



Maintain Healthy Watersheds GIT Meeting February 13, 2023

11:00 am-1:30pm

[Meeting Materials](#)

Jeff Lerner, EPA
Renee Thompson, USGS
Cassie Davis, NY DEC
Shane Kleiner, PA DEP
Angel Valdez, MDE
Scott Stranko, MD DNR
Debbie Herr Cornwall, MDP
Jason Dubow, MDP
Sushanth Gupta, MD DNR
Todd Janeski, DOC
Kyle McLemore, Upper
Mattaponi Tribe

Bonnie Bick, Mattawoman
Creek
Lori Maloney, Eastern Brook
Trout Venture
Dan Murphy, USFWS
Gia Rich, USFS
Peter Claggett, USGS
Kelly Maloney, USGS
Katie Brownson, USFS
Kathryn Barnhart, EPA
Kristin Saunders, UMCES
Bailey Bosley, USGS

Jennifer Starr, Local Gov
Advisory Committee
Gregory Cross
Julia Wakeling, DOEE
Sophie Waterman, CRC
Steve Epting, EPA
Mindy Neil, WV DEP
John Wolf, USGS
Nancy Roth, Tetra Tech
Jenn Walls, DNREC

Review of Healthy Watersheds GIT successes, challenges and lessons learned in 2022.

Renee provided an overview of progress made by the GIT, highlighted ongoing projects, completed projects, and the upcoming Healthy Watersheds Outcome SRS process. Management approaches and some of the 2023 priorities were highlighted including: completion of the CHWA 2.0, the development and application of LUMM indicators, investigations into watershed health and vulnerability, updating the watershed protection map, the potential to strengthen local commitment and capacity through the creation of a Smart Growth Network, and our Healthy Watersheds SRS review in August.

The STAC Rising Temperatures Workshop report clearly lays out the importance of conserving existing healthy watersheds can help promote resiliency to rising water temperatures. Key factors of healthy watersheds that may moderate rising temperatures include: Land use/land cover: percent forest cover (catchment and riparian), percent natural land cover. Hydrology/flow alteration, including infiltration rates of land use/land cover types. Underlying geology/groundwater interaction. Members are to read the summary of the findings and element 4 which focuses on the work of the HWGIT. The report can be accessed [here](#).

We have a real need to identify meaningful thresholds in our decision support tools to communicate the spectrum and the urgency. In 2023 we hope to continue to work on the interim Healthy Watershed indicators. There is an opportunity to use the MD data to mockup what an indicator might look like to give folks an idea what to expect for the whole watershed when the time comes.

Finally, Renee noted the importance of communicating our work. There is a real need to get the right info to the right people at the right time, as that is the only way our work will propel forward. Renee

then opened the floor to chat and answer the question: What do you want us to focus on for the next CALENDAR year?

Discussion:

- Anne Hairston-Strang noted that there are growing local government investments in coastal resiliency, and it would be great to have healthy watershed assessment work presented to them. (E.g., Matt Fleming now leading Anne Arundel's). We have a lot of frameworks (E.g., the STAC rising temperatures report) that could be useful to folks.
- Jason noted that the tools we have for local governments and others is just one leg of the stool. Another leg is understanding the full picture of watershed health. We need to get a handle on if we have lost or gained any watershed. A potential priority for this year should be estimating the gains or losses of healthy watersheds. Jeff responded to this comment by noting that our HWGIT outcome is up for review in August, and we will have an opportunity to potentially deep dive into some of the work that is being done in different watersheds.
- Renee noted that the management question “have we lost or gained healthy watersheds due to development in the past decade” could potentially be answered with the MD to start and then with the CHWA 2.0 later in the year. We know that we have lost some, but how bad and to what extent is something we can answer in more detail. We have a lot of data, but we could put that data into a map and tell a story.
- Kristin noted that the HWGIT should connect to the Chesapeake Conservation Partnership to build key healthy watersheds into state-specific plans for land conservation targeting. They have a focus on protecting 30% of the watershed by 2030, they need ideas on important large scale areas worthy of protection.
- Katie noted that there could be a role for the HWGIT in using the CHWA and other geospatial data to help target streams that are vulnerable to rising water temperatures for restoration and conservation as a follow up to the STAC workshop.
- Shane Kleiner of DEP noted that we have seen a decrease in agriculture, do we see gains in healthy watersheds when there is less ag? Jeff responded by saying we want to paint the whole picture; we want to know what is happening with watersheds to help move us forward and tracking our goals. Shane followed up by saying we need to be better at capturing that change because it's not just a land use change there is also a change in pollution once you stop farming or housing animals in a certain area. How much of an improvement are we seeing post agriculture?
- Steve Epting responded to Shane in the chat by writing: I know BMP location data isn't available across the board (e.g., can be difficult to obtain from NRCS), but it could be helpful to compile stats about BMPs implemented in state-identified healthy waters/watersheds. would help make the point that 'conserved/protected' watersheds still need active management.

