Healthy Watersheds Goal

Sustain state-identified healthy waters and watersheds recognized for their high quality and/or high ecological value.

Theme: "Healthy Watersheds"

Healthy Watersheds Outcome

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

Elements of Healthy Watersheds Management Strategy and Workplan Related to Finance and Economics

Healthy Watersheds Management Strategy General Describe here: Healthy watersheds also provide numerous • Support from B&F Wkgp social and economic benefits to local • Connections to Envtl. communities; they are often sources of drinking Finance Action Team Rpt. water, provide wildlife habitat, help to mitigate Other opportunities to the effects of flooding, support a wide range of network and build recreational opportunities, and are more resilient partnerships/collaborate to the effects of invasive species and climate change. Healthy watersheds are also a bargain: protecting them is much less expensive than restoring waters that have become degraded. Activities that protect healthy waters and watersheds-including land conservation, local ordinances, anti-degradation policies, and other measures-often cost less and can be more effective at maintaining health than restoration. Local tools for healthy watershed protection include ... land and easement purchases. 2 Gap Private sector resources to identify and protect watersheds are scarce overall, especially in undeveloped rural areas where healthy watersheds may be found. Among regulatory safeguards, anti-degradation programs with strict requirements for alternatives analyses and quantified demonstrations of social and/or economic benefits for projects that may degrade water quality may be more effective than general permit programs, which typically don't conduct

	individual project reviews. Healthy watershed	
	protection programs would benefit from some	
	knowledge regarding the type and relative	
	effectiveness of existing safeguards.	
3	Management Approach – Cross GIT	
	Stewardship Goal Implementation Team:	
	Cooperation on efforts to promote individual	
	stewardship, support environmental education,	
	protected lands and assist citizens, communities	
	and local governments in undertaking	
	conservation initiatives in the Bay region.	
	Similarly, the team supports the language	
	outlined in the Protected Lands Management	
	Strategy related to crediting conservation : "Land	
	conservation is not credited towards reductions in	
	the Bay jurisdictions' annual pollution reduction	
	progress reporting. However, land conservation	
	may be able to generate credits for use in	
	compliance trades and/or as offsets for new	
	loads. There may also be opportunities to	
	quantify and incorporate conservation practices	
	into the Chesapeake Bay Program decision	
	support system and to explore how land use	
	projections might be used to quantify future	
	pollutant load reduction incentives for land	
	conservation."	

Hea	Healthy Watersheds Work Plan				
1	Identify the various tools that may be used, primarily by local governments, to protect healthy watersheds	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. (HW GIT Land Use Options and Local Leadership Management Strategies)	Describe here: Support from B&F Wkgp Connections to Envtl. Finance Action Team Rpt. Other opportunities to network and build partnerships/collabor ate		

2	Leverage	Use FWS grant programs like North
	Funding	American Wetlands Conservation Act
		grants, National Coastal Wetlands
		Conservation grants, and Section 6
		Endangered Species Recovery Land
		Acquisition grants to leverage non-
		federal funds (FWS)
		Incorporate healthy watershed
		protection into the RFPs and scoring
		tools used to award federal and state
		water quality grants. (DOEE)
		Work with counties and municipalities
		to prioritize the use of open space
		funding under Act 13 to protect
		healthy watersheds. (PA DEP, DCNR)
		Assist with the leverage of funding .
		Also, incentivize riparian and in-
		stream restoration projects, while
		engraining staff into the local
		community in an effort to change
		mindsets for the benefit of cold water
		resources. (Trout Unlimited)
		Secure Watershed Protection Grants
		(DOEE)
		Continue to work with NRCS to
		prioritize Farm Bill program funding
		to benefit forested watershed lands
		through programs such as EQIP, CSP,
		Healthy Forests, and others (PA DEP,
		DCNR)

Land Conservation Goal

Conserve landscapes treasured by citizens in order to maintain water quality and habitat; sustain working forests, farms and maritime communities; and conserve lands of biological, cultural, indigenous and community value.

Theme: "Healthy Watersheds"

Land Conservation Outcome

By 2025, protect an additional two million acres of lands throughout the watershed—currently identified as high-conservation priorities at the federal, state or local level—including 225,000 acres of wetlands and 695,000 acres of forest land of highest value for maintaining water quality.

