

BIENNIAL STRATEGY REVIEW SYSTEM

Chesapeake Bay Program



Logic and Action Plan: Pre-Quarterly Progress Meeting

Forage Fish Outcome – 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](#).

Factor	Current Efforts	Gap	Actions	Metrics	Expected Response and Application	Learn/Adapt Application
<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 of Forage in Shallow Water Habitat: Determine presence,	Small-scale citizen scientist forage monitoring effort with local watershed organizations.	A comprehensive review of data should be conducted to determine what areas of estuarine shallow water habitats are not	2.1 Select Forage indicator or suite of indicators to track and assess status of forage base available to predators.	No. We do not currently have a measure of progress.	Results of citizen science monitoring project – March 2018. Results of Shoreline threshold study – February 2019	We are making incremental gains in our understanding of forage occupying estuarine shallow-water habitat through

<p>abundance, diversity of forage species in shallow water estuarine habitats.</p>	<p>Study by SERC investigated the connection between the land-water interface on finfish and benthic species. Shallow water trawl surveys by state agencies.</p>	<p>being sampled. Very little information on benthic species is available in these habitats.</p>	<p>2.2 Assist Climate Resiliency Workgroup in evaluating a climate indicator that involves forage.</p> <p>3.2 Complete the Shoreline Threshold Condition study and disseminate results.</p> <p>4.1 Collaborate with the CBP's Scientific, Technical Assessment and Reporting Team to evaluate options for shallow water monitoring efforts and zooplankton surveys.</p>			<p>various small-scale projects and studies. However, a larger, coordinated citizen monitoring effort or Baywide survey would close this gap. However, there is no dedicated funding to accomplish something of this scale.</p>
<p>Partner Coordination: Collaborate on the selection of species to include in a forage indicator. With assistance from STAR team, select suite of indicators to monitor forage base and provide managers with appropriate information.</p>	<p>GIT-funded forage study produced a suite of potential forage indicators.</p>	<p>Choosing an indicator or suite of indicators will require extensive federal, state, and nongovernmental coordination. Effective use of time will be key.</p>	<p>2.1 Select Forage indicator or suite of indicators to track and assess status of forage base available to predators.</p>	<p>No. We do not currently have a measure of progress.</p>		<p>The 2014 STAC workshop and other studies conducted by UMCES have highlighted important forage species, as well as some temporal and spatial patterns. Developing an indicator will allow for more rigorous, consistent tracking of the forage base to ensure healthy predators.</p>
<p>Partner Coordination: Develop consensus on management strategy and objectives of forage outcome.</p>	<p>Recommendations to change language to indicate the diverse species communities that comprise forage in the Chesapeake Bay.</p>	<p>Recent review of Forage Outcome Management Strategy.</p>	<p>1.1 Review management strategy and explore making changes to better reflect our goals.</p>		<p>An updated Management Strategy that emphasizes both the invertebrate and vertebrate forage species comprising forage. Potential updates to other components of the</p>	

					Management Strategy.	
Public, Nongovernmental Organization, and Government Agency Engagement: Communication on ongoing forage research to public, nongovernmental organizations, and government agencies. Ensure usability of shoreline study, and forage sampling study results.	<u>Forage Video:</u> Communicated value of forage through CBP video <u>Fish Habitat WIP Fact Sheet:</u> Recommended the prioritization of Best Management Practices (BMPs) that benefit forage species and fish habitat <u>Forage Presentations:</u> The Fish GIT and the Forage Action Team regularly schedule forage research presentations to inform partners of relevant forage studies	Need to synthesize and present recent studies into formats that can engage a variety of audiences.	3.1 Communicate the results of ongoing forage research with a variety of audiences. 4.1 Collaborate with the CBP's Scientific, Technical Assessment and Reporting Team to evaluate options for shallow water monitoring efforts and zooplankton surveys.			

ACTIONS – 2018-2019					
Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline
Management Approach 1: Define forage species and what comprises the forage base.					
1.1	Review management strategy and explore making changes to better reflect our goals.	Examine the steps necessary to change 'Forage Fish' language in the outcome to better represent the broad taxa that comprise the forage base.	Forage Action Team, Management Board	Baywide	September 2018
		Decide on other changes that should be made to management strategy.	Forage Action Team	Baywide	December 2018
Management Approach 2: Determine the status of the forage base including a definition of "balanced" state.					
2.1	Select Forage indicator or suite of indicators to track and assess status of forage base available to predators.	Develop criteria required to select forage indicators (data availability, cost of future monitoring, etc.) with guidance from Scientific, Technical Assessment and Reporting (STAR) team.	Forage Action Team, STAR	Baywide	June 2018

		Select forage species to include in suite of indicators based on criteria.	Forage Action Team	Baywide	September 2018
		Present chosen species and potential indicators to managers, and discuss how trends and thresholds may lead to management actions.	Forage Action Team, MD DNR, VMRC, PRFC	Baywide	December 2018
		Choose indicators.	Forage Action Team	Baywide	February 2019
2.2	Assist Climate Resiliency Workgroup in evaluating a climate indicator that involves forage.	Advise on how fish population distributions may be incorporated into a climate resiliency indicator.	Forage Action Team, CRWG	Baywide	Ongoing
Management Approach 3: Inform management decisions to better address sustainability of the forage base					
3.1	Communicate the results of ongoing forage research with a variety of audiences.	Examine the opportunities to create videos, articles, or other content to share the important of forage and project results with the scientific community and larger Chesapeake Bay community.	Forage Action Team, Comms Team, Pls	Baywide	Ongoing
3.2	Complete the Shoreline Threshold Condition study and disseminate results.	Advise on the Shoreline Threshold study and consider how the results can be applied.	Forage Action Team	Baywide	Ongoing
		Share results with the contacts for the Fish Habitat Watershed Implementation Plan Fact Sheet or create other tools for community planners/managers.	Forage Action Team, Fish Habitat Action Team	Baywide	Spring 2019
Management Approach 4: Maximize the efficiency of monitoring programs and build on existing efforts.					
4.1	Collaborate with the CBP's Scientific, Technical Assessment and Reporting Team to evaluate options for shallow water monitoring efforts and zooplankton surveys.	Inventory existing datasets and their potential to be incorporated into forage monitoring efforts, prioritize remaining data gaps (i.e. mysids, plankton surveys) and identify potential funding mechanisms to implement monitoring.	STAR, Forage Action Team, Budget and Finance Workgroup	Baywide	Spring 2018
		Disseminate results from the pilot citizen science monitoring pilot project (James, Severn, Eastern Bay, Choptank, and Susquehanna Flats). Continue to evaluate citizen science sampling as a means to gather data.	Forage Action Team, forage project Pls	Baywide	Spring 2019