



Minutes Maintain Healthy Watersheds GIT

October 3rd, 2019 10:00am-2:00pm

[Fish Shack](#), Chesapeake Bay Program Office
410 Severn Avenue,
Annapolis, MD 21403

Conference Line: 929-205-6099, Conference Code: 857 606 769

Zoom: <https://zoom.us/j/570907383>

Meeting Attendees

Renee Thompson (USGS, *Coordinator*)
Nora Jackson (CRC, *Staffer*)
Angel Valdez (MDE, *Chair*)
Jason Dubow (MDP, *Vice Chair*)
Deborah Herr Cornwell (MDP)
Lauren Townley (NYDEC)
Laura Cotell-Knoll (Alliance)
Jessica Elliott (CCP)
Jordan Baker (PA Susquehanna RBC)
Christopher Wharton (Tetra Tech)
Todd Janeski (VA DCR)
Nesha McRae (VADEQ)
Sherry Witt (EPA Contractor)
Julianna Greenburg (CRC)
Lee Epstein (CBF)
Nancy Roth (Tetra Tech)
Ken Hyer (USGS)
Greg Barranco (EPA)
Peter Claggett (USGS)

Steve Faulkner (USGS)
Steve Epting (EPA)
Bo Williams (EPA)
Jennifer Greiner (USFWS)
Katie Brownson (USFS)
Kristen Saunders (UMCES)
Mark Hoffman (CBC)
Rebecca Chillrud (CRC)
Scott Stranko (MD DNR)
Peter Tango (USGS)
Chad Thompson (WV DEP)
Jennifer Miller-Herzog (LTA)
Gina Hunt (MD DNR)
Jennifer Star (Alliance)
Dan Murphy (USFWS)
Bhanu Paudel (DNREC)
Bruce Vogt (NOAA)

Update on Management Board SRS Process and Next Steps – Renee Thompson, USGS

Renee provided an overview of the asks presented to the management board as a part of the Strategy Review System (SRS) for the Healthy Watersheds Cohort. These included asking for comprehensive representation and participation in the GIT, improved coordination among GITs and workgroups, ensuring cross-GIT priorities are addressed, and sharing information with stakeholders. This meeting was a great example of increased member participation in the GIT, as well as having other GITs and workgroups represented. On **Tuesday, October 29** the GIT chairs meeting will focus on the Chesapeake Healthy Watershed Assessment (CHWA) and how it can help meet other CBP outcome needs. The Local Leadership Workgroup is working on communication materials and strategies to help with our need to share information with key stakeholders, you can read the strategy [here](#). In 2013, GIT members identified strategies that would help us reach our outcome, including tracking health and vulnerability,

local engagement, and policy development. We are still working within this framework and have made progress in each of these areas but there are still gaps that need to be filled. The next phase of our work will focus on the question of what it means to sustain a healthy watershed and how it can be done, getting us closer to our goal by 2025. Members provided input on additional actions that should be included in one of the four existing management strategies and accepted adding a fifth management strategy of coordination and cooperation.

Action items: Please email njackson@chesapeakebay.net with any additions or edits to the member list.

Management Strategies and Action Suggestions – Click [here](#) to see the original Menti file.

Tracking Healthy Waters and Watersheds

- 70% forest cover is used in the Forestry Workgroup and could be included as a baseline or threshold for identifying a healthy watershed.
- Tracking the use of policies and actions taken by state or local governments to protect healthy watersheds.
 - Actions are being taken but we have not linked the work of the group to those actions.
- Peter Claggett said that SIHW could still be changing and vulnerable, but if that indicator changes, it would prompt a management response to investigate the change
- Jennifer Greiner suggested linking HW actions on the landscape to brook trout occupancy in streams- something they have intended to measure but have not yet.
- Jennifer Starr said the local leadership workgroup is doing a baseline level of knowledge and service of local officials and will be tracking their future actions. Could be a possibility for measuring progress toward our outcome.
- Related to BMPs and WIP actions in SIHW or surrounding watersheds was a suggested action.
 - It's possible since it would be a geospatial analysis, and we have the locations of BMPs, but not the WIP actions.
- Jason Dubow said that there is value in tracking who is taking action in the watershed, but that's information gathering and not actively making change which where we should be focusing our limited resources.
- Kristen Saunders reminded the group that these actions are for 2-year cycle, and that the goal of the SRS framework is understanding if the actions we invest in have an impact.
- Lee Epstein If change is happening on the ground, it could trigger an inquiry and outreach to the local officials where we could provide them with some tools to help maintain the healthy status of the watershed.
- Gina Hunt asked about what data is updated frequently that we could see change in, whether it's negative or positive? Taking a specific dataset that is frequently updated to track and communicate those changes with the local government.
 - Renee said the best data to use would be high-resolution land cover and the methods and metrics outcome looking at the rate of conversion of natural lands. There are specific high-res land cover metrics that are in the CHWA, in addition to the work Peter Claggett is doing with the land change model and land policy BMPs. There is an opportunity to look at land use change every 3-5 years at the local scale.

