Water Quality Goal Implementation Team Meeting
October 25 – 26, 2021
1111 East Broad Street
Richmond, Virginia 23219

Welcome and Introductions *(Ed Dunne and James Martin, WQGIT Co-chairs)*
- Purpose of the meeting
- Objectives for Day 1 and Day 2
    - Understanding of planned and proposed updates to the Phase 7 suite of modeling tools
    - Consensus on list of priorities to inform development and application of Phase 7
    - Initial feedback on partnership direction post-2025
- Review of PSC directions
- Overview of Requested Decisions

Placeholder: Plenary Speaker (TBD) to address what has worked, what has not, and what must we do differently?

CBP Decisions and Supporting Models 101
- Why do we use the modeling tools? (value, role, purpose)
    - To improve water quality. It is observed data that delists water bodies. However, we need data systems and models to track progress and help plan policies, programs, and practices for water quality improvements.
    - Identify the types of people who set the policies (legislators), programs (agencies), and practices (local governments, planners, and private entities).
- Various decisions that drove development of versions of the modeling tools over the years
    - What would trigger revised planning targets
    - Planning target calculation in 2010, 2011, and 2017
- Highlight of key updates/enhancements/functionalities that have been added to the models over the years
- Partners' perspectives on how modeling helps us get closer to our restoration goals and associated outcome(s) under the 2014 Chesapeake Bay Watershed Agreement
- STAC's Comprehensive Evaluation of System Response (Wardrop/Stephenson)

Water Quality Monitoring
- Presentation and discussion of recent efforts to update monitoring results and explaining the changes in both the estuary and watershed. These activities are part of the CBP outcome on standards attainment and monitoring. Water Quality | Chesapeake Bay Program

Discussion Questions
→ How are decision makers and planners interacting with modeled data to inform policies, programs, and planning to improve water quality? If via CAST, then what information and functionality is most important?
→How can the modeling tools support implementation? How can the modeling tools address challenges to implementation?
→How will monitoring data fit into these updates? Will there be a greater reliance on monitoring data to measure implementation progress (under the new suite of models)?

- o Include a presentation by Gary Shenk on the use of monitoring data in the calibration of the model and one by John Clune of the multiple ways that monitoring data are being used to measure implementation progress)

→How can model outputs and tools provide analyses, and information services to support policy changes and inform program development?

Phase 7 Development and Application
- Why are we updating the models again?
    - o Overview of the suite of modeling tools that will be updated
    - o What is driving these updates? (e.g., PSC decisions/direction; new science; etc.)
- Vision and Purpose for the Phase 7 suite of models (high level)
- Plans for the estuarine model to evaluate climate change and shallow water
    - o Main bay model
        - ▪ Motivation from PSC, WQGIT, STAC
        - ▪ Vision
        - ▪ RFA status
    - o Tributary models
        - ▪ Motivation – shallow water
        - ▪ Vision
        - ▪ RFA status
- Land change modeling work plan
    - o High resolution for 2013, 2017, 2021
    - o Forecast and backcast 1985-2050
    - o Improvements in fallow, construction, and harvested forest
    - o hydrologic features mapping
- CAST functionality
    - o Trends over time
    - o WIP and scenario comparison
    - o Tributary summaries
    - o Optimization interface
- Watershed Model work plan based on WQGIT and other partnership groups (to be discussed and prioritized by the WQGIT)
    - 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
    - o Others?
- 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?
    - o Note – use online survey to poll group on this question
    - o What functionality can the tools provide to support decision making?
    - o Prioritization exercise (perhaps start on Day 1 but confirm on Day 2)
- Proposed Timeline for Phase 7 model development
    - o Overview of the review process, including fatal flaw review
        - ▪ Do we want to conduct another formal fatal flaw review like we did with Phase 6?

- o Role of the WQGIT in the review process
- 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 targets achievement

Assessing 2035 Climate Change Impacts
- Overview of charge to the Modeling Workgroup by the PSC to assess 2035 climate change conditions by 2025
- Discussion of the role of the WQGIT related to the PSC charge to the Modeling Workgroup
- Discussion of management actions and associated deliverables that are responsive to climate change:
  - o 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, as well as a detailed walk-through of the web tool.
  - o Outcomes from an October full-day workshop to outline three recent technical products of 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.
  - o Preview of a November joint meeting of the Urban Stormwater Workgroup, Modeling Workgroup, and Climate Resiliency Workgroup to gain endorsement of the recommendations produced following the October workshop. The endorsed recommendations will be presented to the WQGIT in December 2021, followed by the Management Board in January 2022.

Chesapeake Bay Restoration Post-2025
- Accounting for 2035 climate conditions (see above)
- Planning versus implementation
  - o Continuation of two-year milestones?
  - o Another iteration of the WIPs?
- Expectations for the accountability framework moving forward
- Updated planning targets?

Wrap Up
- Confirmation of WQGIT priorities for Phase 7 development
- Confirmation and recap of WQGIT decisions reached during meeting
- Upcoming deliverables
  - o Phase 7 work plan
  - o Schedule for development and partnership review