Quarterly Progress Meeting: Healthy Watersheds

Step 1: Summarize your outcome.

Outcome:
Ensure 100 percent of state-identified currently healthy waters and watersheds remain healthy.

Lead and Supporting Goal Implementation Teams (GITs):
The Healthy Watersheds Goal Implementation Team (GIT4) leads the effort to achieve this outcome. It works in partnership with the Sustainable Fisheries, Vital Habitats, Water Quality, and Fostering Stewardship Goal Implementation Teams (GIT1, GIT2, GIT3 and GIT5).
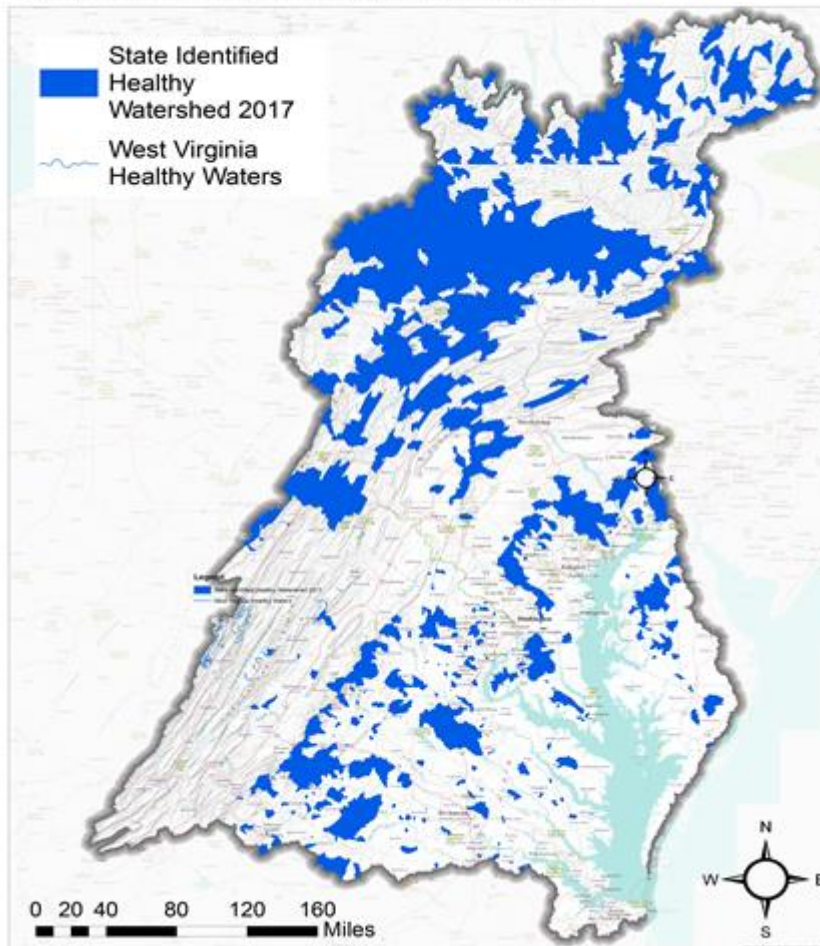
Participating Partners:
(**Bold** indicates active partners)
➢ **Delaware Department of Natural Resources and Environmental Control** *(Contact: John Schneider)*
➢ **District Department of Energy and Environment** *(Contact: Josh Burch)*
➢ **Maryland Department of Natural Resources** *(Contact: Scott Stranko)*
➢ New York Department of Environmental Conservation *(Contact: Ben Sears)*
➢ ~~Pennsylvania Department of Environmental Protection *(Contact: Diane Wilson)*~~
➢ **Virginia Department of Conservation and Recreation** *(Contact: Todd Janeski)*
➢ **Virginia Commonwealth University** *(Contact: Greg Garman)*
➢ **West Virginia Department of Environmental Protection** *(Contact: Tim Craddock)*
➢ **Chesapeake Bay Commission**
➢ National Oceanic and Atmospheric Administration
➢ National Park Service
➢ **U.S. Army Corps of Engineers**
➢ **U.S. Environmental Protection Agency**
➢ **U.S. Fish and Wildlife Service**
➢ **U.S. Forest Service**
➢ **U.S. Geological Survey**
➢ **The Nature Conservancy**
➢ **Chesapeake Bay Foundation**

Progress:
States have set their own definitions of healthy waters and watersheds, and a map of state-identified healthy waters and watersheds is available. The Healthy Watersheds Goal Implementation Team has agreed that the 2015 datasets will serve as the baseline from which to assess watershed health and measure progress toward this outcomes. No healthy waters or watersheds will be removed from the 2015 dataset, but new healthy waters and watersheds may be added in the future. The 2015 Healthy Watersheds map was updated from 2013 data, and additional updates have been made to Maryland and Virginia healthy watersheds in 2017.