- Peter Tango used Brook Trout as an example of a potential indicator, saying that if one population of brook trout disappears, does that mean the watershed drops below maintaining 100% of it's healthy condition?
 - Renee said this depends on how the state identified their healthy watersheds. Even if it's just a natural response, it could be worthwhile to use that as an indicator of change.
- Peter Claggett said we should look at change on the ground, but we are limited by the timeline. Once a change is noticed, land use change is already in motion. NGOs and Land Trusts could be the 'watch dogs' on the ground to monitor potential development.
 - Jason Dubow said that by the time a project is proposed, the county has already developed the mitigation plan. You would have to travel further back and change the comprehensive plan and zoning to prevent development. Even with groups watching for changes, it's usually too late to take action.
- Nancy Roth said that the CHWA could still help counties that are trying to do better, who know where they have natural resources, by informing zoning and planning in those localities.
- Jennifer Miller-Herzog asked about what tools we have to document the decline, track progress, see early warning signs, and get involved. What else can we track on an ongoing basis so that action can happen quickly?
- Renee said that something we talked about with Tetra Tech was whether or not any impaired waters information was incorporated into the assessment. There is a dataset coming out from the EPA soon that can be added, and this could be done, like mapping ongoing HWA information against pollution hot spots.
 - Angel Valdez said that mapping impaired waters is a jurisdictional responsibility and may not be appropriate for the HWGIT as an action.

Local Leadership

- Infographics or other communication products- like the WIP fact sheet, which may or may not have been used. The communications workgroup is already trying to simplify some graphics around the theme of linking the value of healthy watersheds to economy, fish,
- Identify one local government in each state that is interested in protecting its healthy waters.
- Laura Cottell-Knoll said there is a database of local governments, but there is a lot of turnover in elected officials. MACO released an updated list of county officials, but we need to get better at identifying the local champions within those governments.
 - Gina- the APA president for each state might be able to help identify those 'champions' since they would know individuals in their districts.
 - *** Action item: Renee and Nora work with local leadership workgroup to identify individuals and create a list.**
- Renee said that we have discussed working with counties that are combatting natural land conversion and looking at what policies they are using.

Supporting State-Based Efforts

- Encourage state-level forest mitigation in all bay states, no state has a no-net loss, like what is done for wetlands. Incredibly difficult to achieve, especially in the next two years.
- Jennifer Greiner said in response to a suggestion for stricter stormwater regulations in counties with healthy watersheds that it would encourage people not to be successful, if they are doing well, we should not give them stricter regulations.

- Develop a mentoring program for state and local representatives with others based on interest in replicating successful conservation efforts.
 - Renee said she could see this turning into a GIT funding project, to aid this network of individuals who would be good mentors and connecting them with interested officials but not if it's already being done somewhere, we do not want to duplicate efforts.

Federal and State Leadership

- Previously, there was a focus on incorporating healthy watersheds into federal agencies, but no progress was made. We've learned from the adaptive management process that we should focus on doable actions, and potentially drop this strategy.
- Kristin Saunders talked about how other groups made refinements in the plans to focus on actions that are doable and can move the needle. You need to know why progress wasn't made to support dropping it. She suggested shrinking the list of agencies or programs to target, instead of dropping the whole strategy.
- Renee commented on the suggestion to help inform NRCS source water protection funding, saying there could be an opportunity to help review the grants, and the location could be incorporated into the ranking or criteria for receiving the grant. This is similar to what we already do with NFWF grants.
- Bo Williams said that NRCS is still identifying source waters to target, and it's up to the state conservationists to nominate areas. He asked if NRCS knows about the SIHW and what would appropriate actions be in those areas and suggested connecting with the NRCS office. Cross-listed with land conservation outcome, who is already working with NRCS office to identify potential source water protection areas.
 - Steve Epstein said that state conservationists work with EPA to make these designations, and they were just submitted. He offered to commit to helping in the review process.
 - Renee suggested that someone from the Chesapeake Conservation Partnership or HW GIT to be a reviewer for the designations.
 - Kristen Saunders suggested that someone from NRCS (Northeast Regional Conservationist) come and talk to us, potentially at a joint meeting with HW GIT and CCP so we could learn what these areas look like, how they were identified, and aligning funding/resources with healthy watersheds data.
 - Mark Hoffman said that at the last state technical committee meeting, they discussed the National Water Quality Initiative (NWQI), which identifies key watersheds to make large investments in. The NWQI is supposed to take 10% funding of every NRCS farm bill program and dedicate it to source water protection.
- Jennifer Greiner said that the two outcomes that the partnership is falling short on are riparian buffers and wetlands, looking at NRCS farm bill funding by implementing these practices on farms that drain to healthy watersheds.
- *** Action item: meeting with Renee, Jennifer Greiner, Steve Strano, Sally Claggett on how to use this.**
- Bruce Vogt suggested meeting and presenting the CHWA and our work towards the outcome to the NOAA North Atlantic Collaboration team that's talking about developing a watershed initiative program.

