Logic and Action Plan: Post Quarterly Progress Meeting

#

**Healthy Watersheds – 2018-2019**

*[NOTE: make sure to edit* ***pre****- or* ***post****- in the text above, to tell the reader whether this logic and action plan is in preparation for your quarterly progress meeting or has been updated based on discussion at the quarterly progress meeting.]*

**Long-term Target:** (the metric for success of Outcome)

**Two-year Target:** (increment of metric for success)

|  |
| --- |
| **Instructions:** Before your quarterly progress meeting, provide the status of individual actions in the table below using this color key. |
| Action has been completed or is moving forward as planned.  |
| Action has encountered minor obstacles. |
| Action has not been taken or has encountered a serious barrier. |

Additional instructions for completing or updating your logic and action plan can be found on [ChesapeakeDecisions](http://www.chesapeakebay.net/decisions/srs-guide).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Factor | Current Efforts | Gap | Actions  | Metrics | Expected Response and Application | Learn/Adapt |
| *What is impacting our ability to achieve our outcome?* | *What current efforts are addressing this factor?* | *What further efforts or information are needed to fully address this factor?* | *What actions are essential (to help fill this gap) to achieve our outcome?* | *What will we measure or observe to determine progress in filling identified gap?* | *How and when do we expect these actions to address the identified gap? How might that affect our work going forward?* | *What did we learn from taking this action? How will this lesson impact our work?* |
| Public and Landowner Engagement | Both outreach and education aimed at key stakeholders related to the resources and tools available. Outreach efforts focused on 1) the importance and value of local waters, and 2) the tools that are available to protect local watersDeveloping WIP III informational resources | The values associated with maintaining healthy watersheds have too often not been adequately or consistently conveyed to local communities.Communication and outreach with landowners to ensure they are participating in practices that maintain and protect high quality waters on or adjacent to their property | **2.1** (4, 5, 7, 10, 11) [Outreach, including: effectively conveying information on the status of healthy watersheds to local stakeholders](#_2.1) |  |  |  |
| **2.2** (5) [Identify the various tools that may be used, primarily by local governments, to protect healthy watersheds](#_2.2) |
| **3.2** (7, 8, 9, 11, 15) [Implement new or improve existing policy/programs/research](#_3.2) |
| **4.1** (2)[Provide a valued forum for mutual learning and exploration](#_4.1)  |
| **4.2** (3, 4)[Develop information resources and support communications](#_4.2) |
| **4.3** (2, 3)[Promote the science](#_4.3)  |
| Legislative Engagement | GIT funding project 2018 Developing WIP III informational resources | Enhancements are needed for scientific, technical, and policy tools, and for approaches to engage and involve local jurisdictions in protection efforts. Inclusion of healthy watersheds in Phase III WIPs | **2.1** (3, 9) [Outreach, including: effectively conveying information on the status of healthy watersheds to local stakeholders](#_2.1) |  |  |  |
| Federal Government Agency Engagement | Continued communication with NOAA, USFS, NPS, USFWS and others. | Need engagement from federal agencies other than EPA in order to fully protect healthy watersheds | **3.2** (1, 4, 5, 6, 12)[Implement new or improve existing policy/programs/research](#_3.2) |  |  |  |
| **4.2** (5)[Develop information resources and support communications](#_4.2) |
| State Government Agency Engagement  | State leadership on federal regulatory programs, primarily the Clean Water Act (CWA) Section 303, antidegradation, and CWA Section 319 program funds are closely tied to Healthy Watersheds | States have taken different approaches to define and identify healthy watersheds, and likewise have different plans to improve their assessment and monitoring over time.Need active participation from all states/jurisdictions in the MHWGIT | **3.2** (13, 14) [Implement new or improve existing policy/programs/research](#_3.2) |  |  |  |
