Outcome: Fish Habitat

Goal: Sustainable Fisheries

Outcome: Continually improve effectiveness of fish habitat conservation and restoration efforts by identifying and characterizing critical

Long term Target: Improve spatial data and characterization of fish habitat and integrate information into management, strategic planning

2 year Target: Identify the most critical habitat areas and/or habitat requirements for a few priority species and identify shared priorities

Management Approach 1: Identify and prioritize threats to fish habitat at the jurisdictional and Baywide scale and propose actions to manage the threats.

Key Action** *Description of work/project. Define each major action step on its own row. Identify specific program that will be used to achieve action*	**Performance Target(s)** *Identify incremental steps to achieve Key Action.*	**Participating Entity** *Identify responsible partner for each step.*	**Geographic Location**	**Timeline** *Identify completion date (month & year) for each step)*	**Estimated Project Cost** *Best estimate of total project cost (needed)*	**Available funding by Partner**	**Factors Influencing and/or Gap** *Identify related factor or gap in Management Strategy*
Continue to improve our understanding of specific habitat stressors to promote sound management strategies that can conserve and restore habitat for productive fisheries.	Review and utilize existing reports to identify priority species and natural habitat limitations.	Maryland DNR (lead) Delaware, Pennsylvania, Virginia, DC; PRFC, Fish Habitat Action Team	Watershed wide	Jun-16	Staff time	NOAA, MD DNR (Fisheries)	
	Work with TetraTech to compile and synthesize existing reports and data to develop summaries of key stressors and fisheries response that can be used by resource managers.	TetraTech, Fish Habitat Action Team	Watershed wide	Dec-15	100 hours TetraTech time (2015)	Potential funding by EPA for TetraTech	
	Develop a matrix which categorizes key threats to priority species and their habitats.	Sustainable Fisheries GIT, Vital Habitats GIT	Watershed wide	Jun-16	Staff time	MD DNR (TEA)	
Totals						**n/a**	
Work with Chesapeake Bay Program (CBP) partners and Goal Implementation Teams (GITs) to identify threats and understand how those threats are being addressed.	Share priority species habitat and stressors analysis with Goal Teams.	Fish Habitat Action Team, Healthy Watershed GIT, Vital Habitat GIT, Water Quality GIT (including Toxics Workgroup)	Watershed wide	Sep-16	Staff time	Staff time by participating entities	Information gaps on species
Totals							
Develop thresholds and/or metrics for primary stressors and threats to characterize what aspects of habitat need to be maintained to support fish habitat functions.	Build on significant advances by Maryland DNR on how land use change is impacting tidal fish communities by developing and applying thresholds of impervious cover Baywide.	MD DNR (Fisheries), Fish Habitat Action Team	Tidal Watersheds in MD	Jun-16	Staff time (MD DNR: Fisheries)	MD DNR	
	Work with SERC multiple stressors of the land water interface PI's to apply results of that study to identify metrics for shoreline hardening and fish abundance.	MD DNR (TEA), SERC, Fish Habitat Action Team	Tidal Watersheds	Jun-17	Staff time (MD DNR: TEA)	MD DNR	
Totals						**n/a**	

Management Approach 2: Compile and identify available data on habitats, habitat vulnerabilities and fish utilization at different life stages to develop a set of criteria for identifying areas of high-value fish habitat.

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Incorporate fish utilization information into a threat matrix	Use the priority species habitat stressor analysis from management approach 1 to identify healthy habitat criteria for species.	STAR, Sustainable Fisheries GIT, Fish Habitat Action Team	Watershed wide	Jun-17	Staff Time	Staff time by participating entities	Lack of information on species in their habitats, research needs to identify habitat areas
	Delaware will continue to prioritize identification of spawning, nursery, and overwintering habitat to support Largemouth bass, American shad, and Atlantic sturgeon in the Nanticoke River drainage. Existing data could be used to identify these areas in general but additional research is needed to further refine specific habitat needs and determine where the most critical areas are located.	DE, Fish Habitat Action Team	Nanticoke River Drainage	Late 2017	Staff Time	DE	
					Total		