Elements of Protected Lands Management Strategy and Workplan Related to Finance and Economics

Prot	Protected Lands Management Strategy			
1	General Successfully protecting and sustaining new acreage requires tapping innovative funding mechanisms and data technologies, encouraging collaboration and increasing public engagement and stewardship.	Describe here: Support from B&F Wkgp Connections to Envtl. Finance Action Team Rpt. Other opportunities to network and build partnerships/collaborate		
2	Funding and Incentives for Conservation Competition for limited federal and state funding for land conservation has increased in recent years. This is a result of decreases in dedicated funding sources and less than optimal alignment of existing resources, which come in many forms, such as tax incentives, credits, grants and sales. Comparatively high land prices in the watershed also stretch limited resources. Funding available at the federal and state levels for land conservation could be better aligned with funding for working lands, recreation, water quality, biological diversity and related efforts to increase the overall pool of funding available. The private sector, including donors, foundations and landowners interested in preserving their property's heritage or scenic value, presents opportunities for funding and stewardship that could be better leveraged with limited public resources. Ownership Patterns and Fragmentation As the			
	watershed's resident population grows and shifts			

toward urban areas, land values increase near commercial centers. As **competition for economically viable use of the land** intensifies, the incentives and pressures to develop compete with the values that support conservation.

Managing Protected Areas As land is protected, managers and funders must address strategies for supporting long-term management. Funding for maintenance of existing public lands is often limited. Privately-held easements also require monitoring, which can become more complicated as the land transfers to second generation landowners. Technical and financial assistance can build the capacity of local land trusts and volunteers to manage and monitor protected areas. Designations such as heritage areas, public-private comanagement arrangements, stewardship funds and innovative citizen engagement tools such as adoption programs could also expand maintenance capacities and increase general funding levels for managing public lands.

3 Gap

Aligning Land Conservation Priorities with Funding Opportunities

A single, integrated, customized watershed-wide conservation priority and ranking system is attractive. Consistent baseline data and criteria for identifying conservation priorities could encourage more informed decision-making across jurisdictions. Currently, funding programs and priorities vary by jurisdiction and are often driven by policies set in legislation. Local and regional initiatives may wish or need to set unique criteria or policies. Technological considerations often favor lightweight, focused tools. LandScope can complement many of these applications through crossplatform data and services integration, supporting greater access to data and encouraging greater consistency in data collection and maintenance over time.

Building the Land Conservation Community

The Chesapeake Conservation Partnership can provide a platform for diverse conservation-minded partners, from federal agencies to local land trusts, to convene,

discuss and act on land conservation priorities. Greater participation by the private sector and local jurisdictions and organizations, especially in urban settings, can enable the land conservation community to expand its scope, capacity and effectiveness. As it evolves, the Partnership can also offer organizations with varied conservation missions more ways to establish mutually beneficial personal and professional relationships. The Partnership, or individual participating organizations, could undertake private sector fundraising, work with local jurisdictions to encourage smart growth, and offer training and assistance to landowners and local stewardship organizations to increase the breadth and commitment of these groups to protecting and managing the places that are important to them. Already, active public and private sector participation and buy-in to formalize the Partnership and add staffing capacity have created a strong foundation for increasing the effectiveness of the group's communications, advocacy and fundraising capabilities over time.

Developing the Capacity and Tools for Restoring, Protecting and Managing Landscapes

While over 170 land trusts currently exist in the watershed, many have no or limited staff support. In early 2015, the Land Trust Alliance initiated a Chesapeake Bay Watershed Land Trust Assessment Study. The results help focus future investment in training and tools that support organizational development and capacity-building, strategic conservation planning, and increase the efficiency and effectiveness of existing and new land trusts. Tools and assistance may include business and financial planning, legal assistance, and knowledge and expertise.

Expanding Federal, State and Local Funding and Incentives for Conservation

Federal, state, and local government as well as non-profit sources can be leveraged to complete conservation transactions. Recent successes include alignment of federal, state and private funding for land conservation along the Journey Through Hallowed Ground National Scenic Byway in support of their initiative to plant 620,000 trees through four states, the Nanticoke River in Maryland and Delaware; and the Rivers of the Chesapeake Land and Water Conservation Fund (LWCF) collaborative funding proposal, which has

aligned a constituency of conservation partners across five states in a bigger way than ever before. Conveying the social and economic benefits of land conservation, aligning funding sources with related initiatives and prioritizing conservation needs in response to changing budgets and political climate continues to remain a challenge. Dedicated funding streams for land conservation are not always secure, especially in tight budget years; vigilance is required to sustain these funds. In some jurisdictions lack of dedicated funding streams limits impact. Land conservation is not credited towards reductions in the Bay jurisdictions' annual pollution reduction progress reporting. However, land conservation may be able to generate credits for use in compliance trades and/or as offsets for new loads.