| **4.1** (3, 4)[Provide a valued forum for mutual learning and exploration](#_4.1) |
| Local Government Agency Engagement  | Work related to quantifying and reducing the rate of conversion of natural lands to development.Direct coordination with local stakeholders to get relevant data, information and tools into the hands of managers on the ground. | Need to understand how to package materials in effective manner and how to get those materials to the correct audience/ outreach and communication with local decision makers. | **2.1** (1, 2, 3, 4, 5, 6, 9, 10, 11, 12)[Outreach, including: effectively conveying information on the status of healthy watersheds to local stakeholders](#_2.1) |  |  |  |
| **2.2** (1, 2, 3, 4, 5)[Identify the various tools that may be used, primarily by local governments, to protect healthy watersheds](#_Management_Approach_3:) |
| **3.2** (2, 11)[Implement new or improve existing policy/programs/research](#_3.2) |
| Partner Coordination | Cross-management strategy coordination, alignment for multiple benefits, analysis and data products at a Bay-wide scale, and access to/connection to federal agencies | The usage of existing tools is not universal, even within states. Furthermore, some tools are underdeveloped, poorly supported, and unsuited for widespread sharing and/or integration. | **1.2** (1)[Develop vulnerability information](#_1.2) |  |  |  |
| **2.1** (1, 8, 12)[Outreach, including: effectively conveying information on the status of healthy watersheds to local stakeholders](#_2.1) |
| **3.1** (2)[Leverage Funding](#_3.1) |
| **3.2** (10, 12)[Implement new or improve existing policy/programs/research](#_3.2) |
| **4.1** (1)[Provide a valued forum for mutual learning and exploration](#_4.1)  |
| [**4.2**](#Management42) (1, 2, 5)[Develop information resources and support communications](#_4.2) |
| **4.3** (1)[Promote the science](#_4.3)  |
| Use Conflict  | Efforts to integrate living resources priorities with TMDL implementation efforts | Competing resources going to other environmental management and assessments such as the TMDL | **2.1** (2, 10)[Outreach, including: effectively conveying information on the status of healthy watersheds to local stakeholders](#_2.1) |  |  |  |
| Population Growth  | Phase 6 Land Change model outputs related to conversion of natural lands to development | Understand how conversion of natural lands to development puts pressure on healthy watersheds | **1.2** (3, 8)[Develop vulnerability information](#_1.2) |  |  |  |
| Scientific and Technical Understanding: locating healthy waters and watersheds | Individual jurisdictional efforts to monitor, assess, and determine watershed health | Need continued assessments to determine if state-identified healthy waters and watersheds are still healthy and if additional waters and watersheds have become healthyLack of funding for increased monitoring for unassessed waters | **1.1**[Continue gathering inventory of healthy watersheds](#_1.1) |  |  |  |
| Scientific and Technical Understanding: determining healthy watershed vulnerabilities | Develop and apply tools or methods that integrate various inputs to characterize watershed vulnerability to future high-level risks. | Need more information on watershed condition, urban growth proximity/pressure, energy development trends, water demand forecasts, invasive species threats, upstream activities, land ownership type, future transportation infrastructure plans, climate change, sea level rise, and other factors. | **1.2**[Develop vulnerability information](#_1.2) |  |  |  |