State Identified Healthy Watersheds

Because jurisdictions have differing definitions of healthy waters and watersheds, there is not a common definition for the healthy waters and watersheds addressed in this outcome. Instead, our partners track and support the protection of the waters and watersheds identified through the definitions below.

➢ In Delaware, there are currently no healthy watersheds. All of the state's tributaries to the Chesapeake Bay are impaired by nitrogen, phosphorus, sediment and/or bacteria, and will only be considered healthy when their Total Maximum Daily Loads (TMDLs) are achieved and their surface water quality standards are met.

➢ Because the District of Columbia is a primarily urbanized area, it has not identified currently healthy watersheds.

➢ In Maryland, streams and their catchments are designated **Tier II** when their biological characteristics are significantly better than minimum water quality standards.

➢ In New York, those waterbodies that have been categorized as "No Known Impact" because monitoring data and information indicate an absence of use restrictions are considered healthy.

➢ In Pennsylvania, those waters and watersheds that have been classified as **High Quality or Exceptional Value** are considered healthy.

➢ In Virginia, those waters and watersheds that are identified as having high aquatic integrity according to the Virginia Department of Conservation and Recreation's Division of Natural Heritage **Healthy Waters Program** are defined as ecologically healthy waters.

➢ In West Virginia, those waters that have been designated **Tier 3** are known as outstanding national resource waters and are considered healthy.

Step 2: Explain the logic behind your work toward an Outcome.
The attached logic table (available as an Excel spreadsheet) explains the reasoning behind our work toward an Outcome. The table indicates the status of our management actions and denotes which actions have or will play the biggest role in making progress.

Step 3: Craft a compelling narrative.

What are our assumptions?
(1) Are you on track to achieve your Outcome by the identified date?
   a. What is your target? What does this target represent? (e.g., the achievement we believed could be made within a particular timeframe; the achievement we believed would be necessary for an Outcome's intent to be satisfied; etc.)?
      • Our target is 100% of healthy watersheds are sustained
   b. What is your anticipated deadline? What is your anticipated trajectory?
      • There is no deadline associated with this outcome. The language of the outcome implies that all State-Identified Healthy watersheds will *remain* healthy in perpetuity.
   c. What actual progress has been made thus far?
      • We have developed and updated the Healthy Watersheds map in 2013, 2015, and 2017.
      • GIT Funding projects have helped to identify healthy watersheds in West Virginia, demonstrate the value of retaining forestland and create tools to help local planners retain forestland in VA and PA, evaluate policies that reduce land conversion, and conduct high resolution stream mapping which will assist in tracking riparian forest buffers, monitoring stream health, assessing habitat for brook trout, and modeling hydrology and sediment.
      • We have identified a diversity of entities and key partners at Federal, State, Local and NGO levels that are essential to watershed protection.
      • We have developed a framework for tracking healthy watersheds and identified key data providers and partners including STAR, STAC and the EPA healthy watersheds branch that can help us fill data and logistical gaps.
      • Utilizing other outcomes and GIT work, particularly Climate Change Workgroup, Land Use Methods and Metrics Outcome, Protected Lands Outcome, Habitat GIT, and Fisheries GIT has helped inform the location of healthy watersheds and will assist in protection.
   d. What could explain any existing gap(s) between your actual progress and anticipated trajectory?
      • The majority of activity regarding the collection and use of watershed condition information has been used to characterize impaired watersheds for restoration, rather than to identify and protect healthy watersheds. There is a lack of information for assessing "health" as opposed to "degradation." Further, the

routine collection of information about the status of healthy waters and watersheds is often lacking.

- Widespread assessments of healthy watershed vulnerability are not available. This is a key role for the HW Goal Team and we have begun outlining next key steps to get us from identification to assessment on a watershed wide scale.
- As local governments focus on addressing their core functions including education, public safety, land use decision making and complying with a variety of water quality requirements, they are seldom able to adequately identify and protect healthy watersheds. Both outreach and education will be needed to inform local governments, watershed organizations, and planning district commissions of the importance and value of healthy waters and the tools that are available to protect them.

Are we doing what we said we would do?
(2) Which of your management actions have been the most critical to your progress thus far? Why? Indicate which influencing factors these actions were meant to manage.
- We have been successful at compiling and identifying information related to the location of State-Identified healthy waters and watersheds. In addition, we have begun to develop a framework for identification of vulnerability, threat and level of protection. (Factors: Scientific and Technical Understanding and human induced land use change/population growth)
- Supporting State based efforts. This action has been successful due to the existence of our GIT and commitment to serving as a valuable forum for shared dialogue and information. Each of our meetings highlights successful projects and actions across the watershed that help in sustaining and protecting healthy watersheds. (Factor: Federal/State Engagement)
- Our GIT funding projects have been crucial for increasing our understanding of policies, planning incentives and tools that can help curb land use change and therefor protect healthy watersheds. (Factor: Population growth) The next step is how to relay this information to key local actors and also provide a pathway for 2-way communication. (Factor: Local Government Engagement)
(3) Which of your management actions will be the most critical to your progress in the future? Why? What barriers must be removed—and how, and by whom—to allow these actions to be taken? Indicate which influencing factors these actions will be meant to manage.
- Threat data (i.e. development pressure, climate impacts, and infrastructure and energy development): this type of data is in development at CBP as part of the land change modeling effort, climate workgroup and other CBP partners. The key is identifying which data sources to utilize and determining the best path forward for assessing watershed vulnerability in light of this new information. (Factor: Scientific and Technical Understanding)
- Local leadership and outreach: While we have identified that land use change and locals are important, there are still communication barriers. (Factor: Local Engagement)
- Prioritization of protection efforts. Once we have the data and information related to the level of protection and threats of healthy watershed; how do we prioritize protection? What actions can and should be put in place? How do we motivate land owners? (Factors: Monitoring efforts, state resources/capacity barriers; Scientific and Technical Understanding; Engagement)