Update on the Land Use outcomes SRS process, progress, and next steps

Renee ran through the updated LUMM and LUOE SRS timeline. The outcomes will be presenting to the MB on March 9th, draft materials will be provided by 2/17 for members to give feedback prior to the MB.

The LUMM and LUOE live within the local action cohort (which consists of Tree Canopy, Local Leadership, LUOE, and LUMM outcomes). Peter and Renee have worked to demonstrate to the MB and others at the program how all the outcomes within the local action cohort are built upon the LUMM and rely on each other to communicate what is happening on the landscape. Peter has created the [Local Action Cohort Pyramid](#) (slides 2-4) which visualizes the relationship between the outcomes. The local action cohort is all about creating data to help inform decisions. We cannot create data and hope that people use it we need to incorporate translators to reach target audiences.

Renee ran through a list of high-level planned actives for the LUOE/LUMM, with the biggest being the need to combine the LUMM and LUOE Management Strategy and Logic and Action Plans. They would be better served if they are combined as they work so closely together.

The STAC Rising Temperatures report was mentioned again as it directly relates to land use outcomes and specifically calls out actions to help cool waters. Renee also pointed out that a lot of the landscape characteristics that warm waters are already metrics in our tools and that there is a real opportunity for us to better integrate climate resiliency and stream temperature with the existing metrics.

A part of the SRS process is asking the MB to help keep your outcome moving through specific asks. Renee noted that the LUOE has yet to come up with anything specific other than the ask of combining the LUMM and LUOE management strategy and work plan. Peter spoke on the LUMM MB asks:

- Make monitoring for land use change a longer period. Commit to monitoring tree canopy, forest buffers, and land conversion for at least another 10 years. MB to support the extension of the land use change monitoring out to 2030.
- Support the Land Use Workgroup continue evolution of working with locals (refocusing of how the partnership use this data in general)
- For the MB to make a concerted effort to identify translators and trusted sources to help move the work of the cohort forward.
- Combined the LUMM and LUOE MS and workplan.

Discussion

- Jason asked if the land use change data analysis will (over time) help inform counties and states about how much actual loading they need to account for in terms of loading changes due to growth? Peter responded that yes, the data is anticipated to be used in the Phase 7 calculated loads of land use change. As we get updated data the model will be updated. That question is at the root of motivation to fund this data. That question is a good one to bring up in internal conversations.
- Anne asked peter if he could go over how crediting conservation could be credited in a way that would be helpful for Bay restoration. Peter responded by noting that crediting conservation mainly applies to forest conservation. If you conserve forests by putting it in an easement you could theoretically get full credit for a developed area the same size as that forest. A conversation on land use, crediting, and the bay models occurred.
- Scott Stranko in the chat asked: Do we have a good handle on the relative influence of BMPs for protection (stormwater infiltration, buffers, etc.) versus land protection? Renee responded by

saying: in a word no, but we have identified this as a science need, and it was also a recommendation in the STAC rising temp report. My experience looking into this is that it is hard to summarize the impact of BMPs at the catchment scale (due to lag, and BMPs abilities to influence downstream). Steve Epting added: I'm working with a contractor now on a lit review aimed at inventorying existing approaches for quantifying water quality outcomes of protection-based BMPs, including land protection. Happy to share findings when this is wrapped up later this year. this is an EPA HQ project. Peter noted that coupling conservation (i.e., putting land in a conservation easement) with restorative actions like buffers helps water quality improvement vs just putting land in a conservation easement and doing nothing with it.