| Scientific and Technical Understanding: information to prioritize healthy watershed protection | Collaborate with other goal teams to compile information on state and federal land protection priorities and determine overlap with high-risk healthy watersheds for additional protective measures when appropriate. | Need to understand which healthy watersheds are vulnerable and why. Be able to communicate those vulnerabilities to stakeholders to help prioritize protection. | **1.3**[Prioritize protection](#_1.3) |  |  |  |
| Scientific and Technical Understanding: further technical assessment activities | Efforts to utilize assessment information and incorporate newly available information | Need to complete vulnerability assessment and framework to determine additional needsNeed additional state capacity | **1.4**[Maintain and expand assessment activities and information](#_1.4) |  |  |  |
| Funding and Finances | Efforts to create incentives for land conservation in State-identified HW. | Need more financial resources so that states and local governments can monitor and manage healthy watersheds; need a way to incentivize and credit conservation  | **2.3**[Leverage Funding](#_2.3) |  |  |  |
| **3.1**[Leverage Funding](#_3.1) |
| **3.2** (3)[Implement new or improve existing policy/programs/research](#_3.2) |

|  | ACTIONS – 2018-2019 |
| --- | --- |
| Action # | Description | Performance Target(s) | Responsible Party (or Parties) | Geographic Location | Expected Timeline |
| Management Approach 1: Tracking Healthy Waters and Watersheds  |
| 1.1 | Continue gathering inventory of healthy watersheds | Tetra Tech, MHWGIT State Data Leads, and MHWGIT and CBPO GIS Staff will continue to compile data on State-identified Healthy Waters and Watersheds and update the master list and map of State-identified Healthy Waters and Watersheds | MHWGIT State Leads, CBPO GIS Team, Tetra Tech  | Bay-wide | Ongoing |
| 1.2 | Develop vulnerability information | 1. Tetra Tech will work with jurisdictions to identify management needs in tracking the vulnerability of healthy watersheds, so that information will be useful to target state management efforts in healthy watersheds
2. Develop and implement a methodology to establish climate related goals and baselines for individual Chesapeake Bay Agreement Management Strategies such as the Healthy Watersheds Management Strategy
3. Forecast land development scenarios
4. Utilize sea level rise/storm surge assessments
5. Incorporate Energy Development Trends research into vulnerability assessment
6. Incorporate resiliency study
7. Incorporate Resource Conservation Opportunity Areas
8. Quantify impact of land conversion on healthy watersheds and habitats
9. Maryland will further develop and apply tools and methods to characterize vulnerability of healthy watersheds to specific, future high-level risks
 | 1. MHWGIT, CBPO GIS Team, Tetra Tech
2. STAR, Climate Resiliency WG
3. CBPO USGS
4. USACOE
5. TNC, MHWGIT, CBPO GIS Team
6. TNC, MHWGIT, CBPO GIS Team
7. USFWS, MHWGIT, CBPO GIS Team
8. CBPO USGS, Land Use WG
9. MDE, MD DNR
 | 1. Bay-wide
2. Bay-wide
3. Bay-wide
4. Bay-wide
5. PA and NY
6. Bay-wide
7. Bay-wide
8. State Identified Healthy Watersheds
9. MD
 | 1. July 2018
2. September 2018
3. December 2018
4. May 2019
5. May 2019
6. 2018-2019
7. 2018-2019
8. May 2018
9. December 2018
 |
| 1.3 | Prioritize protection | 1. Assess protected status of healthy watersheds
2. Compile and publish bi-annual Chesapeake Bay Protected Lands Dataset
3. MD will collaborate with other goal teams to compile information on State and Federal land protection priorities and determine overlap with high-risk healthy watersheds for additional protective measures when appropriate (e.g., for use in WIP Conservation Plus Scenarios)
4. MD DNR Conservation Tool
5. RFA to protect Riparian Buffers through land acquisition
 | 1. MHWGIT
2. CBPO GIS Team, NPS
3. MDP, MDE, MD DNR, VHGIT
4. MD DNR
5. NYSDEC
 | 1. Bay-wide
2. Bay-wide
3. MD
4. MD
5. NY
 | 1. Ongoing
2. Ongoing
3. May 2018
4. 2018-2019
5. Ongoing
 |
| 1.4 | Maintain and expand assessment activities and information | 1. Work with STAR to determine current and future monitoring needs and outline gaps