Coordination, Cooperation, and Integration – NEW Potential Management Approach

- Committed coordination and cooperation with key GITs and workgroups to assure shared resources, information and priorities while reducing the duplication of efforts.
- Identified groups to work with include the Stream Health WG, Fish Habitat, Brook Trout, Climate Resiliency, and protected lands, and commit to a joint meeting with climate resiliency to work through the Climate Smart tool.
- Working with other teams is necessary for reaching our goal, so we need to designate the specific actions and commit to doing this by including it in the logic and action plan.
- Angel Valdez suggested adding the work 'integration' to the title.
- **Action item: Send suggestions of actions for this strategy within a week. GIT agreed to add this to our management strategy and include wetlands and forestry to groups we want to target collaboration with.**

USGS Presentation on New Science Directions – Ken Hyer USGS

Ken Hyer is the Associate Coordinator for the USGS Chesapeake Bay Effort with Scott Phillips. USGS is about to release their science plan for the next few years and will continue to bring science to the partnership to inform decision making. Previously work focused on the TMDL Midpoint assessment, they are moving towards a more integrated approach by looking at all the factors that stress habitats. Theme three will enhance focus on the living resources, looking at the habitat availability and quality, and what stressors are affecting them. They will be working across different landscape settings on a regional scale to inform multiple workgroup outcomes. Theme 2 will look at risks to coastal habitats and what stressors are affecting SAV, wetlands, climate resiliency, and waterfowl distribution. The next topic covers land characterization and improving public access for recreation. This will entail monitoring land use, key hydrography, land management and BMPs, and ultimately how this information can forecast land use change. They are adopting a strategy of integrating science and engaging stakeholders, moving away from a previous technical focus. You can find more information about USGS work [here](#) or contact Ken Hyer (kenhyer@usgs.gov).

Review of Outcome, Management Strategy Themes and State Identified Healthy Watersheds

(Definitions)- Nora Jackson, CRC

The outcome and goals of the Healthy Watersheds GIT are only a part of the original vision for the goal team which was to sustain watershed health where it is high, exceptional and/o outstanding, to increase the number of healthy watersheds in the future, provide a forum for mutual learning, develop information resources and promote the science. The four management strategy themes of tracking healthy waters and watersheds, local leadership actions, supporting state-based efforts, and federal and state leadership. Adding Cooperation, coordination, and integration as a management strategy can strengthen some of our cross-GIT efforts, for example the overlapping of brook trout populations with healthy watersheds. It is important to keep in mind that the state definitions for healthy watersheds are based on water quality in a stream segment. The CHWA looks at metrics happening on the landscape, giving a more complete picture of what's happening on the ground.

USGS Science Theme 3: Assessing Watershed health - Renee Thompson and Peter Claggett, USGS

Theme 3 in the USGS science plan: Characterize land use and change to assess the vulnerability and resiliency of vital lands and healthy watersheds. Assessing the vulnerability and resiliency of streams, watersheds, and vital lands means also assessing current conditions of watershed health. Combining measurements taken on the ground to the foundational data that they are developing, like the high-resolution land cover data, allows them to statistically relate one to the other for a more precise measure of resilience and vulnerability. The activities of work under theme three include producing data, like using the high-res and lidar to map 3-D stream channels, analyzing it and assessing the risk factors, and then using that statistical relationship to determine indicators of watershed health.

Chesapeake Healthy Watersheds Assessment (CHWA) and Tracking the Health of State-Identified Healthy Watersheds– Renee Thompson and Peter Claggett, USGS

Renee provides a review of the CHWA, how the data was calculated, how it will be represented, and presenting ideas of how to best utilize the product. The data was calculated at the catchment scale, and individual metrics were placed into different categories so they can be “rolled-up” into a single index category, and all categories combined to create a health index. The CHWA includes vulnerability indicators but they do not roll up into categories of threats. The management actions vary so much between each metric that a single index would not accurately represent the overall vulnerability. There is variation in the condition of each watershed, so how the data is represented is critical to accurately analyze it. While it was intended to be a method for tracking health of time, the data included in the product are metrics and not indicators of watershed health. Statistical analysis using field data that relates to the CHWA non-biological metrics would provide scientific support for identifying a metric as an indicator of health. Seeking the input of the goal team on how to use the CHWA- do we leave the database as it is, or do we perform the statistical analysis to create indicators out of these metrics?

