitigation standards, and expanded priority forests. Tier II watersheds are now part of the priority forests with stronger mitigation requirements. To be phased in over the next couple of years.”

Wrapping up Land Use Outcomes SRS and moving into Healthy Watershed SRS- *Renee Thompson, USGS, Coordinator HWGIT.*

Renee provided background on the HWGIT outcomes (land use options evaluation, land use methods and metrics and healthy watershed outcomes), timelines, progress, draft documents and next steps in preparation for the upcoming August 10th Quarterly Progress Meeting.

The land use outcomes are at the end of their SRS process, with a final presentation at the STAC meeting on their science needs on June 13th. The HWGIT now needs to focus on the healthy watershed's outcome and prepare for the August SRS review.

Renee ran through what we have been doing over the last 10 years and honed in on the last two years. Some big accomplishments include the MDHWA, the development of CHWA 2.0, and the upcoming Community Response to Land Use Change GIT funding project that is set to start in July. Renee also highlighted the Healthy Watersheds management and noted that there is still work to be done in getting

leadership involved and tracking healthy watersheds (tracking should become easier with the completion of CHWA2.0 and the creation of an indicator).

The Chesapeake Bay Program relies on documenting the Strategy Review System process through three documents: the Logic & Action Plan, the Narrative Analysis, and the Presentation. These documents inform Quarterly Progress Meetings and summarize specific commitments, short-term actions, and resources required for success. In order to write these documents, it is crucial that we understand what members are doing and their general thoughts on the outcome. A [Jamboard](#) was used to collect this information, and is still open for members to continue to add to.

Discussion:

When the question “What Scientific, Fiscal, or Policy related developments have arisen related to the ability to achieve our outcome?” was presented to the group, Jeff asked if we have talked about the idea of tracking land use policy and keeping it current in terms of understanding what lands are being protected through policy?

Renee said she thinks it is something we could do on a local or jurisdictional level, but the idea of doing it watershed-wide seems overwhelming. Working with the MidAtlantic Planning Collaboration might be a good place to start exploring that type of data.

Jeff modified the question a little we could be asking “Within the healthy Watersheds we have identified what is the land use planning on the ground in addition to the status of the protection work that is occurring in those places”?

[GIT Funding Project Presentation: Updating the Chesapeake Conservation Partnership \(CCP\) Priority Habitat Dataset of the Chesapeake Conservation Atlas: A Scoping Project](#) -Bianca Boggs, Skeo Solutions

Over the last year, contractor Skeo and an advisory team have been working to research various potential approaches and associated resources required for an updated, watershed-wide dataset of important habitats to guide land conservation and terrestrial and aquatic habitat conservation, restoration, and stewardship. The current Habitat Model is derived from Nature’s Network Conservation design data and was developed in 2017. It currently lives on the CCP Conservation Atlas webpage. In order to understand what people are getting out of the current model and what might be needed for an updated model the team had stakeholder engagement interviews with subject matter experts. The team found that stakeholders want flexibility with the data to make their own maps; 1 m data is a lot to run at the watershed-wide scale and would be more helpful at a parcel scale, and matching the model with Bay restoration goals could help with grants. Three workshops were also held (two for internal Bay Program stakeholders and one for external stakeholders) that were helpful for the advisory team to get feedback. They heard a lot of the same stuff as the one-on-one interviews.

Bianca then moved into the recommendations:

Invest in developing a new CBP Habitat Model. The current model is static, lacks transparent method, not widely used, and is out of date relative to other data sources. To do the update CBP should adopt the new conservation design Nature’s Network dataset as the foundation layer and integrate updated datasets as they release. Bianca then ran through the how to of this project and what an update might

entail. Additional subject matter expert interaction and additional research into cost are potential next steps of this project.

The final report on this GIT funding project will be released on Thursday, June 15th.

Discussion:

Jeff asked if there were any habitats that popped out as being more problematic or challenging in terms of mapping versus others. There's been some talk within our program about focusing a little bit more on shallow water and near shore habitat, and I'm curious if experts felt like Nature's Network does a good job of mapping those areas out versus other types of habitats within the bay watershed overall. Bianca noted that they did not hear of anything specific in terms of a problematic habitat. They did hear that Nature's Network is useful.

Renee noted the main focus of this model would be on terrestrial areas that we would want to target for land conservation. In the chat, Faren wrote, "SECAS developed specific models for near and offshore analyses for their conservation blueprint."

Jeff asked about using 30 m vs 1m data and if people in the interviews or workshop feel it would improve targeting. In the chat, Anne noted, "1m data is useful for buffers and other linear habitat features, too. But sometimes too fine for forest blocks (can show canopy gaps and call it fragmented rather than successional stage)." Denise Clearwater, also in chat, wrote, "The ability to shift between scales (1m vs 30m) would be very useful. The layers can be used for different review purposes. At a fine scale, it could be used for reviewing specific projects."

In response, Bianca noted that subject matter experts thought the 1m data would not be as useful at the watershed level; some noted that the 30 m at the parcel level would be fine or a 10m would be helpful. Overall, it is helpful information, but it is not incorporated into the whole model.

To conclude the conversation Jeff about next steps. Renee said we need to find someone who will champion this project into its next phase. We have a solid blueprint and need someone to pick it up and continue to ask the questions and look into how it would be maintained.