2. Continue to work on: healthy watershed metrics, analyses of protocol for determining status of each watershed, assessments of watershed protection priority, and exploring a method to track marginally healthy watersheds
3. Monitor high resolution imagery processing and work with LUWG to determine how data can be incorporated into a healthy watershed tracking framework
4. Track forest cover and provide regular updates on forest gain/loss
5. Conduct GIS assessments to identify key high value brook trout habitat to conserve and those areas that are considered marginal and in need of restoration
6. USACE, NFWF, and state partners will conduct the Chesapeake Bay Comprehensive Water Resources and Restoration Plan to identify project opportunities for ecosystem restoration and other USACE mission areas utilizing healthy watershed inventories, land cover datasets, and other data
7. Expand assessment activities and information for forests and forest conservation
8. Fort Dupont Watershed Restoration NFWF Grant Project
9. Continue to focus on trend analysis for existing Tier II streams
10. Continue to monitor MDSS sites
11. Water quality monitoring in the Susquehanna will be updated between 2018-2020 and monitoring in the Chemung Basin will be updated 2022-2024
 | 1. MHWGIT, STAR
2. MHWGIT
3. CBPO GIS Team, Land Use WG
4. USFS
5. CBP GIS Team, VHGIT, TU
6. USACE, NFWF
7. FWG
8. DC DOEE
9. MDE, MD DNR
10. MD DNR
11. NYSDEC
 | 1. Bay-wide
2. NA
3. Bay-wide
4. Bay-wide
5. Bay-wide
6. Bay-wide
7. Bay-wide
8. Fort Dupont
9. MD
10. MD
11. NY
 | 1. June 2018
2. Ongoing
3. 2018-2019
4. 2018-2019
5. 2018-2019
6. May 2018
7. May 2019
8. 5 years
9. Ongoing

10. Ongoing11. 2018-2024 |
| Management Approach 2: Local Leadership – strengthen local commitment and capacity to protect their healthy watersheds |
| 2.1 | Outreach, including: effectively conveying information on the status of healthy watersheds to local stakeholders | 1. Work collectively to improve outreach strategies, and better "get the word out" across multiple Management Strategies to determine the best approaches and methods for reaching key stakeholders
2. Healthy Watershed Fact sheet templates for WIP developers and implementers
3. Healthy Watersheds TMDL Forest Study Phase 3: VA staff will work with a pilot locality to review and revise Comprehensive Plans and ordinances to establish policies, incentives, and standards that promote and facilitate conservation of high conservation value forests that will result in TMDL progress
4. DOEE present about watershed protection at community events & meetings
5. Work with DC schools on watershed restoration education & implementation projects
6. Creation of a comprehensive outreach strategy for the DC DOEE restoration branch and provide a method and baseline training from which all staff can use to communicate with partners
7. Start a job training program (River corps) in DC that provides training on how to control invasive species, LID maintenance, inspections, photo monitoring for stream restoration projects in addition to general experience to be stewards for the environment
8. MD will partner with NGOs to coordinate protection and communication efforts
9. Develop and implement communications to local communities in MD to support integration of healthy watershed protection into local comprehensive plans
10. Develop and implement outreach to communities in MD to support directing some pollution reduction/mitigation activities planned for large-scale TMDL development watersheds that contain healthy (sub)watersheds
11. MD Tier II Story Map to communicate how and why MD protects Tier II streams on a watershed scale, to better ensure that downstream high-quality waters are maintained
12. Local government outreach, working with regional planning boards, Soil and Water Conservation Districts (SWCD), Water Quality Coordinating Committees (WQCC) on WIP III awareness with focus on local water quality. Create awareness of where local healthy watersheds are located, benefits of protection and resources/grants available for protection