- Jason spoke about priorities for 2023 for the HWGIT to consider: what does science tell us about the types of acceptable land change within healthy watersheds that would not degrade the watershed so that it's no longer healthy. What is acceptable? What information do governments need to figure out what to do with these healthy watersheds. Peter answered that it is a hard question to answer, it's a tough question.
- Shane made a comment related conservation vs, BMP implementation. He is seeing that some of the areas preserved are still experiencing historical issues (i.e., erosion issues, flood plain disconnection), and without BMPs some these watersheds are not going to see any trends toward health. There is intervention that needs to be done. Jeff noted that this should be a part of conversations with local governments.
- Jeff then moved to get a pulse check of the group about how they are feeling about the MB asks and what we will be presenting to the MB. The group reacted positive and felt comfortable moving forward with the asks.
- **Action: Draft Land Use Outcome SRS materials will be sent out on Friday February 17th for members to review**

Advancing Healthy Watershed Protection

Mindy Neil of WVDEP shared that they are trying to get up to speed on where they have delineated healthy watersheds. Mindy noted that she is unaware of formal conservation plans within DEP, but there is some work that could be happening with other agencies. Back Creek has a protection plan that the agriculture depart has put together. WV has also been doing assessments on Bay tributaries. DEP is also getting up to speed on what others in WV are already doing and looking into potential conservation.

Jen Walls of DNREC talked about Delawares Climate Action Plan implementation. There is a heavy focus on tree planting. Delaware is keeping up with their Riparian Forest Buffer Plan and are currently developing their wetland plans. Jeff asked if there is there any uptick of land in conservation easements in Delaware? Jenn noted that she will have to follow up with other folks on that.

Jason Dubow of MDP talked about the completion of the Water Quality Protection Process that was developed in partnership with MDE. It gives guidance to local government on protection of water resources as localities grow. There is a specific section on healthy watersheds, that helps local governments understand how to protect high value watersheds. You can read more about it here: <https://planning.maryland.gov/Pages/OurWork/envr-planning/water-resources-mg/2022/02/framework-cwa-wqprotection.aspx> Jeff noted that MDE has control over the state revolving

fund that could help with this work. Jason responded by saying that conversations on funding need to happen across MD agencies.

Jeff noted that state revolving funds can be used on green infrastructure investments, they can be used in land conservation, especially if there is a connection to water quality. Another thing of note is that they can be targeted to disadvantaged and underserved communities. SRF: Big opportunity. Lots of money.

Jeff then opened the floor to federal folks to talk about opportunities that they have to help advance watershed protection work.

Katie Brownson of the USFS talked about the Forest Legacy Program and how they got a boost in funding through the Inflation Reduction Act. Each state has designated forest legacy areas that are laid out in their state forest action plans. So, states can put forward a proposal to conserve lands within those designated forest legacy areas. It is a competitive program, and Anne noted that this area tends to be competitive as land is more expensive. Tools like the CHWA tool is super helpful when trying to convey the need for funds. You can see a Forest Legacy Program Interactive Map here:

<https://usfs.maps.arcgis.com/apps/webappviewer/index.html?id=9d083b89bd254c23acf56f8143e0c119>

Jeff noted that an overlay between the designated forest legacy areas in each state, with information on healthy watersheds could help communicate what needs to be protected and what may already be protected.

Anne Hairston-Strang noted that we are due for a deep dive into different conserved lands organizations, as they have funding opportunities.

