

Chesapeake Bay TMDL Midpoint Assessment:

Potential Schedule Adjustments & Options

Background & Current Status

- In October 2012, the WQGIT established the priorities for the Bay TMDL's Midpoint Assessment (MPA) and agreed that the associated deadlines for these priorities would follow the Phase 6 model calibration schedule. The PSC approved the MPA guiding principles, priorities and schedule in December 2012.
 - Currently, the final calibration of the Phase 6 Watershed Model is scheduled from October 2016 – December 2016, with the release of the final model in January 2017.
 - The beta version of the Phase 6 Watershed Model was released for a one-year partnership review in January 2016. This type of review of the modeling tools is unprecedented in Bay Program history.
 - Other beta versions will be released to account for any updated information. These release dates include April 2016, July 2016, and October 2016.
 - Each beta version released to the partnership provides a stronger sense of what the final version of the model will be.
 - All information (e.g. BMP panel recommendations, final land use data inputs) are due to the CBP modeling team by September 2016 for the final calibration run.
- The Phase 6 calibration schedule is especially critical to work underway for Phase 6 land use, the BMP expert panels, and how Conowingo and climate change are to be modeled in the Phase 6 decision support tools.
- The Phase III WIP schedule was developed based on this calibration schedule, to allow ample time for the Bay watershed jurisdictions to develop their Phase III WIPs that considers the new science, data, and tool refinements as part of the MPA.
 - EPA releases final expectations for Phase III WIPs in June 2017 (6 months after Phase 6 models are final)
 - EPA releases the final Phase III WIP planning targets in December 2017 (one year after Phase 6 models are final)
 - Draft Phase III WIPs are due to EPA in June 2018 (18 months after Phase 6 models are final; 6 months after Phase III WIP planning targets available)
 - Final Phase III WIPs are due to EPA in December 2018 (two years after Phase 6 models are final; one year after Phase III WIP planning targets available)

Issue

- Schedule adjustments are needed due to delays in the finalization of the Phase 6 land use dataset:
 - The three contractors (Chesapeake Conservancy, University of Vermont, and Worldview Solutions) responsible for the collection of the high resolution land cover data are behind schedule. They are also experiencing challenges in accuracy with their preliminary data products.
 - New wetlands data and tree canopy data won't be available and submitted to the CBPO Land Use Team until the end of July.
 - The CBPO Land Use Team expects to receive all of Virginia's high resolution land cover data in June, as opposed to receiving this data on a rolling basis in the spring 2016 time period.
 - Therefore, the team has less than three months to process and finalize the Phase 6 land use data set.

- All of these delays could compress the local review of this data, which is an essential component to building local credibility and confidence in the Phase 6 modeling tools.
- **BOTTOM LINE: More time – specifically, three months – is needed to review, process, and finalize the Phase 6 land use dataset. However, the September 30, 2016 deadline for all other data inputs (e.g. BMP Expert Panel recommendations) remain.**

How do these delays impact the Phase 6 modeling calibration schedule and associated modeling priorities?

- **Short answer: It would push out certain modeling-related deadlines by three to six months.**
- The benefits of such schedule adjustments include protecting the integrity of the local review of the Phase 6 land cover/land use data and allowing a partnership review of the final calibrated Phase 6 Watershed Model (which is currently not built into the schedule and is something partners have requested).
- The revised Phase 6 model calibration schedule would be as follows:
 - SEPTEMBER 2016: All data inputs (with the exception of Phase 6 land cover/land use data) due to the Modeling team.
 - OCTOBER 2016: Run beta 4 version of the Phase 6 Watershed Model.
 - FALL-WINTER 2016: Partnership decisions made on any additional load reductions needed because of Conowingo infill and climate change¹ based on draft Phase 6 Watershed Model and Water Quality Sediment Transport Model (WQSTM).
 - DECEMBER 2016: Final Phase 6 land cover/land use data complete and delivered to Modeling team.
 - JANUARY – MARCH 2017: Final calibration of the Phase 6 Watershed Model.
 - END OF MARCH 2017: Final Phase 6 Watershed Model released for partnership review.
 - APRIL 2017: Partnership's fatal flaw review of Phase 6 Watershed Model.
 - APRIL 2017: WQSTM calibration with final Phase 6 loads. Begin CB hypoxia sensitivity scenarios of nitrogen and phosphorus loads from 16 major CB basins to support allocation decisions.
 - MAY 2017: Complete Hypoxia sensitivity scenarios. Begin key allocation scenarios of No Action, Limit of Technology, Progress Scenarios, Phase 2 WIPS, etc².
 - MAY 2017: Address comments on Phase 6 Watershed Model and WQSTM.
 - JUNE 2017: Finalize and release Phase 6 Watershed Model and WQSTM.

How do these delays impact the current Phase III WIP schedule?

- **The recommendation is to keep as close to the original Phase III WIP schedule as possible.**
- The Modeling team can have draft Phase III WIP planning targets available for partnership review by July 2017. Policy decisions on Conowingo and climate change should have already been made, so those decisions will help inform allocation development.
- The Local Area Targets Task Force will deliver their final recommendations to the partnership by March 2017.
- There have been requests from the partnership for EPA to release its expectations for the Phase III WIPs earlier than June 2017.

¹ By July 2016, the Modeling team will be able to implement a simulation system for Conowingo, including nutrient processing, high storm events, and changes in deposition as infill occurs. Linkages to the WQSTM will be made and scenarios will be available for early policy decisions in fall 2016. The Modeling team will also be able to generate climate change analyses by fall 2016 to inform early policy decisions within that same timeframe.

² The Modeling team will begin running sensitivity scenarios in April 2016 and scoping scenarios such as the ones listed above in July 2016.

- The Phase II WIP expectations³ did not include the Phase II planning targets and the original Phase III schedule had the expectations released prior to the final Phase III WIP planning targets. So, conceivably, the final expectations could be released by June 2017, as originally intended, or before.
- The benefits of adhering to the original Phase III WIP schedule is that it strives to maintain the timing between the release of the Phase III WIP planning targets and the development of the Phase III WIPs.

Deliverable	Current Schedule	Revised Schedule
All Phase 6 data inputs due (except land use)	September 2016	No change – Sept 2016
Final Phase 6 land use dataset due	September 2016	December 2016
Final calibration of Phase 6 Model	October – December 2016	January – March 2017
Partnership review of draft final Phase 6 Model	N/A	April 2017
Release of final Phase 6 Model	January 2017	June 2017
EPA releases draft expectations for Phase III WIPs	January 2017	No change – Jan 2017
EPA releases final expectations for Phase III WIPs	June 2017	No change – June 2017
EPA releases draft Phase III WIP Planning Targets	Spring 2017	July 2017
EPA releases final Phase III WIP Planning Targets	December 2017	No change – Dec 2017
Draft Phase III WIPs due to EPA	June 2018	No change – June 2018
Final Phase III WIPs due to EPA	December 2018	No change – Dec 2018

Questions to Consider & Next Steps:

- During the October 2012 meeting, the WQGIT requested at least one year between the release of the draft Phase III WIP planning targets and the deadline for the draft Phase III WIPs (the same is true for the final planning targets and final Phase III WIPs). Does the WQGIT still feel this schedule provides adequate time for these planning targets to inform the development of the Phase III WIPs?
- What additional concerns or feedback does the WQGIT membership have on the revised schedule?
- Recommendations from the WQGIT will be presented to the Management Board and the PSC for their consideration during their May meetings.

³ https://www.epa.gov/sites/production/files/2015-07/documents/guideforthePhaseIIWIPs_330final.pdf