[Fish Habitat] – [2022-2024]

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
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?*
Scientific and Technical Understanding: habitat impacts on fish at critical life stages	Research on fish habitat is ongoing by partner organizations	Gaps remain in understanding how environmental factors and availability of quality habitat impacts fish at	1.1 Complete striped bass nursery habitat GIT-funded project	Information on striped bass nursery habitat incorporated into management decision making (e.g. Essential	Improved understanding of high value habitat availability and condition for	

		critical life stages		Fish Habitat consultations, land use planning)	striped bass used by fishery managers.	
			1.2 Complete summer flounder shallow water tributary habitat project	Results communicated to stakeholders, and considered for fishery management	Improved understanding of fish habitat utilization and connectivity for key species used by fishery managers.	
			1.3 Complete characterization of nursery habitats used by black sea bass and summer flounder in Chesapeake Bay and the Coastal Lagoons	Results communicated to stakeholders, and considered for fishery management	Improved understanding of fish habitat utilization and connectivity for key species used by fishery managers.	
			1.4 Complete Habitat Utilization and Ecosystem Connectivity in the Southern Mid-Atlantic Bight and present results to FHAT	Results communicated to stakeholders, and considered for fishery management	Improved understanding of fish habitat utilization and connectivity for key species used by fishery managers.	
	Continued collaboration with federal and Bay Program partners to express fish habitat characterization needs in the Chesapeake Bay		1.5 Continued development of NCBO Seasonal Summaries and quarterly delivery to FHAT to discuss data and narrative takeaways	Quarterly reports highlight short-term influences on Chesapeake Bay Fish Habitat	Improved understanding of fish habitat response to a suite of annual abiotic data used to update MAFMC risk assessment tool for EAFM.	
			1.6 Explore connection with Hypoxia Collaborative and ensure the team considers applications for	Pilot profiler data reviewed by Action Team and recommend	Improved understanding of fish habitat conditions based	

			characterizing fish habitat (Ex. explore projections of HABs, connections to watermen, anglers, and aquaculture, striped bass squeezes, and corresponding closures)	potential applications for management	on hypoxia levels used to guide seasonal fishery management decisions.	
			1.7 Continued dialogue with STAR and the CBP monitoring team, specifically assisting with upcoming monitoring reviewing centered around addressing needs and gaps.	Submit recommendations to monitoring review team regarding key opportunities to connect to fish habitat	Presentation to PSC properly captures key connection between water quality and living resource response	
			1.8 Synthesize information about existing shallow water monitoring programs, data, and gaps and highlight opportunities to best allocate resources to address needs. Work with the Action Team and Chesapeake Bay Program to define "shallow water" in this context	Increased understanding of gaps, needs, and strategies to address research needs	Funding provided to meet research needs	
			1.9 Explore opportunities to utilize newly deployed telemetry arrays to help characterize key fish habitat for Bay species	Increased understanding of fish movement in Chesapeake Bay	Improved understanding of fish habitat utilization and connectivity for key species inform public and conservation actions.	
Scientific and Technical Understanding:	Ongoing effort to compile and assess available	Need improved understanding of how data quality,	2.1 Execute a joint tidal/non-tidal pilot fish	Evaluation of non-tidal/tidal joint pilot	Improved	

conducting fish habitat assessments	environmental and biological data	scale, extent, and quantitative analytical and modeling methodologies affect fish habitat assessment and characterization	habitat assessment in the Patuxent River		understanding of best practices to evaluate fish habitat condition.	
			2.2 Compile list of stakeholders/Patuxent venues and potential uses for the pilot assessment in the Patuxent river.	Stakeholders widely use the habitat assessment in decision making to address needs.	Improved understanding on the needs of each jurisdiction to help plan work on fish habitat assessment and habitat stressors.	
			2.3 Identify metrics for status and trends analyses and species distribution modeling of key species such as american eel, alosines, blue and flathead catfish, and freshwater mussels. Where data is available, link water quality trends to the fish status and trends.	Increase knowledge on habitat condition of threatened, invasive, and managed bay species	The new information guides conservation and management actions	
			2.4 Explore opportunities to highlight important fish spawning areas for the public, state, and local decision makers	Increased focus on management applications of fish habitat work	Spawning areas are highlighted in permitting processes	
			3.1 Explore opportunities to support mussel conservation/restoration efforts	Identify areas that could support mussel restoration efforts	CBP partners use information to guide stream health and fish passage decisions	
			3.2 Update existing Maryland shoreline hardening condition map with new Maryland inventory data from VIMS	Continued discussion with Chesapeake Bay Program partners on how to address loss of natural	Shoreline hardening is considered in local planning efforts	