Dan Murphy of USFWS talked about the NFWF Chesapeake WILD RFP. There is 10 million dollars available, and the RFP is out. Grant proposals are due April 12th. They require 50% match, but half of the contribution can be non-DOI federal money. Dan also mentioned the Land Protection Plan to expand the acquisition boundary for Patuxent National Wildlife refuge into Southern Maryland. The plan will hopefully be completed and approved by the end of the summer. If approved the USFS would be able to purchase land of interest through either fee or simple conservation easements. This has been a long process dating back to 2011 and is looking like it will be approved to potentially protect 30 thousand acres. Bonnie Bick mentioned REPI as another way to get lands protected.

In the chat Lori Maloney wrote: Fish Habitat Partnerships have been tracking the BIL funding, although more related to fish passage. It's hard for our partners to keep up with all the BIL priorities and RFPs. I haven't been following land protection under the BIL but would love to learn more.

Action: We are looking for state protection of healthy watershed highlights to be able to share with the MB in August.

Cross outcome and coordination opportunities with HWGIT, Land Use Outcomes, Stream Health, and Climate Resiliency Workgroups

Jeff moved the conversation along to talk about cross outcome coordination. He called on Lori Maloney to talk about brook trout and its relationship with healthy watersheds.

Lori Maloney spoke on the brook trout workgroup and its relationship with healthy watersheds. The brook trout workgroup through GIT funding has funds available to help track projects that have happened in the Bay Watershed related to cold water/ brook trout areas. This is project that is being done with the eastern brook trout joint venture. By 2024 their assessment work of what projects are happening and what is changing because of those projects will be done, and we will have a better idea on where we have gained and lost brook trout. Brook trout are an indicator species that can tell us how a cold-water watershed is holding up. Lori noted that cross outcome conversations should hopefully be happening in summer.

Jeff asked Kristin to speak on some cross outcome connections that are happening at the Bay Program. Kristin noted that the GIT funding project that Renee talked about early in the meeting (Community Response to Land Use Change) will be looking at the data that has come from the land use work and the healthy watersheds assessment to identify vulnerable areas where, for example, brook trout might have some vulnerabilities, and where we could work with specific communities through engagement and outreach. Kristin also talked about the importance of tapping into the different funding areas as another thing groups like our should be talking about. We focus on where we need to protect, but we also need talk about how we can protect, and funding is a big part of that conversation. Kristin than talked about land use outcomes upcoming SRS presentation to the MB. She talked about how it's not only important to ask for continued investment in the collection and analysis of the data but is also important impress upon people at the state and local level that they USE the data and analysis. Conversations with others who care about what that data is showing in terms of potential habitat loss that impacts living resources could be beneficial. The data is not just to be put into the model, we have an opportunity to make the case that the data and its analysis can be used across the full spectrum of the work that we do. We need to ring the bell of importance of the land use data.

Katie mentioned potential cross GIT effort. The Forestry Workgroup has been a part of the GIT project about maintaining forests in the stream corridors. From that project some of the next steps identified were for us to dig more into county level regulations to look for opportunities to strengthen regulations to help prevent forest loss. Preventing loss is most important in healthy watersheds, and there seems to be synergy with the potential GIT funding project related to permitting for new developments in the counties that intersect the healthy watersheds.

Renee noted that there is an opportunity to support the Stream Healthy Workgroup in making connections between the metrics that we're already collecting in the healthy watershed assessment, and how we can potentially share those or utilize those to also support on the stream health work group and developing some sort of indicator. In terms of the Climate Resiliency Workgroup there is an opportunity to further refine this idea of resilient communities. We are currently trying to augment and add to our climate metrics in the CHWA 2.0.

In the chat Kelly Maloney put SHWG, FHAT, HWA, BTWG, CRWG have all overlapping interests here, not only documenting current conditions but some have goals to improve conditions beyond a baseline as well as identifying additional endpoints.

Action: if you would like to share ideas on potential meeting topics, please email Sophie and Renee.