There may also be opportunities to quantify and incorporate conservation practices into the Chesapeake Bay Program decision support system and to explore how land use projections might be used to quantify future pollutant load reduction incentives for land conservation. There are other opportunities for expanding or creating new land conservation funding streams, including local ballot measures and creating a mitigation fund. Elected officials continue to need to be informed about the value of land conservation.

Consistent messaging and advocacy that is both more coordinated and more vocal could improve support for funding and incentives.

4 Management Approach

Increase funding, incentives, and mechanisms for protecting conservation priorities - Leverage conservation data and multiple resource values to realign and expand funding options. Promote and defend new and existing state and federal policies and investments in land protection.

Identify, fund and implement creative and inclusive ways to acquire data and connect systems - Improve the quality, quantity and accessibility of conservation priority data, data-sharing and platform integration to make smarter decisions about where to focus conservation efforts.

Protected Lands Work Plan			
1	Return Maryland's state land preservation programs to full cash funding as soon as possible	(MDA, MDNR)	Describe here: Support from B&F Wkgp Connections to Envtl. Finance Action Team Rpt. Other opportunities to network and build partnerships/collaborat e
2	Continue to use DNR's Program Open Space funds to leverage federal funds for land acquisition projects	In FY 2017, DNR is applying for an increased amount of federal funds for land acquisition programs. If the federal grants are awarded, this will increase federal funds in MD for land preservation projects (MdDNR, Feds)	C
3	Continue to pursue federal funds (including DoD REPI) to leverage state and county funds in the purchase of easements Continue to seek	MALPF is currently working with REPI to secure funding for several Charles County properties. If this funding is secured, this will increase MALPF's potential for land acquisition projects in Southern Maryland (MdA) 1,000 acres annually (MET)	
7	donations of conservation easements on lands of high natural resource value toward maintaining water quality in the Bay watershed	2,000 doi es dimidany (ini_1)	
5	Continue to distribute annual appropriations for the Virginia Land Conservation Foundation grants	Dependent upon amount of funds appropriated during the General Assembly session (Dept. of Forestry, Dept. of Game and Inland Fisheries, Dept. of Historic Resources, Dept. of Agriculture and Consumer Services, Virginia Outdoors Foundation, localities, land trusts)	
6	Continue to support the Virginia Land	None (VA Dept of Taxation)	

	Preservation Tax Credit		
7	Program Continue to develop Virginia proof of concept pilot program to run different development scenarios through 2025 in test area as proxy for TMDL model to determine value of forestland retention as possible TMDL BMP credit	Phase one - GWRC service area of the Rappahannock River Basin Phase II - Entire Rappahannock River Basin as proxy for CB Watershed plus Pennsylvania (DOF, DEQ, RRBC, GWRC, VTWRRC, CBC, TNC. EPA) (funding and review)	
8	Continue allocation of state matching funds to local purchase of development rights(PDR) programs.	10 conservation easements recorded by local PDR programs each fiscal year (Virginia Department of Agriculture and Consumer Services; local governments)	
9	Work with the Governor's Office and legislators to create a new Conservation and Recreation Funding Initiative (Potential title: Growing Greener II)	Introduce and Pass Legislation (PA Gov's Office and Legislators)	
10	Work with key stakeholders to develop a Growing Greener III funding initiative	Build grassroots support; Grow legislative support; Educate public on benefits of GGIII (PALTA & Conservation Organizations)	
11	Defend and protect current funding sources for conservation in Pennsylvania	Continue policy and advocacy work (PALTA & Conservation Organizations)	
12	Expand LWCF funding to protect land in the Chesapeake Bay watershed	Submit annual federal LWCF collaborative proposal Assess alignment between stateside and federal LWCF, and develop a strategy for increasing alignment 2017 Every year, expand the circle of those involved in advocacy activities, with the aim of increasing funding levels (NPS, US FWS, BLM, US Forest Service,	

