

BIENNIAL STRATEGY REVIEW SYSTEM

Chesapeake Bay Program



Logic and Action Plan: Pre-Quarterly Progress Meeting

Healthy Watersheds – 2020-2021

[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](#).

Factor	Current Efforts	Gap	Actions	Metrics	Expected Response and Application	Learn/Adapt
<i>What is impacting our ability to achieve our outcome?</i>	<i>What current efforts are addressing this factor?</i>	<i>What further efforts or information are needed to fully address this factor?</i>	<i>What actions are essential (to help fill this gap) to achieve our outcome?</i>	<i>What will we measure or observe to determine progress in filling identified gap?</i>	<i>How and when do we expect these actions to address the identified gap? How might that affect our work going forward?</i>	<i>What did we learn from taking this action? How will this lesson impact our work?</i>
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 (SIHW) are still healthy -Assessments to identify new SIHW.	1.1 Continue gathering inventory of healthy watersheds	Periodically update SIHW maps and data layers reflecting changes.	Demonstrate where healthy waters and watersheds are over time.	

		-Lack of funding for increased monitoring for unassessed waters				
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	Chesapeake Healthy Watersheds Assessment (CHWA) – indicating a potential change in health	Improved statistical assessment will better guide metric selection, potential indicator development, and future outcome tracking Provide resources to prevent harm (policies, plans, incentives and tools) related to land use change.	
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. -Be able to communicate ways to effectively address vulnerabilities.	1.3 Prioritize protection	Increased cross-GIT or WG activity such as co-meetings, workshops, tool and product sharing, GIS and other data sharing, and GIT funded projects Track proportion of SIHW that are protected over time.	Communicate and understand how SIHW are becoming more or less protected through land conservation and other mechanisms.	
Scientific and Technical Understanding: further technical	Efforts to utilize assessment information and incorporate newly	-Need to complete vulnerability assessment and framework to	1.4 Maintain and expand assessment activities and information			

assessment activities	available information	determine additional needs. -Need additional state capacity. -Need to refine audience(s) and potential use of final products to better guide future assessment work.				
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 Develop vulnerability information			
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 waters Developing 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 Outreach, including: effectively conveying information on the status of healthy watersheds to local stakeholders			
			2.2 Identify the various tools that may be used, primarily by local governments, to protect healthy watersheds			
			3.2 Implement new or improve existing policy/programs/research			
			4.1 Provide a valued forum for mutual learning and exploration			
			4.2			

			Develop information resources and support communications			
Legislative Engagement		-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 Outreach, including: effectively conveying information on the status of healthy watersheds to local stakeholders	-Identify if information about healthy watersheds and healthy watershed protection were included in the Phase III WIPs		
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 Implement new or improve existing policy/programs/research 4.2 Develop information resources and support communications			
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 HWGIT	3.2 Implement new or improve existing policy/programs/research 4.1 Provide a valued forum for mutual learning and exploration	Guest presentation on a healthy watershed or practices to sustain them at each GIT meeting.	Post case studies on CBP website as a resource repository.	

<p>Local Government Agency Engagement</p>	<p>Work related to quantifying and reducing the rate of conversion of natural lands to development.</p> <p>Direct coordination with local stakeholders to get relevant data, information and tools into the hands of managers on the ground.</p>	<p>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.</p>	<p>2.1 Outreach, including: effectively conveying information on the status of healthy watersheds to local stakeholders</p> <p>2.2 Identify the various tools that may be used, primarily by local governments, to protect healthy watersheds</p> <p>3.2 Implement new or improve existing policy/programs/research</p>			
<p>Partner Coordination</p>	<p>Cross-management strategy coordination, alignment for multiple benefits, analysis and data products at a Watershed-wide scale, and access to/connection to federal agencies</p>	<p>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.</p>	<p>1.2 Develop vulnerability information</p> <p>2.1 Outreach, including: effectively conveying information on the status of healthy watersheds to local stakeholders</p> <p>3.2 Implement new or improve existing policy/programs/research</p> <p>4.1 Provide a valued forum for mutual learning and exploration</p> <p>4.2 Develop information resources and support communications</p> <p>4.3 Promote the science</p>	<p>HWGIT staff will track all cross-outcome actions, meetings, shared resource products, communication and outreach materials etc.</p>	<p>Assess progress of coordination activities and assess if they are meeting goals.</p>	

