EXAMPLE: The tables featured here are examples and include information extrapolated from the Stream Health Management Strategy and Work Plan. The information does not reflect GIT or workgroup input.

Stream Health Logic Table and Work Plan

Primary User: Goal Implementation Teams, Workgroups, and Management Board | Secondary Audience: Interested Internal or External Parties
Primary Purpose: To assist partners in thinking through the relationships between their actions and specific factors, existing programs and gaps (either new or identified in their Management Strategies) and to help workgroups and Goal Implementation Teams prepare to present significant findings related to these actions and/or factors, existing programs and gaps to the Management Board. | Secondary Purpose: To enable those who are not familiar with a workgroup to understand and trace the logic driving its actions.
Reminder: As you complete the table below, keep in mind that removing actions, adapting actions, or adding new actions may require you to adjust the high-level Management Approaches outlined in your Management Strategy (to ensure these approaches continue to represent the collection of actions below them).
Long-term Target: Improve the health and function of ten percent of stream miles above the 2008 baseline.
Two-year Target: 600,000 stream feet restored

*Notes:

- This example contains information in those columns that are currently **optional** to complete (Metrics, Expected Response, and Adapt/Learned). It is meant to illustrate how these columns could be used, if groups have the corresponding information and would like to provide or document it. The information in these columns is not representative of the direction of the Stream Health workgroup.
- This example does not include all factors listed in the Stream Health Management Strategy, but uses the information provided in the first iteration of the logic table in this new format. In addition, this example focuses on those factors that had specific actions associated with them. The SRS Planning Team will look at ways to represent more holistically the factors identified in the Management Strategy that might not be addressed through work plan actions.

EXAMPLE: The tables featured here are examples and include information extrapolated from the Stream Health Management Strategy and Work Plan. The information does not reflect GIT or workgroup input.

Factor	Existing Programs	Gap	Actions **(critical in bold)**	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 achieve our outcome?*	*Optional: Do we have a measure of progress? How do we know if we have achieved the intended result?*	*Optional: What effects do we expect to see as a result of this action, when, and what is the anticipated application of these changes?*	*Optional: What did we learn from taking this action? How will this lesson impact our work?*
Local Legislative Engagement: Policy maker understanding of stream restoration practices and benefits to ecosystem		*Project design process for stream restoration that can measure change in stream functions and project success is based on a project goals and objectives*	5.1 Local official training and education materials		Local officials will support new project design processes that measure change in stream function	
State Agency Engagement: Stream restoration permitting		*Delays from both the practitioner and regulator in the permit review process can hinder implementation efforts*	3.2 Streamlined permitting process	Number of days to issue a permit	Decrease in number of days to issue permit at 3 and 6 months after implementing action. Faster permitting time will allow for a greater two year stream restoration target in next work plan.	Action addressed delays from regulator. New action to focus on practitioner.
Partner Coordination: Engaging all available partners in the watershed conducting work to measure stream health	Existing monitoring programs listed in Stream Health Management Strategy	*Lack of process and funding to track and report updated Chessie BIBI*	**(1.3)**			
Partner Coordination: Development of a shared stream restoration	4.4 (Example purposes only)	*Lack of common watershed, stressor, and stream assessment and restoration guidelines*	2.1			

EXAMPLE: The tables featured here are examples and include information extrapolated from the Stream Health Management Strategy and Work Plan. The information does not reflect GIT or workgroup input.

Factor	Existing Programs	Gap	Actions **(critical in bold)**	Metrics	Expected Response and Application	Learn/Adapt
monitoring protocols and technical guidelines						
Partner Coordination: Understanding of common permitting needs and challenges		*Information needs to support innovative, effective design approaches to identify restoration potential and success for different land uses, stream types, and current and future site constraints, causes of impairment/stressors*	3.1	Information collected to fill identified gap	Gap filled; can then identify "innovate, effective design approaches", which will encourage new approaches as we move forward.	Committee had limited success in gathering this information. Considering alternative actions for next work plan.
Partner Coordination: Sharing of scientific understanding	Existing scientific understanding included in Stream Health Management Strategy	*Adequate extension infrastructure to communicate newest research and technical guidance to jurisdictions*	4.3	Number of jurisdictions self-reporting use of this research and technical guidance	Within two years of issuing training, Jurisdictions using tools to approve better projects.	TBD
Scientific and Technical Understanding: Develop/refine metric to measure watershed wide stream health		*It is a biological endpoint that will reflect the improvements in stream health and function called for in the 2014 Chesapeake Watershed Agreement. At this time, the index needs to be updated with the most recent macroinvertebrate data.*	**(1.1)** , **(1.2)**		1.1 – by completion of project, able to use new Chessie BIBI to assess progress. 1.2	
Scientific and Technical Understanding: Scientific knowledge of stream restoration and management		*Sufficiency of data to demonstrate effectiveness of stream restoration practices*	3.3			

EXAMPLE: The tables featured here are examples and include information extrapolated from the Stream Health Management Strategy and Work Plan. The information does not reflect GIT or workgroup input.