	T		<u> </u>
		Chesapeake Conservancy)	
		(coordinator)	
13	Continue to utilize	(MdDNR)	
	Targeted Ecological		
	Areas to target limited		
	funding for land		
	preservation in Maryland		
14	Creation of a	The effort is now formalized and	
	collaborative body to	opportunities have been	
	8identify high	identified (DOF, DCR, DGIF, DEQ,	
	c9onservation value sites	TNC)	
	th10roughout the state	,	
	for the purpose of		
	prioritizing and possibly		
	joint funding high		
	priority acquisition		
	targets		
15	Fund a LandScope Fellow	Implement a work plan that	
15	through NatureServe to	reflects the Partnership's data	
	support data	needs and opportunities	
	improvements that	Seek funding to make the	
	benefit the Partnership	position permanent	
	and participants; identify	Increase visibility and use of	
	and implement at least 3	LandScope through online	
	cross-platform	and/or in-person trainings and	
	interoperability features	updates at least quarterly,	
	to improve data	and demonstrate its integration	
	accessibility and	with related platforms and tools	
	applications	(NatureServe, NPS, FWS, EPA,	
		other partners)	
16	Research and write	(PALTA)	
10	success stories that		
	demonstrate the benefits		
	of Keystone		
	Fund and Growing		
	Greener funding		
	C. Conc. Iunanig		

Vital Habitats Goal

Restore, enhance and protect a network of land and water habitats to support fish and wildlife, and to afford other public benefits, including water quality, recreational uses and scenic value across the watershed.

Theme: "Healthy Watersheds"

Stream Health Outcome

Continually improve stream health and function throughout the watershed. Improve health and function of 10 percent of stream miles above the 2008 baseline for the Chesapeake Bay watershed.

Elements of Stream Health Management Strategy and Workplan Related to Finance and Economics

Stream Health Management Strategy Describe here: Support from B&F Wkgp **Prioritization** Connections to Envtl. Finance Targeting procedures for cost-effective restoration Action Team Rpt. actions and design approaches that will achieve both Other opportunities to water quality and biological functional improvement. network and build WIPs provide a level of analysis on the type and mix of partnerships/collaborate projects to meet load reductions and associated costs. The process to identify the projects varies by jurisdiction along with cost estimates. **Investments** in research to improve the body of knowledge surrounding restoration techniques and net benefit to stream and watershed health. 2 Management Approach Strategy 2: Provision of adequate **funding** and technical resources to support functional lift in stream restoration projects, in addition to nutrient and sediment reduction. c. Work with funding agencies to provide multi-year funding to monitor effects of stream restoration. f. Recommend **incentives** for projects that provide both functional uplift and water quality benefits. g. Literature synthesis to fully document response of stream ecological conditions from stream restoration management actions that may be used to support an expert panel similar to those available for expected

nutrient and sediment reductions. Part of the expert panel would address the applicability of Chessie BIBI (and other similar ecological data) where restoration work is being conducted to improve stream functions.

Recommendations could be applied to help track estimated stream improvements similarly to the way nutrient and sediment trends are already tracked by the Bay Program. This panel could also develop guidance on how the restoration/enhancement of stream functions translates to nitrogen, phosphorus, and sediment "credit" as recommended by the STAC report on "Designing Sustainable Stream Restoration Projects within the Chesapeake Bay Watershed".

Stre	Stream Health Work Plan			
1	None identified	Describe here: • Support from B&F Wkgp • Connections to Envtl. Finance Action Team Rpt. • Other opportunities to network and build partnerships/collabor ate		

Vital Habitats Goal

Restore, enhance and protect a network of land and water habitats to support fish and wildlife, and to afford other public benefits, including water quality, recreational uses and scenic value across the watershed.

Theme: "Healthy Watersheds"

Brook Trout Outcome

Restore and sustain naturally reproducing Brook Trout populations in Chesapeake Bay headwater streams, with an eight percent increase in occupied habitat by 2025.

Elements of Brook Trout Management Strategy and Workplan Related to Finance and Economics

Broo	Brook Trout Management Strategy			
1	General Engaging the community in tree plantings, water quality, habitat, and macroinvertebrate monitoring. Being able to articulate the community/watershed wide benefits of brook trout from a recreational and economic perspective is also important for local buyin.	Describe here: • Support from B&F Wkgp • Connections to Envtl. Finance Action Team Rpt. Other opportunities to network and build partnerships/collaborate		
2	It may cost a bit more to restore a spring creek but if there is strong confidence it will persist (temperature wise) in the face of climate change it may be worth the investment. Likewise incorporating springs and groundwater influences into a decision support tool to identify culverts for replacement would be beneficial to make sure limited resources are going towards removing barriers that create connectivity to thermal refugia. Tools or technologies are needed to help correlate terrestrial habitat restoration to improvements in Brook Trout population health. Continued or increased funding of terrestrial habitat restoration or conservation programs. Creative or innovative ways to incentivize private landowner participation. A dire need to ensure the success of this monitoring program is annual seasonal help (\$10,000/year) when surveys are done and repair/replacement costs of survey equipment (\$7,500/year). An additional need will be funding (\$15,000/year) for the annual genetic			

analysis for the N₀ for sampled "patches" which is a	
vital component of the patch monitoring plan	
proposed.	