				shoreline habitat		
Partner Coordination	Efforts to communicate research and assessment findings to a broader Chesapeake Bay community		4.1 Continued communication between FHAT and PIs overseeing funded research from Management Approach #1: State representatives will attend project update presentations and consider management implications from research results	Increased focus on management applications of fish habitat work		
			5.1 Coordination with NRHA inland assessment	Results from the non/tidal and tidal assessment are integrated with the regional assessment		
			5.2 Explore funding mechanisms/opportunities for habitat restoration proposals. Develop project proposals informed by funded science.	Opportunity to obtain funding to make progress on outcome focus areas		
Government Agency, Nongovernmental organization, and local engagement	Provide relevant and accessible information to local governments, NGOs, and other stakeholders to help increase consideration of fish habitat in decision making	Engaging effectively with stakeholder groups can be improved	4.2 Coordinate with NCBO communications team to highlight, synthesize, and present habitat research results to a fisheries/general bay program audience (fisheries managers, place-based stakeholders, Chesapeake Bay Commision. ASMFC, etc.)	Increased focus on management applications of fish habitat work		
			4.5 Explore avenues to present fish habitat shoreline hardening information to a local planning audience by utilizing connections with the LLWG/LGAC	Continued discussion with local government partners on how to address loss of natural shoreline habitat	limits placed on shoreline development	

	Connecting with underserved communities by supporting projects/events that highlight array of provided benefits from fish habitat	Engaging effectively with community groups and public stakeholders groups can be improved	4.3 Engage with Rod and Reef tournaments in VA and investigate ways to utilize these avenues to engage with underserved communities in the watershed and highlight successful ecosystem restoration for NOAA Leadership	Evidence of increased public knowledge of the importance of restoration activities to recreational fishing opportunities Measurable change in demographics of fishing tournaments		
			4.4 Support the Coastal Conservation Assocations's reef ball implementation/outreach project in Cambridge MD. Utilize this project as a way to connect to underserved communities.	Evidence of increased public interest in restoration activities and increased angling opportunities		

ACTIONS – [2022-2024]					
Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline
Management Approach 1 : Compile and identify available data on habitats, habitat vulnerabilities and fish utilization					
1.1	Complete striped bass nursery habitat GIT-funded project	Final reports and deliverables with results distributed to the Fisheries GIT and Fish Habitat Action Team.	VIMS (Mary Fabrizio, Rachel Dixon)	Chesapeake Bay	July, 2022
1.2	Complete summer flounder shallow water tributary habitat project	Final reports and deliverables with results distributed to the Fisheries GIT and Fish Habitat Action Team.	SERC (Matt Ogburn)	Select Maryland tributaries	Winter, 2022

1.3	Complete characterization of nursery habitats used by black sea bass and summer flounder in Chesapeake Bay and the Coastal Lagoons	Final reports and deliverables with results distributed to the Fisheries GIT and Fish Habitat Action Team.	VIMS (Mary Fabrizio, Troy Tuckey)	Coastal Bays and select Virginia tributaries	Winter, 2022
1.4	Complete Habitat Utilization and Ecosystem Connectivity in the Southern Mid-Atlantic Bight and present results to FHAT	Final reports and deliverables with results distributed to the Fisheries GIT and Fish Habitat Action Team.	VIMS (Jim Gartland, Adena Schonfeld)	Southern Chesapeake Bay	Winter, 2022
1.5	Continued development of NCBO Seasonal Summaries and quarterly delivery to FHAT to discuss data and narrative takeaways	Quarterly reports presented to the FHAT at membership meetings	NCBO (Mandy Bromilow, Bruce Vogt)	Chesapeake Bay	Ongoing
1.6	Explore connection with Hypoxia Collaborative and ensure the team considers applications for characterizing fish habitat (Ex. explore projections of HABs, connections to watermen, anglers, and aquaculture, striped bass squeezes, and corresponding closures)	Committed coordination and cooperation with key CBP workgroups to assure shared resources, information and priorities	Fish GIT/STAR (Bruce Vogt, Peter Tango, Justin Shapiro)	Chesapeake Bay	Ongoing through 2022-2023
1.7	Continued dialogue with STAR and the CBP monitoring team, specifically assisting with upcoming monitoring reviewing centered around addressing needs and gaps.	Listed Fish Habitat monitoring needs addressed in the forthcoming PSC monitoring review	FHAT (Bruce Vogt, Peter Tango, Chris Moore, Justin Shapiro)	Chesapeake Bay	Winter 2022
1.8	Synthesize information about existing shallow water monitoring programs, data, and gaps and highlight opportunities to best allocate resources to address needs. Work with the Action Team and Chesapeake Bay Program to define "shallow water" in this context	Synthesis paper delivered to the FHAT. Host at least one conversation with Bay Program (shallow water conflicts team)/Action Team membership to define synthesis focus	FHAT (Chris Moore)	Chesapeake Bay	2023
1.9	Explore opportunities to utilize newly deployed telemetry arrays to help	At least two updates or proposed opportunities presented to the FHAT	NCBO (Wilmelie Cruz)	Chesapeake Bay	Ongoing