			5.1 Improved Cross-outcome coordination			
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 Outreach, including: effectively conveying information on the status of healthy watersheds to local stakeholders			
Funding and Finances	Efforts to create incentives for land conservation in state-identified healthy watersheds.	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 3.2 Implement new or improve existing policy/programs/research			

ACTIONS – 2020-2021					
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	<ol style="list-style-type: none"> HWGIT State Data Leads, and HWGIT 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 Investigate the potential to harness community-based monitoring to target monitoring in watersheds identified as “threatened” through the CHWA. 	<ol style="list-style-type: none"> HWGIT state leads, CBPO GIS Team, USGS HWGIT, STAR 	<ol style="list-style-type: none"> Watershed-wide Bay-wide 	<ol style="list-style-type: none"> Ongoing 2021

ACTIONS – 2020-2021

Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline
1.2	Develop vulnerability information	<ol style="list-style-type: none"> 1. Assess which vulnerability factors are most important to consider. <ol style="list-style-type: none"> a. Assist jurisdictions in considering how to incorporate signals of change in SIHW assessments. b. Investigate how to report on whether we have lost any SIHW since agreement was signed. 2. Quantify impact of land conversion on healthy watersheds and habitats (LUMM). 3. Work with HWGIT and Habitat GIT to identify factors influencing vulnerability of healthy watersheds and habitats 4. Prototype some options related to "spectrum of watershed health and vulnerability" 5. Solicit guidance on additional vulnerability metrics and indicator development from STAC 6. Conduct statistical analyses of the vulnerability metrics and diagnostic measures of watershed health to develop vulnerability indicators 	<ol style="list-style-type: none"> 1. HWGIT, CBPO GIS Team, USGS 2. CBPO USGS, Land Use WG 3. HWGIT, HGIT, USGS 4. HWGIT, LUWG, CBPO GIS Team, USGS 5. HWGIT, STAC, USGS 6. HWGIT, CBPO GIS Team, USGS, contractor 	<ol style="list-style-type: none"> 1. Watershed-wide 2. Watershed-wide 	<ol style="list-style-type: none"> 1. 2020 - 2021 2. 2020 - 2021
1.3	Prioritize protection	<ol style="list-style-type: none"> 1. Assess protected status of healthy watersheds 2. Compile and publish bi-annual Chesapeake Bay Protected Lands Dataset 	<ol style="list-style-type: none"> 1. HWGIT 2. CBPO GIS Team, NPS, USGS 3. HWGIT, CBPO GIS Team, USGS 	<ol style="list-style-type: none"> 1. Watershed-wide 2. Watershed-wide 3. Watershed-wide 4. Watershed-wide 	<ol style="list-style-type: none"> 1. Ongoing 2. Ongoing 3. 2020 4. 2020-2021

ACTIONS – 2020-2021

Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline
		<ul style="list-style-type: none"> a. Oversee HWGIT funding contract to improve data collection and the way the CBP Protected Lands indicator is maintained 3. Investigate updating the Farms and Forests CCP Priority with high-resolution land use/cover data 4. Investigate additional threats to high-valued lands using best available data related to development pressure and forest, farmland and wetland conversion utilizing the results of the Land Use Methods and Metrics Outcome as well as the CHWA (pending LUMM rates of conversion) 	4. HWGIT, CBPO GIS Team, LUWG, USGS		
1.4	Maintain and expand assessment activities and information	<ul style="list-style-type: none"> 1. Oversee implementation of the Chesapeake Healthy Watersheds Assessment. <ul style="list-style-type: none"> a. Technical review of data and Tetra Tech report, review .gdb and associated data, familiarize with methods, datasets b. Assess CHWA results and next steps for measuring progress towards achieving the Healthy Watersheds Outcome. c. Relate CHWA information to impaired waters and pollution information 	<ul style="list-style-type: none"> 1. HWGIT, CBPO GIS Team, USGS, MDE, Contractor 2. HWGIT, CBPO GIS Team, Land Use WG, STAR, USGS 	<ul style="list-style-type: none"> 1. Watershed-wide 2. Watershed-wide 	<ul style="list-style-type: none"> 1. 2020 - 2021 2. 2020 - 2021