Bro	Brook Trout Work Plan			
1	None identified	Describe here:		
		 Support from B&F Wkgp 		
		Connections to Envtl. Finance Action		
		Team Rpt.		
		 Other opportunities to network and 		
		build partnerships/collaborate		

Vital Habitats Goal

Restore, enhance and protect a network of land and water habitats to support fish and wildlife, and to afford other public benefits, including water quality, recreational uses and scenic value across the watershed.

Fish Passage Outcome

By 2025, restore historical fish migratory routes by opening 1,000 additional stream miles, with restoration success indicated by the presence of Alewife, Blueback Herring, American Shad, Hickory Shad, American Eel and/or Brook Trout. The Fish Passage Workgroup is dedicated to restoring connectivity to creek, stream and river habitats for migratory fish through dam removal and fish passage projects. While the Fish Passage workgroup is primarily focused on blockage removals that benefit diadromous species, the group acknowledges the benefits of dam removal to resident species. As such, Brook Trout was added to the Fish Passage strategy target species list.

Elements of Fish Passage Management Strategy and Workplan Related to Finance and Economics

Fish	Fish Passage Management Strategy			
1	Funding The ability to achieve change through fish passage projects is largely limited by a lack of resources.	 Describe here: Support from B&F Wkgp Connections to Envtl. Finance		
2	Gaps With the average cost of stream barrier removal in Maryland, Virginia and Pennsylvania hovering			

	around \$200,000, this workgroup will need more	
	than \$20 million in project implementation funds	
	in order to have a chance of meeting this	
	outcome (Strategy Statement Document, 2010).	
3	Management Strategy	
	The workgroup will continue to apply for	
	restoration grants to fund design and removal of	
	barrier projects. Various Federal agencies and	
	nonprofits offer grant funding opportunities	
	including: NOAA, USFWS, Chesapeake Bay Trust	
	and National Fish and Wildlife Foundation. There	
	is no dedicated funding for barrier removal	
	projects provided directly from the Chesapeake	
	Bay Program. Often times, project managers have	
	to obtain and combine several sources of funding	
	to complete one removal, increasing time and	
	staff efforts for the removal project. The	
	workgroup needs a more dedicated funding	
	source for larger scale removals that will award	
	funds for planning through implementation in	
	larger amounts.	
	Another option may include providing a cash	
	incentive through buyouts, one-time cash	
	payments and/or tax credits to dam	
	owners who give permission to remove their	
	dams.	

Fish Passage Work Plan				
Fish 1	None identified	Describe here: Support from B&F Wkgp Connections to Envtl. Finance Action Team Rpt. Other opportunities to network and build partnerships/collabor		
		ate		

Sustainable Fisheries Goal

Protect, restore and enhance finfish, shellfish and other living resources, their habitats and ecological relationships to sustain all fisheries and provide for a balanced ecosystem in the watershed and Bay.

Theme: "Healthy Watersheds"

Fish Habitat Outcome

Continually improve effectiveness of fish habitat conservation and restoration efforts by identifying and characterizing critical spawning, nursery and forage areas within the Bay and tributaries for important fish and shellfish, and use existing and new tools to integrate information and conduct assessments to inform restoration and conservation efforts.

Elements of Fish Habitat Management Strategy and Workplan Related to Finance and Economics

Fish Habitat Management Strategy					
1	Valuation of ecosystem services and value of habitats supporting high-priority species. Quantifying the ecological role and the economic returns habitats provide by serving these roles is a way to more effectively communicate the value of habitats.	Describe here: • Support from B&F Wkgp • Connections to Envtl. Finance Action Team Rpt. Other opportunities to network and build partnerships/collaborate			
2	Management Approach Communicate importance of fish habitat to the general public and local community leaders by engaging in a conversation about the tradeoffs associated with competing uses of land and water. Planning decisions are made at the local level and ensuring fish habitat is a part of the local planning process and considerations is a primary mechanism to stem the decline of quality fish habitat.				

Fish	Fish Habitat Work Plan				
1	No actions	Describe here:			
	identified	 Support from B&F Wkgp 			
		 Connections to Envtl. Finance Action Team 			
		Rpt.			
		 Other opportunities to network and build partnerships/collaborate 			