 | 1. MHWGIT, LGAC
2. MHWGIT
3. MHWGIT, VADOF
4. DC DOEE
5. DC DOEE
6. DC DOEE
7. DC DOEE
8. MDE, MD DNR
9. MDE, MD DNR
10. MDE
11. MDE
12. NYSDEC
 | 1. Bay-wide
2. NA
3. VA
4. DC
5. DC
6. DC
7. DC
8. MD
9. MD
10. MD
11. MD
12. NY
 | 1. Ongoing
2. March 2018
3. December 2019
4. 2018-2019
5. 2018-2019
6. 2018-2019
7. 2018
8. 2018-2019
9. May 2018
10. 2022
11. 2018-2019
12. Ongoing
 |
| 2.2 | Identify the various tools that may be used, primarily by local governments, to protect healthy watersheds | 1. Gather, summarize and place on the Chesapeake Bay Program website or other locations as determined in the Local Leadership Management Strategy approach for improving transfer of knowledge to locals, existing studies and reports on the costs, benefits and effectiveness of both local and state level land use policy options, incentives and planning tools
2. Healthy Watersheds TMDL Forest Study Phase 3: A VA pilot locality will implement various planning tools for incentivizing forestland retention
3. Finalize and implement guidance to protect healthy watersheds in MD
4. MD working with counties on a county by county basis to help identify areas for protection vs. growth
5. WQCCs, WIP III development, land acquisition program and buffer program, distributing resources provided by MHWGIT (planning tools, template for WIP development) in person and on DEC website for stakeholders
 | 1. MHWGIT
2. MHWGIT, VA DOF
3. MDE
4. MDE, MD DNR
5. NYSDEC
 | 1. Bay-wide
2. VA
3. MD
4. MD
5. NY
 | 1. December 2019
2. 2019
3. December 2018
4. Ongoing
5. Ongoing
 |
| 2.3 | Leverage Funding | 1. Incorporate healthy watershed protection into the RFPs and scoring tools used to award federal and state water quality grants
2. Healthy Watersheds TMDL Forest Study Phase 3: incentivize private capital markets to invest in conservation and the offset future growth and development
 | 1. MDE, DNR
2. MHWGIT, VA DOF
 | 1. MD
2. NA
 | 1. Ongoing
2. 2019
 |
| Management Approach 3: Federal and State Leadership |
| 3.1 | Leverage Funding | 1. Secure Watershed Protection Grants
2. Federal partnerships with FHWA and NPS, NFWF, Local partnerships with DC Water
 | 1. DC DOEE
2. DC DOEE
 | 1. DC
2. DC
 | 1. 2018-2019
2. 2018-2019
 |
| 3.2 | Implement new or improve existing policy/programs/research | 1. Engage with federal agencies other than EPA (such as FERC and DOT) to leverage opportunities within those agencies so that they can set the stage for state and local governments to further healthy watershed protection
2. Healthy Watersheds TMDL Forest Study Phase 3: Creation of a training program and guidebook that leads communities through the process of revising and establishing policies, incentives, and standards that promote and facilitate conservation of high conservation value forests
3. Healthy Watersheds TMDL Forest Study Phase 3: develop a model to monetize forestland retention and other conserved land values in the TMDL 6.0 model
4. Continue integrating healthy watershed protection into EPA water programs. Thus far EPA has made progress on integrating protection in the 319 program, 303(d) program and into source water protection
5. Share information on newly launched Healthy Watersheds Consortium Grant and annual opportunities for states and others to submit proposals for sub-grants
6. Continue to manage USACE reservoirs and recreational facilities to protect, preserve, and restore significant ecological resources by managing natural resources in a healthy and sustainable condition, fostering healthy lands and waters by balancing public uses and needs, and providing public outdoor recreational opportunities
7. DC River Smart Homes and Schools Programs
8. DC Tree Plantings
9. DC Public Space LID
10. DC partnering with the NPS, to repave the roadways that cross through Fort Dupont Park
11. MDP community outreach for A Better Maryland, which is an initiative to listen to local needs
12. MDE regularly meeting with DOD and other federal agencies to update regulations
13. NY Open Space Conservation Plan continuing easement acquisitions