ACTIONS – 2020-2021

Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline
		<ul style="list-style-type: none"> d. Publish CHWA in CBP Open Data and ArcGIS online e. Assess changing conditions for all land cover metrics included in the CHWA f. Investigate best methods for keeping the CHWA updated g. Oversee GIT Funding project: Implementation of Chesapeake Healthy Watersheds Assessment in Maryland's Tier II watersheds <p>2. Investigate specific tracking questions outlined by GIT members and interested parties:</p> <ul style="list-style-type: none"> a. Work with STAR to determine current and future monitoring needs and outline gaps b. Explore the develop new watershed characteristics of health and vulnerability using high resolution imagery and track them over time. 			
Management Approach 2: Local Leadership – strengthen local commitment and capacity to protect their healthy watersheds					
2.1	<p>Outreach, including: effectively conveying information on the status of healthy watersheds to local stakeholders</p> <p>Translate, communicate and develop materials to convey local engagement needs related to sustaining healthy watersheds and reducing land conversion.</p>	<ul style="list-style-type: none"> 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. Work with Local Leadership Workgroup (LLWG), Communications WG, and LGAC to implement Local Engagement Strategy (as it related to healthy watersheds) 	<ul style="list-style-type: none"> 1. HWGIT, LLWG, CBP Comm Team, LGAC 2. HWGIT, Local Leadership WG 	<ul style="list-style-type: none"> 1. Watershed-wide 2. Watershed-wide 	<ul style="list-style-type: none"> 1. Ongoing 2. 2020-2021

ACTIONS – 2020-2021

Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline
		<ul style="list-style-type: none"> a. Coordinate with others on how to effectively compile and package resources for use in CBP outreach materials. b. Incorporate Healthy Watersheds TMDL Forest/Conserved Lands Retention Study Phase III and other related Land Use Options Evaluation Products (completed GIT funding project) c. Development of cross outcome materials for local elected officials and other stakeholder audiences to convey policies, planning incentives and tools to reduce conversion. <ul style="list-style-type: none"> 1. FY 2019 GIT funding project with Habitat GIT: “Improved Technical Service Delivery to land owners”. 2. Work with LLWG to include healthy watersheds related content in FY19 GIT funding project, “Cross Outcome Watershed Educational Materials”. d. Identify 1-2 case pilot jurisdictions where healthy watersheds are present, and they have demonstrated the desire to sustain them. 			

ACTIONS – 2020-2021

Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline
		(What actions have been successful there?).			
2.2	Identify the various tools that may be used, primarily by local governments, to protect healthy watersheds	<ol style="list-style-type: none"> Gather, summarize and place on the Chesapeake Bay Program website or other locations as determined in the Local Leadership Management Strategy an 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 Oversee shared GIT funding project with Habitat GIT: Improved technical service delivery to landowners: Achieving multiple CBP outcomes (assure resources from HWGIT projects are incorporated into project). 	<ol style="list-style-type: none"> HWGIT, Local Leadership WG HWGIT, Habitat GIT, Contractors 	<ol style="list-style-type: none"> Watershed-wide Watershed-wide 	<ol style="list-style-type: none"> 2020-2021 2020 - 2021
2.3	Leverage Funding	<ol style="list-style-type: none"> Incorporate healthy watershed protection into the RFPs and scoring tools used to award federal and state water quality grants. 	<ol style="list-style-type: none"> HWGIT 	<ol style="list-style-type: none"> Watershed-wide 	<ol style="list-style-type: none"> Ongoing
Management Approach 3: Federal and State Leadership					
3.1	Leverage Funding	<ol style="list-style-type: none"> Oversee GIT funding project: Chesapeake Intensive Conservation Finance Workshop (co-sponsored with Land Conservation WG) <ol style="list-style-type: none"> Investigate how to link with HWGIT priorities. 	<ol style="list-style-type: none"> HWGIT, CCP, LTA, Contractors HWGIT, USGS NRCS 	<ol style="list-style-type: none"> Watershed-wide Watershed-wide 	<ol style="list-style-type: none"> 2020 2020-2021