Factor	Existing Programs	Gap	Actions **(critical in bold)**	Metrics	Expected Response and Application	Learn/Adapt
Scientific and Technical Understanding of Credit-oriented Protocols: BMP implementation effect on potential lift and/or improvement in stream function		*Robust stream restoration monitoring*	1.4	State verification programs include Verification Committee recommendations		
Scientific and Technical Understanding of Credit-orientated Protocols: Uniform design process for stream restoration that can measure change in stream functions and/project success based on a project goals and objectives.	USFWS and MDE guidance to evaluate stream restoration projects (to be released 2015)	*Specific to the Bay TMDL, a design process for restoration projects to reduce nutrient and sediments loads delivered downstream while at the same time ensuring optimal habitat conditions restored.*	4.1			
Scientific and Technical Understanding of Credit-orientated Protocols: Achieve both water quality and biological functional improvement through the TMDL process	WIP implementation of BMPs under Bay TMDL	*Procedures for cost effective restoration actions and approaches*	4.2			

KEY	
Metric	Specific metrics have not been identified
	Metrics have been identified
Expected Response	No timeline for progress for this action has been specified
	Timeline has been specified

EXAMPLE: The tables featured here are examples and include information extrapolated from the Stream Health Management Strategy and Work Plan. The information does not reflect GIT or workgroup input.

WORK PLAN ACTIONS				
Green – action has been completed or is moving forward as planned. Yellow - action has encountered minor obstacles. Red - action has not been taken or has encountered a serious barrier.				
Action	**Description**	**Performance Target(s)**	**Responsible Party (or Parties) & Geographic Location**	**Expected Timeline**
Management Approach 1: Identify an appropriate suite of metrics to measure the multiple facets of stream health to complement the Chesapeake Bay Basin-wide Index of Biotic Integrity (Chessie BIBI)				
1.1	Update and refine Chessie BIBI for streams.	1. Updating the database will be completed in Nov. 2015. The following remaining steps will be completed in 2016. 2. Metric and index calculations 3. Index sensitivity improved 4. Bioregion under-representation analysis 5. Genus-level metrics tested	ICPRB; Chesapeake Bay Watershed	Steps 2-5: April 2016 Final report completed Sept. 2016
1.2	Establish 2008 baseline to determine trends.	1. Provide stream representation comparable to CBWM Phase 6 including 1st-4th order streams (also reconcile differences in scale from various sampling programs, 1:24k v 1:100k) 2. Develop method to express site-specific biological data as percent of stream miles with a passing rank in Chesapeake Bay Watershed 3. Determine time period for the 2008 baseline and calculate baseline 4. Decide how trends (I.e., % change from 2008 baseline) should be determined from random sampling design data	ICPRB, USGS, Technical Advisory Group for Chessie BIBI update; Chesapeake Bay Watershed	Final report completed Sept. 2016
1.3	Determine and report stream health progress	1. Periodically acquire and process available stream data from Bay States and DC 2. CBP calculate and report % change in Chessie BIBI index	Bay States and DC provide data; ICRPB work with monitoring staff and EPA CBP for QA process; EPA CBP report and track	Dec. 2017

EXAMPLE: The tables featured here are examples and include information extrapolated from the Stream Health Management Strategy and Work Plan. The information does not reflect GIT or workgroup input.

			Chesapeake Bay Watershed	
1.4	Provide BMP verification metrics when requested	1. Stream Health Work Group continue to work with Habitat GIT to review future drafts of state Verification Program Plans to assure states incorporate Verification Committee recommendations. 2. Stream Health Work Group to receive regular updates on results of "pooled monitoring" research via Chesapeake Bay Trust (CBT) grantees or CBT staff	Suggested BMP Verification Committee, Habitat GIT SHWG, state agencies (MD DNR Monitoring and Non-Tidal Assessment) Chesapeake Bay Watershed	January 2016 - ongoing
Management Approach 2: Provision of adequate funding and technical resources to support functional lift in stream restoration projects, in addition to nutrient and sediment reduction.				
2.1	Implement pooled monitoring approach.			
Management Approach 3: Active and engaged participation by local communities with Federal and State partners is central to Bay restoration (see Management Strategy for full Approach)				
3.1	Develop stream restoration permit committee.			
3.2	Develop streamlined process for permitting.			
3.3	Establish minimum stability monitoring requirements			
Management Approach 4: Develop and promote holistic stream restoration design guidelines that identifies the level of degradation and improvement of stream functions and key stressors/factors limiting potential uplift.				
4.1	Implement STAC recommendations to align stream restoration BMP protocols to optimize improvements in stream health and function.			
4.2	Address 4c non-pollution impairments by providing recommendations to the TMDL process.			

EXAMPLE: The tables featured here are examples and include information extrapolated from the Stream Health Management Strategy and Work Plan. The information does not reflect GIT or workgroup input.

4.3	Provide stream training to regulators and practitioners.			Ongoing
4.4	Publish guidance to evaluate stream restoration projects.	This is for theoretical example purposes only, to show how existing programs could be incorporated into the logic table above.	US FWS, MD DNR Chesapeake Bay Watershed	
Management Approach 5: Work with CB Partners to include the Enhancing Partnering, Leadership, and Management GIT to enhance the capacity of local governments, organizations, and landowners of beneficial stream restoration and maintenance practices.				
5.1	Provide training and education materials to local officials on stream restoration and health.			