Management Approach 3: Map and target high-value fish habitat for improved conservation and restoration. Partners will work with the science and management community to develop spatial tools for priority habitats and species to inform management							
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Overlay spatial data on priority fish species seasonal ranges (by life stage) with high-value habitats.	Identify spatial tools and datasets that can be utilized to map the priority species habitats and stressors identified under management approaches 1 and 2.	Fish Habitat Action Team, STAR	Watershed wide	Jun-17	Staff time	Staff time from participating entities	GIS Capacity
	Maryland has developed a mapping approach to identify high priority habitat for anadromous spawning areas in Maryland and will continue to develop similar maps for all life stages of our target species.	MD DNR (fisheries), Fish Habitat Action Team, of interest to Fish Passage Workgroup	Tidal watersheds in MD	Apr-16	Staff time	Staff time from MD DNR Fisheries	Pending future budgets, access to spawning areas
	Complete development and testing of the Mid-Atlantic Telemetry Observing System (MATOS) Beta version and demonstrate successful operation.	NCBO	Tidal	Jan-16	Staff time	NCBO	Long-term maintenance of telemetry arrays and MATOS database
					Total		
Identify and where possible, fill spatial data gaps for specific species and/or tributary areas that lack sufficient data coverage.	Identify species and geographic areas (i.e. non-tidal warm) that need spatial data coverage and metric development.	Fish Habitat Action Team, of interest to Stream Health and Non-Tidal Monitoring Network	Watershed wide	Dec-17	Staff time	Staff time for participating entities	Data and monitoring gaps for non-tidal areas
	Convert existing fish and habitat survey data for priority species to spatial datasets where needed.	Fish Habitat Action Team, STAR, NCBO, Connect with NALCC and/or ACFHP	Watershed wide	Dec-17	Staff time	Staff time for participating entities	Data availability and need
					Total		

Management Approach 4: 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.							
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Engage and communicate fish habitat needs with CBP partners and local communities.	Package and deliver information on fish habitat and stressors to local groups (including LGAC, CAC) to determine application.	MD DNR, VMRC, DE, PA, DC, Fish Habitat Action Team	Watershed wide	Dec-16	Staff time	Staff time of participating entities	
	Support Maryland's Fish Habitat Workgroup focused on sustaining and restoring viable fish habitats in Maryland in developing strategies to connect with rural communities to increase their commitment to maintain the rural character of their watersheds.	MD DNR, Fish Habitat Action Team, Stewardship GIT, Communications GIT	MD-wide	Jun-16	Staff time	Staff time (MD DNR Fisheries)	
	Delaware will collaborate with state planning staff and environmental review coordinators to aid with protection of habitat through the regulatory process and initiative that can be incorporated into local comprehensive land-use plans and master plans.	DE, Environmental Review Coordinators	DE	Ongoing	Staff time	Staff time (DE)	Permits and ordinances, process of permitting

Management Approach 5: Evaluate ways to enhance fish habitat protection by reviewing examples from other regions (e.g., the Puget Sound Partnership) and actively engaging with the Atlantic Coast Fish Habitat Partnership.							
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Engage local planners and restoration practitioners to communicate the value of habitat to people (including ecosystem services).	Initiate regular engagement with LGAC.	Sustainable Fisheries GIT, LGAC	Watershed wide	Sep-16	Staff time	Staff time from participating entities	
	Total						
Work with partners who are implementing fish habitat conservation projects.	Initiate regular engagement with regional partnerships also working on habitat issues (i.e. NALCC).	Sustainable Fisheries GIT, NALCC and Appalachian LCC	Watershed wide	1-Sep	Staff time	Staff time from participating entities	
	Work with ACFHP to ensure Chesapeake Bay habitats are included in their efforts.	Fish Habitat Action Team, ACFHP	Watershed wide	early to mid 2016	Staff time	Staff time from participating entities	
	Total						
	Engage with TNC to understand their projects for anadromous fish on the East Coast and salmon efforts on the West Coast to identify potential application to the Chesapeake Bay.	TNC, Sustainable Fisheries GIT		Ongoing	Staff time	Staff time from participating entities	

Complete a review and analysis of fish habitat conservation efforts from other regions of the country.	Work with the National Fish Habitat Partnership Science and Data Committee to identify how the 2015 inland assessment may be used to characterize the primary stressors to freshwater habitats in the region.	National Fish Habitat Partnership Science and Data Committee, Fish Habitat Action Team		Ongoing	Staff time	Staff time from participating entities	
	Contact Midwest organizations to learn about tools developed for freshwater mussels in that region.	Illinois Department of Natural Resources, FWS, US Army Corps of Engineers, Upper Mississippi River Conservation Committee, USGS		Ongoing	Staff time	Staff time from participating entities	
Explore avenues to develop a review of policies and cultural views that may limit promotion of habitat conservation.	Utilize outreach efforts and previous literature and surveys to determine how cultural views contribute or counteract the promotion of fish habitat conservation.	Communications GIT, Stewardship GIT, Partnering and Leadership Workgroup, Fish Habitat Action Team, of interest to CBF, CBC	Watershed wide	Ongoing	Staff time	Staff time from participating entities	
	Total						