14. Land acquisition through Water Quality Implementation Project Program, a competitive grant program that distributes New York State Environmental Protection Fund (EPF) money for projects that reduce polluted runoff, improve water quality, and restore habitat in New York's waterbodies. Riparian buffers and Land Acquisition on non-agricultural land are a priority practice through this program
15. Assessment and Maintenance of Riparian Forest Buffers in the Chesapeake Bay Watershed: Perform riparian forest buffer site assessments, facilitate maintenance projects and provide outreach relating to riparian forest buffer management
 | 1. MHWGIT
2. MHGIT, VA DOF
3. MWHGIT, VA DOF
4. EPA
5. EPA
6. USACE
7. DC DOEE
8. DC DOEE
9. DC DOEE
10. DC DOEE
11. MDP
12. MDE
13. NYSDEC, NYS OPRHP, NYSDAM, NYSDOT, EFC
14. NYSDEC
15. NYSDEC
 | 1. Bay-wide
2. Bay-wide
3. Bay-wide
4. NA
5. NA
6. Bay-wide
7. DC
8. DC
9. DC
10. DC
11. MD
12. MD
13. NY
14. NY
15. NY
 | 1. January 2019
2. 2019
3. 2019
4. 2018-2019
5. 2018-2019
6. Ongoing
7. Ongoing
8. Ongoing
9. Ongoing
10. April 2018
11. December 2018
12. December 2018
13. Ongoing
14. Ongoing
15. September 2018
 |
| Management Approach 4: Support State-based Efforts |
| 4.1 | Provide a valued forum for mutual learning and exploration  | 1. Continue meeting 2-4 times a year and at meetings continue hosting Case Study presentations related to healthy watershed protection/tracking
2. Host Youth Fair for Environmental Education
3. MDE is developing best practices outreach materials for Tier II waters. It is a straightforward check list with recommended BMPs depending on the activities
4. MD is developing a permitting applicant portal to integrate wetlands and waterways program. Which allows users to type in a location and permit number and see what types of information is available. Fee exempt government entities will access the portal and get information they need. Tier II (HW) check list will be integrated. This initiative is called "ecollaboration"
 | 1. MHWGIT
2. DC DOEE
3. MDE
4. MDE
 | 1. NA
2. MD
3. MD
4. DC
 | 1. Ongoing
2. 2018-2019
3. 2018-2019
4. 2018-2019
 |
| 4.2 | Develop information resources and support communications | 1. Provide messages and resources to CBP Communications staff
2. Share presentations, slides, pictures, graphics, to help partner agency staff prepare presentations, reports, etc. with effective healthy watersheds messages
3. River Smart Homes Flyer Distribution
4. Update and distribute Riparian Buffer Funding Brochure and make resources provided by MHWGIT available on website for stakeholders
5. Increase communication so that federal programs and agencies are more protective of state-identified healthy watersheds
 | 1. MHWGIT
2. MHWGIT
3. DC DOEE
4. NYSDEC
5. MDE, MD DNR
 | 1. NA
2. NA
3. DC
4. NY
5. MD
 | 1. Ongoing
2. Ongoing
3. 2018-2019
4. Ongoing
5. Ongoing
 |
| 4.3 | Promote the science  | 1. Continue to work with the Chesapeake Bay Program and partners to quantify and incorporate conservation practices into the Chesapeake watershed modeling efforts and to explore how land use protections might be used to quantify future pollutant load reduction incentives for land conservation
2. Citizens Statewide Lakes Assessment Program collects lake data including water quality samples, lake perception, harmful algal blooms, and invasive species distribution. Data for Rotating Intensive Basins Studies monitoring, impaired waterbodies 303(d) list, Priority Waterbody List and other programs
3. Water Assessments by Volunteer Evaluators is citizen-based water quality assessment that enables citizen scientists to collect biological data for assessment of water quality on wad able streams. Participants submit sampling locations for review and attend an eight-hour training session on collection methods. Data is used for monitoring reports, state and federal reporting, and Rotating Intensive Basins Studies program
 | 1. MHWGIT
2. NYSDEC
3. NYSDEC
 | 1. Bay-wide
2. NY
3. NY
 | 1. Ongoing
2. Ongoing
3. Ongoing
 |
|  |  |