Water Quality Goal Implementation Team Meeting
October 25 – 26, 2021

THIS MEETING IS BEING RECORDED

Zoom Link: https://umces-edu.zoom.us/j/91600681760
Meeting ID: 916 0068 1760
Passcode: 092043
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Meeting Materials: Day 1 Link | Day 2 Link

The charge of the Water Quality Goal Implementation Team (WQGIT) is to evaluate, focus, and accelerate the implementation of practices, policies, programs that will restore water quality in the Chesapeake Bay and its tributaries to conditions that support living resources and protect human health. The Team reports to the Management Board and Principals' Staff Committee.

Purpose: To **discuss** an initial set of **Phase 7 Model update priorities** that pertain to supporting and advancing the Chesapeake Bay Program partnership's water quality goals.

Objectives for Day 1 and Day 2:
(1) **Understanding** of planned and proposed updates to the **Phase 7 suite of modeling tools**
(2) **Consensus** on **process for identifying Phase 7 priorities and initial prioritized list of updates** to inform development and application of Phase 7
(3) Initial **feedback** on partnership **direction post-2025**

Questions for WQGIT Consideration

- What are the planned and proposed Phase 7 suite of modeling tool updates?
- What is the initial prioritized list of updates for developing and applying Phase 7?
- What other priorities do we need to consider for these updates?
- What are our initial thoughts about water quality and our direction post the 2025 goal? What do we need to do now in anticipation of that 2025 deadline?
- What are our initial thoughts about our direction post-2025?
- Do we agree with the updated list of priorities? If not, how do we tweak these priorities?

Day 1 (October 25, 2021)

Meeting Kick-off and Setting the Stage

9:00 AM	• **Welcoming remarks and roll call** ○ Why are we updating the models again? ○ What are the drivers for these updates?	James Martin and Ed Dunne, WQGIT Co-chairs
	• **Administrative remarks / housekeeping items**	Lucinda Power, WQGIT Coordinator
	• **Overview of agenda and requested WQGIT decisions** ○ Consensus on process for identifying Phase 7 priorities and initial prioritized list of Phase 7 updates	Sherry Witt, Senior Facilitator, General Dynamics Information Technology

	o Agreement on overall schedule for Phase 7 development, including the role of the WQGIT in the review process o Identification and agreement of next steps, including future discussions on Phase 7 and work plan development	
	• **CBPO Support for Phase 7 Model Development** o Current funding available o Staff Resources o Model updates underway, including those already identified by the CBP partnership	Lee McDonnell, Chief, Science, Analysis, and Implementation Branch, EPA CBPO
Chesapeake Bay Program Partnership Decisions and Supporting Models 101
Morning Session, continued	• **Presentation: Why do we use the modeling tools?** o To improve water quality. It is observed data that delists water bodies. However, we need data systems and models to track implementation progress and help plan policies, programs, and practices for water quality improvements. o To provide those setting the policies (legislators), programs (agencies), and practices (local governments, planners, and private entities) a means by which to make informed decisions with the latest available scientific data.	Dave Montali and Mark Bennett, Modeling Workgroup Co-chairs
Round Table with WQGIT Members ➢ **Question 1**: What's working well for you in the Phase 6 suite of modeling tools (e.g., CAST/Watershed Model, estuarine model, airshed model)? For example: o Are you using CAST for other purposes beyond the Bay TMDL? If so, what? o Do you use CAST more for running scenarios or for a source of previous data and reporting? o Do you like the online functionality of CAST and that it's accessible to the public? o What model functionalities best support your work? ➢ **Question 2**: What would you like to see changed in the Phase 6 suite of modeling tools? For example: o What functionalities could be added to support your planning efforts? o What challenges that you've experienced in using the modeling tools could be addressed through further refinements?
BREAK (10mins)
Morning Session, continued	• **Presentation: What do we mean by updating the models?** o What happens in a CAST update versus a Phase update? ➢ *WQGIT question and answer session*	Olivia Devereux, Devereux Consulting
	• **Presentation: Highlight of key updates/enhancements/functionalities that have been added to the models over the years**	Lew Linker, Modeling Workgroup Coordinator and Gary Shenk, USGS

	• **Presentation: Various decisions that drove development of versions of the modeling tools over the years**
	   o What would trigger revised planning targets
	   o Planning target calculation in 2010, 2011, and 2017, 2020 climate change
	
	➢ *WQGIT question and answer session*	

	• **Presentation: The role of monitoring data in model development**
	   o Use of monitoring data in the calibration of the watershed and estuarine models
	   o Overview of expanded USGS Status and Trends efforts: compilation and analysis of additional monitoring data to describe change
	
	➢ *WQGIT question and answer session*
		Gary Shenk, USGS and Ken Hyer, USGS

Facilitated WQGIT Discussion

➢ What are the key takeaways from the previous three presentations on modeling and monitoring? Have these presentations changed any response and feedback provided from the earlier Round Table?