Are our actions having the expected effect?

(4) What scientific, fiscal or policy-related developments or lessons learned have changed your logic or assumptions (e.g., your recommended measure of progress; the factors you believe influence your ability to succeed; or the management actions you recommend taking) about your Outcome?

- Scientific: Lots of data is focused on water quality and there is less information regarding watershed health. There needs to be continued monitoring and tracking of state-identified healthy waters and watersheds, as well as threats and healthy watershed vulnerabilities. We are actively working with EPA healthy watersheds office to adapt and customize their preliminary healthy watersheds assessment tool to the Chesapeake Bay Watershed.
- Fiscal: Local, state, and federal governments have limited capacity for monitoring and assessing healthy waters and watersheds. Articulating the economic value of healthy waters and watersheds to local actors is necessary. Similarly there is a need to better articulate the economic implications of healthy watershed degradation. What happens if we lose healthy watersheds? Without CBP funding the jurisdictions cannot get there.
- Policy: Continued state participation is an issue. Variability in defining and tracking healthy waters and watersheds can present problems. Tools to assist in policy and management of healthy waters and watersheds have been developed but it is unknown how to get these tools to the correct "on the ground" people. Prioritization methods are unknown. Engaging local planners, NGOs, and land trust and the facilitation of two-way communication is necessary. There is also a need to be more nimble with regard to *current/immediate* threats to healthy watersheds. For example while long term development trends and climate impacts are important there may be a shorter term threat like an infrastructure project or new master planned community that can hinder watershed health. How can we help local planners identify and respond to near term as well as potential longer term threats?

(5) What would you recommend changing about your management approach? What new content will you include in your updated work plan?

- Focus on threat assessment: there are temporal, longer term threats as well as immediate threats
- More actions for engaging local planners, NGOs, and land trusts and increasing the capacity of those entities.
- Continued monitoring efforts; how can be begin to triage most threatened watersheds and put in place actions plans to protect them? How can we motivate land owners to care about healthy watersheds?
- Develop a clear path forward related to climate change threats.

(6) What opportunities exist to collaborate across GITs? Can we target conservation or restoration work to yield co-benefits that would address multiple factors or support multiple actions across outcomes?

- Collaboration with the Climate Resiliency workgroup for assessing threats and vulnerability. There is not an identified timeline to work with Healthy Watersheds at this time and data layer development/recommended datasets are not available or planned at this time.
- STAR for monitoring and tracking. We are working closely with STAR and the Status and Trends workgroup to help identify the right path forward related to reporting how we are meeting our outcome.

- Fish Habitat, Fisheries GIT, and Habitat GIT. Factors such as water quality, impervious surface, and climate resiliency have been identified as areas of mutual interest.
- Stewardship GIT for Protected Lands and Local Leadership efforts. Protected healthy watersheds help ensure sustained watersheds over time. Local leaders and the decisions related to land use change are essential partners in watershed protection.
- Water Quality GIT for incorporation of healthy watershed protections into the WIPs, land use methods and metrics/options evaluation (understanding where healthy watersheds are threatened), forestland retention and tracking (the more forest generally, the healthier the watershed).
- Active participation and execution of the Cross-GIT mapping effort.

How should we adapt?
(7) What is needed from the Management Board to continue or accelerate your progress? Multiple asks of the Management Board should be prioritized where possible.
- Assistance with consistent partner participation
- Pathway to communicate tools and information to planners and watershed organizations, and the facilitation of two-way communication. Local actors are missing from the table.
- Need for more consistent and frequent monitoring and assessments of healthy waters and watersheds.
- Exercise influence and demonstrate support to effectively credit land conservation in the updates to the Bay models and TMDL by creating strong incentives going forward for: a) the placement of science appropriate BMPs on permanently protected lands, and b) the permanent protection of large landscapes of resource lands from conversion in combination with other possible measures.
- Inclusion of healthy watersheds in the Phase III WIPs to assist in relaying the importance and benefits of protecting healthy watersheds to local planners and to provide guidance on watershed protection. These are not competing priorities, they are complementary.