GIT decided to develop statistical models to directly relate the healthy watershed assessment metrics to diagnostic measures of watershed health.

- Angel Valdez explained the background on why Maryland is doing a MD HWA. Maryland uses MBSS exclusively, and it was not incorporated into the CHWA. Including the MBSS in the assessment adds meaning to the assessment, and MBSS has no information on watershed health, just high-quality stream segments.
- Kristin Saunders asked how much difference in usability for the other goal teams by using it as is or adding the statistical analysis.
 - Renee explained how the HW assessment can be used as is to help inform other outcomes as just metrics, but developing the statistical models is better science.
- Peter Claggett said the stream health management strategy specifically calls for using non-biological landscape condition metrics and relating those to monitoring data (like Chessie Bibi), creating an indicator that could be used to prompt management action. Going the statistical route would benefit teams more.
- Steve Epstein: The dataset as it is now is still useful and should be put in the hands of managers, land trusts, and all states going through HUC 12 planning for non-point source pollution planning. By identifying HUC areas that are disproportionately polluting vs. areas that are healthy opens the door for more funding. The EPA PHWA struggled with these questions of using the metrics and indicators and how the assessment could be used, but it was not addressed.

- Todd Janeski from VA said that they will continue to use their own method of identification and would most likely not integrate the CHWA. They are already working including more watershed-based information and want to continue using their own metrics and products. The model they have built works with their data, not the CHWA. Adopting a new system would derail their efforts and progress.
- Jordan Baker from PA said that the state is focusing efforts on impaired streams and waterways.
- Renee and Peter Claggett discussed the purpose of the goal team, and asked if any jurisdictions are developing their own indicators or method of tracking health, and ultimately how can this goal team serve a purpose in PA or VA.
 - Kristin Saunders reminded the group of the history of the goal team and why the specific language in the outcome is “state-identified.” If the states only use their own data, then maybe we ask them to remain in the GIT and connected to the work as it develops.
- Jennifer Greiner asked how this was handled in other groups, like stream health, and how stream health is measured beyond benthics.
 - **Habitat GIT meeting is scheduled for [November 6-7](#) in PA; updating Stream Health, Fish Habitat, Fish Passage, Brook Trout, and Wetlands workplans. Stream Health workgroup will be meeting on [Friday, October 25](#).**
- Jennifer Miller-Herzog said that anything that identifies a possible negative change could be used as a way to prioritize or focus on a particular area, like how aerial monitoring is used in the land trust community.
 - Kristin Saunders said that it rather than having an indicator for health, we use “signals of change” as an indicator, so the focus is on the possibility of positive or negative change rather than a particular level of health which lets the states continue to use their own methods. Again, we are reminded that part of the adaptive management process is learning what we can and cannot accomplish and adapting our actions accordingly.
- Todd Janeski thinks that the signal of change idea could be useful to VA, but they are still limited by resources and will continue to use a model approach to determine sites to sample. Their process is additive, so many of the sites initially sampled are not sampled again. The most they would do is cross-reference the CHWA data with their own data, and even then, it would not change their methods and priority sampling areas.
- Angel Valdez talked about how the CHWA suits the needs of Tier II watershed identification and protection in Maryland by helping identify baselines since there is no information on what level of watershed health was there originally. Once identified as a Tier II watershed, the area remains under that designation and is not removed from the list, even if there is degradation.

Action items and Decisions Summary:

- Email njackson@chesapeakebay.net with any additions or edits to the member list.
- * Renee and Nora will work with local leadership workgroup to identify local leader “champions,” create a list for outreach.
- * Meeting with Renee, Jennifer Greiner, Steve Strano, Sally Claggett on how to incorporate healthy watersheds with NRCS source water protection area identification, and target funding for riparian buffers and wetlands from NRCS on farms that drain to healthy watersheds.
- Send suggestions of actions the Coordination, Cooperation, and Integration Strategy

- HWGIT agreed to add management strategy, “Coordination, Cooperation, and Integration,” and include wetlands and forestry to groups we want to target collaboration with.
- HWGIT agreed to pursue statistical analysis to support converting CHWA metrics into indicators of watershed health.
- HWGIT will be having more regular meetings on a quarterly schedule.
- Healthy Watersheds [Management Strategy](#) and [Logic and Action Table](#) were approved by the management board in January 2020 and can be found here.