12:00 PM LUNCH (30 minutes)

Phase 7 Development and Application

Afternoon Session	• **Presentation: Plans for the estuarine model to evaluate climate change and shallow water**
	   o Main bay model
	       o Motivation from PSC, WQGIT, STAC
	       o Vision
	       o RFA status
	   o Tributary models
	       o Motivation – shallow water
	       o Vision
	       o RFA status
	
	➢ *WQGIT question and answer session*
		Lew Linker, Modeling Workgroup Coordinator

	• **Presentation: CAST functionality**
	   o Trends over time
	   o WIP and scenario comparison
	   o Tributary summaries
	   o Optimization interface
	
	➢ *WQGIT question and answer session*
		Olivia Devereux, Devereux Consulting

	• **Presentation: Land change modeling work plan** o High resolution for 2013, 2017, 2021	Peter Claggett, USGS

	o Forecast and backcast 1985-2050 o Improvements in fallow, construction, and harvested forest o Hydrologic features mapping ➢ *WQGIT question and answer session*	
BREAK (10 minutes)		
Afternoon Session, continued	• **Current Watershed Model work plan based on feedback from other partnership groups** o NHD-scale Phase 7 model o Improvement of physical process simulation o Uncertainty quantification o Co-benefits o Evaluation of all Bay TMDL water quality standards o Changing nutrient input calculations o Improvement of climate change simulation ➢ *WQGIT question and answer session*	Gary Shenk, USGS
4:00 PM Wrap Up	• **Closing comments** o Discussion of any preparations going into Day 2 o Overview of Day 2 agenda ➢ Based on what you heard from today's discussions, do you understand the planned and proposed updates? Any information needed to help inform discussions and decisions on Day 2?	Sherry Witt, Senior Facilitator, General Dynamics Information Technology
Day 2 (October 26, 2021)		
9:00 AM	• **Welcoming remarks and introductions** o Additional thoughts and take-aways of WQGIT members from Day 1 presentations o Highlights of Day 2 agenda	Sherry Witt, Senior Facilitator, General Dynamics Information Technology
	• **Achieving water quality goals in the Chesapeake Bay: STAC's Assessment of System Response and Science Needs** o Overview of assessment and documented knowledge gaps o Recommended strategies for integrating scientific and technical analysis with adaptive management to aid decision-making under uncertainty.	Denice Wardrop, CRC and Kurt Stephenson, Virginia Tech
Assessing 2035 Climate Change Impacts		
Morning Session, continued	• **Overview of charge to the Modeling Workgroup by the PSC to assess 2035 climate change conditions by 2025**	James Martin, WQGIT Co-chair

	• **Presentation of management actions and associated deliverables that are responsive to climate change:** ○ Outcomes from August 12 CSN webcast from RAND/Cornell/Carnegie on detailed data and methods for how to adjust stormwater management BMPs to respond to climate change and detailed walk-through of the web tool. ○ Brief review of three recent technical products: 1) Virginia Tech climate change BMP report, 2) CSN reports and Technical Memos on climate change, and the 3) new RAND climate change stormwater BMP design guidance. ○ Overview of the 2-day October joint meeting of the Urban Stormwater Workgroup, Modeling Workgroup, and Climate Resiliency Workgroup. The joint meeting will seek endorsement of the three technical products and produce several preliminary recommendations to the WQGIT for advancing implementation of climate-resilient stormwater management approaches. Workgroup-endorsed recommendations will be presented to the WQGIT in December 2021, followed by the Management Board in January 2022.	Lew Linker, Modeling Workgroup Coordinator and David Wood, Urban Stormwater Workgroup Coordinator
	➢ *WQGIT question and answer session on 2035 climate change impacts*	All WQGIT members

BREAK (10 minutes)

Prioritization of Phase 7 Model Updates

Facilitated WQGIT Discussion

➢ Discussion of criteria for setting priorities
 ○ Complete by 2023
 ○ Actively work toward for a future model
 ○ Back burner (encourage research)
 ○ Never do this

➢ What does the WQGIT want to see done differently with this new suite of modeling tools to help advance implementation efforts and ultimately achieve our water quality goals?
➢ What functionality can the tools provide to support decision making?
➢ What modeling priorities would the WQGIT like to see that's not reflected in the current Phase 7 work plan?

❖ **ACTION**: Based on discussions above, WQGIT will be asked to create a prioritized list of Phase 7 Model updates

12:00 PM (Lunch)

➢ *Continued Discussion on Prioritization of Phase 7 Model Updates – Presentation of Results Based on Menti-meter*

Confirmation of Priorities & Timeline for Phase 7 Model Development

Afternoon Session, continued	• **Overview of the Development Timeline**	Dave Montali and Mark Bennett, Modeling Workgroup Co-chairs

	• **Overview of the Review Process**
	  o Role of the WQGIT in the review process
	  o Do we want to conduct another formal fatal flaw review like we did with Phase 6?
	  o What considerations do we need to be aware of during the review period? (e.g., submission and evaluation of 2024/2025 milestones / assessment of Phase III WIP planning target achievement)
		James Martin and Ed Dunne, WQGIT Co-chairs

	• **Discussion of initial prioritized list of Phase 7 model updates**	All WQGIT Members

WQGIT Decision Requested: Agreement on overall Phase 7 Model development timeline and review process
WQGIT Decision Requested: Consensus on initial prioritized list of Phase 7 Model updates

BREAK (10 minutes)

Chesapeake Bay Restoration Post-2025

Facilitated Discussion with WQGIT Members
➢ **Question 1**: Planning versus implementation – continuation of two-year milestones and/or another iteration of the WIPs?
➢ **Question 2**: Expectations for the CBP partnership's accountability framework moving forward (e.g., outcome attainability)
➢ **Question 3**: Updated Planning Targets and what that means for implementation

4:00 PM Wrap Up	• **Closing remarks**
	  o Recap of WQGIT decisions reached during meeting
	  o Discussion of next steps and upcoming deliverables
	    ▪ Future WQGIT discussions on Phase 7
	    ▪ Upcoming deliverables: Phase 7 work plan and detailed schedule for Phase 7 development and partnership review
		James Martin and Ed Dunne, WQGIT Co-chairs

ADJOURN and THANK YOU for YOUR PARTICIPATION!