	characterize key fish habitat for Bay species				
Management Approach 2: Identify and prioritize stressors to fish habitat and evaluate scale					
2.1	Execute a joint tidal/non-tidal pilot fish habitat assessment in the Patuxent River	Update on progress presented to the FHAT	NCCOS, USGS (AK Leight, Steve Faulkner)	Patuxent River Watershed	Fall 2022
		Final report and deliverables with results distributed to the Fisheries GIT and Fish Habitat Action Team	NCCOS, USGS (AK Leight, Steve Faulkner)	Patuxent River Watershed	2023
2.2	Compile list of stakeholders/venues and potential uses for the pilot assessment in the Patuxent river.	Final report listing key stakeholders/venues and their identified uses for fish habitat assessment products	FHAT, USGS, NCCOS, academic partners (Chris, Moore, Steve Faulkner, AK Leight)	Patuxent River Watershed	June, 2022
2.3	Identify suitable metrics for status and trends analyses and species distribution modeling of potential key species including but not limited to american eel, alosines, blue and flathead catfish. Where data is available, link water quality trends to the fish status and trends	Report of possible metrics/species for analysis provided to FHAT	USGS (Kelly Maloney, Kevin Krause)	Chesapeake Bay Watershed	Fall 2022
		Final reports and deliverables with results distributed to the Fisheries GIT and Fish Habitat Action Team	USGS (Kelly Maloney, Kevin Krause)	Chesapeake Bay Watershed	2023-2024
2.4	Explore opportunities to highlight important fish spawning areas for the public, state, and local decision makers	Host at least two conversations between FHAT and state jurisdictional fish habitat representatives to explore appropriate areas for designation and stakeholder outreach needs	FHAT (Chris Moore)	Chesapeake Bay	Ongoing
Management Approach 3: Map and target high-value fish habitat for improved conservation and restoration					
3.1	Explore opportunities to support mussel conservation/restoration efforts	Presentation of findings at a Fish Habitat Action Team meeting	USGS, FHAT (Chris Moore)	Chesapeake Bay Watershed	2023-2024
3.2	Update existing Maryland shoreline hardening condition map with new Maryland inventory data from VIMS	An updated GIS mapping product with eight total Maryland counties	FHAT, CBP GIS Team (Justin Shapiro, Angie Wei)	St. Mary, Charles, Somerset, and	Complete as inventoried data becomes available

				Worcester counties	
Management Approach 4: Communicate importance of fish habitat					
4.1	Continued communication between FHAT and PIs overseeing funded research from Management Approach #1: State representatives will attend project update presentations and consider management implications from research results	Committed coordination and cooperation between research PIs and FHAT state representatives	FHAT, Research PIs, VMRC, MDNR	Chesapeake Bay	Ongoing
4.2	Coordinate with NCBO communications team to highlight, synthesize, and present habitat research results to a fisheries/general bay program audience (fisheries managers, place-based stakeholders, Chesapeake Bay Commision. ASMFC, etc.)	Creation of at least two research "one-pagers" highlighting research results/synthesis for a fisheries and more general Chesapeake Bay Program audience	NCBO, FHAT (Justin Shapiro, Brue Vogt, Kim Couranz)	Chesapeake Bay	Fall, 2022
4.3	4.3 Engage with Rod and Reef tournaments in VA and investigate ways to utilize these avenues to engage with underserved communities in the watershed and highlight successful ecosystem restoration for NOAA Leadership	Conduct outreach to improve diversity of participation in rod and reef tournaments Plan and hold an event in a VA targeted oyster restoration tributary for state, congressional and NOAA leadership	CBF, NCBO (Chris Moore)	Virginia tributaries	Fall 2022-2023
4.4	Support the Coastal Conservation Assocations's reef ball implementation/outreach project in Cambridge MD. Utilize this project as a way to connect to underserved communities.	New bilingual signs, communicating value of habitat, installed at the Bill Burton Pier Presentation of progress and impact to FHAT and Fisheries GIT audience	ASMFC, Coastal Conservation Association (Lisa Havel, Dave Sikorski)	Choptank River	2022

4.5	Explore avenues to present fish habitat shoreline hardening information to a local planning audience by utilizing connections with the LLWG/LGAC	Present shoreline mapping findings to at least one LLWG led seminar/webinar/meeting (Ex. Local planning series with APA)	FHAT (Chris Moore, Justin Shapiro, Bruce Vogt)	Chesapeake Bay	2022
Management Approach 5: Evaluate ways to enhance fish habitat protection by reviewing examples from other regions and actively engaging with the Atlantic Coast Fish Habitat Partnership.					
5.1	Coordination with NRHA inland assessment	Presentation to Fisheries GIT and Fish Habitat Action Team on NRHA progress	NCCOS (AK Leight)	Chesapeake Bay	Ongoing
5.2	Explore funding mechanisms/opportunities for habitat restoration proposals. Develop project proposals informed by funded science.	Develop at least one project proposal for near-shore habitat restoration (NFWF SWG, GIT-funding, NFHP).	FHAT, ASFMC (Chris Moore, Lisa Havel)	Chesapeake Bay	Ongoing

Key:

FHAT - Fish Habitat Action Team

NCBO - NOAA Chesapeake Bay Office

NCCOS - National Center for Coastal and Ocean Science

USGS- US Geological Survey

ASMFC - Atlantic States Marine Fisheries Commission

CBF - Chesapeake Bay Foundation

VIMS - Virginia Institute of Marine Science

SERC - Smithsonian Environmental Research Center

LLWG - Local Leadership Workgroup

LGAC - Local Government Advisory Committee