ACTIONS – 2020-2021

Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline
		2. Investigate how to incorporate SIHW or CHWA into NRCS source water protection funding and efforts by Chesapeake Conservation Partnership to protect drinking water. (coordination with 1.3)			
3.2	Implement new or improve existing policy/programs/research	<p>1. Guide development of GIT Funding project:</p> <p>a. Implementation of Chesapeake Healthy Watersheds Assessment in Maryland's Tier II watersheds</p> <p>b. Work with other Jurisdictions to identify other state specific datasets that can/should be incorporated into future assessments.</p> <p>2. Investigate whether HW can be a factor in NRCS Source water protection funding.</p> <p>3. Present CHWA to NOAA's North Atlantic Regional Team.</p> <p>4. 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</p> <p>5. 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</p>	<p>1. MHWGIT, MDE</p> <p>2. MHWGIT, VA DOF</p> <p>3. MHWGIT, NOAA</p> <p>4. HWGIT, EPA, Other feds.</p> <p>5. HWGIT, EPA</p> <p>6. HWGIT</p>	<p>1. Watershed-wide, MD</p> <p>2. Watershed-wide</p> <p>3. NA</p> <p>4. NA</p> <p>5. NA</p> <p>6. Watershed-wide</p>	<p>1. 2020-2021</p> <p>2. 2020-2021</p> <p>3. 2020-2021</p> <p>4. 2020-2021</p> <p>5. 2020-2021</p> <p>6. 2020-2021</p>

ACTIONS – 2020-2021

Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline
		6. Share information on newly launched Healthy Watersheds Consortium Grant and annual opportunities for states and others to submit proposals for sub-grants			
Management Approach 4: Support State-based Efforts					
4.1	Provide a valued forum for mutual learning and exploration	Continue meeting 2-4 times a year and at meetings continue hosting case study presentations related to healthy watershed protection/tracking	1. HWGIT	1. NA	1. Ongoing
4.2	Develop information resources and support communications	<ol style="list-style-type: none"> 1. Work with Communications Team to develop messages and resources 2. Share presentations, slides, pictures, graphics, to help partner agency staff prepare presentations, reports, etc. with effective healthy watersheds messages. 	<ol style="list-style-type: none"> 1. HWGIT, Communications Team 2. HWGIT 	<ol style="list-style-type: none"> 1. NA 2. NA 	<ol style="list-style-type: none"> 1. Ongoing 2. Ongoing
4.3	Promote the science	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	1. HWGIT, USGS	1. Watershed-wide	1. Ongoing
Management Approach 5: Improved cooperation, coordination and integration					
5.1	Improved Cross Outcome Coordination: Committed coordination and cooperation with key CBP workgroups to assure shared resources,	<ol style="list-style-type: none"> 1. HWGIT staff to attend meetings of “sibling” groups to facilitate coordination. <ol style="list-style-type: none"> a. Investigate how to incorporate the results of 	<ol style="list-style-type: none"> 1. HWGIT, “sibling” WGs 2. HWGIT, SHWG, FHWG 	<ol style="list-style-type: none"> 1. NA 2. NA 3. NA 4. NA 	<ol style="list-style-type: none"> 1. 2020-2021 2. 2020-2021 3. 2020-2021 4. 2020-2021

ACTIONS – 2020-2021

Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline
	<p>information and priorities while reducing duplication of efforts.</p> <p>Key complementary groups include: Stream Health, Fish Habitat, Brook Trout, Climate Resiliency, Protected Lands, Land Use, Forestry, Wetlands, Local leadership*, LGAC*, Communications* (*See section 2.1 and 4.2 for specific local engagement and communication actions)</p>	<p>the "Climate Change Indicators for the Chesapeake Bay Program: An Implementation Strategy" into the HW Outcome. (CRWG)</p> <p>b. Track forest cover and provide regular updates on forest gain/loss (FWG)</p> <p>c. 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 (HGIT, FHWG) (utilizing Cross GIT mapping and other CBP resources).</p> <p>d. Expand assessment activities and information for forests and forest conservation (with input and cooperation with Forestry and Land use work groups).</p> <p>2. Investigate how the CHWA can help inform other outcome</p> <p>a. Work with Stream Health and Fish Habitat workgroups directly to identify shared data and assessment needs</p> <p>3. Facilitate the sharing of information related to conservation finance mechanisms with CCP and <u>Healthy Waters/Forest Retention Project-Phase III: Final Report for Chesapeake Bay Trust</u> (See Action 2.1 task 2 above)</p>	<p>3. HWGIT, CCP, CBP Communications Team, Local Leadership WG</p> <p>4. HWGIT, Communications Team, Climate Resiliency WG, other CBP groups</p>		

ACTIONS – 2020-2021

Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline
		4. Host occasional shared meeting with central cross-coordination topic for discussion. a. Host shared Climate workgroup and HWGIT meeting to work through Climate Smart tool (2020) b. 1 – 2 others			