

Chesapeake Bay TMDL's Midpoint Assessment Detailed Schedule

*Shaded item denotes calibration schedule

Timeline	Deliverable	Lead Partnership Group
YEARS 2011-2014		
2011	James River: Develop study work plan and issue Notice of Intended Regulatory Action	VA
2012	James River Chlorophyll-a Study Work Plan implementation	VA
October 2012	WQGIT meets to identify midpoint assessment priorities; confirm Guiding Principles; develop overall midpoint assessment and Phase III WIP schedule	WQGIT
December 2012	PSC approves midpoint assessment guiding principles; priorities; and overall schedule	PSC
January – February 2013	WQGIT approves high and low priority midpoint assessment priority work plans; implementation of work plans begin	WQGIT/Source Sector Workgroups
February 2013	EPA provides clarity on assessment of “60% by 2017” interim target, including the use of Phase 5.3.2 and the role of numeric and programmatic commitments	EPA
February 2013 – September 2014	Collect readily available land use and related datasets from localities	LUWG
May 2013	Building a Better Bay Model Workgroup	AMS
October 2013 – September 2014	Identify gaps in the types and locations of data received; re-prioritize data needs; target localities for additional data collection and solicit directly to their agencies	LUWG

2014	Monitoring: Assessing approaches for a new indicator based on trends in flow-normalized loads (from WRTDS)	STAR
	Monitoring: Enhance approaches to examining temporal trends in water quality in tidal waters and further develop and evaluate new statistical approach (General Additive Models) and explore ways to compare it to watershed trends	
2014 (ongoing)	Climate Change: 2050 land use analysis for Watershed Model	Modeling Workgroup/LUWG
February 2014	Release of New Insights Report: Science-based evidence of water quality improvements, challenges, and opportunities in the Chesapeake	STAR
March 2014	STAC Workshop on “Management Effects on Water Quality Trends”	STAC/STAR
October 2014	WQGIT approves 2014 land use projections	WQGIT
October 2014	WQGIT approves proposed land use classifications	WQGIT/LUWG/Source Sector Workgroups
October 2014	BMP Panels prioritized for Phase 6 model calibration	Source Sector Workgroups
October 2014 – May 2016	Solicit and accept updates to local land use data from localities	LUWG
October 2014	Rough draft of major changes to nutrient processing in Scenario Builder will need to be complete. Continued sensitivity refinement	Modeling Workgroup
November 2014	Release of the Lower Susquehanna River Watershed Assessment report for a 45 day public comment period	MD/USACE
December 2014	Local impoundments: Draft Dynamic Water Data Base data set, which will provide an estimate of small impoundments from the mid-1980s to the present	USGS/Modeling Workgroup
December 2014	Complete mapping of crops to new land uses	AMS
	Determine procedure to assign “double-crop” acres of crops grown within the same year	
	Recommend how to best model pasture near streams	

December 2014	Sparrow and literature review results for draft land uses	LUWG
December 2014	Release of Eastern Shore nutrient trends report	STAR
YEAR 2015		
2015	Science Advisory Panel Criteria recommendations for the James River Chlorophyll-a study	VA
2015	Monitoring: Finalization of new indicator based on trends in flow-normalized loads (from WRTDS)	STAR
	Monitoring: Coastal plains trend explanations complete	
January 2015	Air Deposition: Base CMAQ scenarios complete	Modeling Workgroup
January 2015	Publish Chesapeake Bay Land Change Model; LUWG explores pros/cons of setting Phase III WIPs on a future land use	LUWG
January 2015	Climate change: Tidal Water temperature – increase density gradient initial analysis for WQSTM	Modeling Workgroup
	Climate change: - Increased salinity - increase density gradient initial analysis for WQSTM	
	Climate change: Sea level rise & tidal Bay hydrodynamic effects – initial analysis	
February 2015	Draft acreage for federal land boundaries	LUWG
February 2015	Draft pollutant loading targets for draft land use classifications	Modeling Workgroup
March 2015	Simulate Trend Scenario for all Chesapeake Bay watershed jurisdictions	LUWG
	Draft datasets due for 2012 Phase 6 Land Use Raster database	
March 2015	Final release of the Lower Susquehanna River Watershed Assessment	MD/USACE
March 2015	All major partnership decisions are made on changes to Scenario Builder processing and data. Scenario Builder final modifications begin	Modeling Workgroup

April 2015	Final pollutant loading targets approved by Modeling Workgroup for proposed land use classifications	Modeling Workgroup
April 2015	Climate change: Rainfall increased intensity analysis for Watershed Model	Modeling Workgroup
May 2015	Complete LUWG review of Trend Scenario and draft alternative future scenarios. LUWG presents recommendations to WQGIT	LUWG
June 2015	Propose alternative fertilizer application process	AMS
	Further assess the volatility in fertilizer sales and Ag Census expenditure data	
	Propose final method for estimating fertilizer use across years	
June 2015	Air Deposition: Wet deposition from 1983-2013 complete	Penn State
July 2015	Complete simulation of all scenarios through 2030 (five year increments)	LUWG
Summer 2015	PSC decision on setting Phase III WIPs on future land use	WQGIT/LUWG
Summer 2015	Climate change: Evapotranspiration – New methods to account for stomata resistance and CO2 levels analysis for Watershed Model complete	Modeling Workgroup
Summer 2015	Climate change: Air temperature – reaction rates for Watershed Model complete	Modeling Workgroup
September 2015	Further analyze yearly crop yield data variability to determine it is sufficient	AMS
	Collect and analyze yearly animal data to determine if it is sufficient	
	Analyze yearly poultry data to determine if it can be used in conjunction with Poultry Litter Subcommittee recommendations	
	Propose alternative manure estimate method for each animal group	
	Propose alternative manure application process in SB	
	Analyze data collected from Poultry Litter Subcommittee and recommend an alternative litter estimation method	
	Develop manure mineralization and volatilization estimates from literature	
	Develop estimates of nutrient losses from animal operations	
	Complete group review of state-specific nutrient application rates, and determine how rates should be used	

	Propose and test various methods for applying estimated nutrients from manure and fertilizer	
	Analyze the impact a new method has on application rates within EVERY county, and adjust method if application rates are unreasonable	
September 2015	Compile biosolids data to complete the estimates of nutrient inputs to agriculture	Wastewater Workgroup/AMS
September 2015	Final datasets due for Phase 6 Land Use Raster database	LUWG
October 2015	Local impoundments: Refined Dynamic Water Data Base data set	USGS/Modeling Workgroup
October 2015	BMP Historic Data Cleanup complete	Bay jurisdictions/WTWG
October 2015	Watershed Model calibration: to be complete – improvements in hydrology and land sediment processes; PQUAL calibration methods; river calibration methods; and regional factors	Modeling Workgroup
	Incorporation of multiple model estimates for sensitivity to nutrient inputs into the Phase 6 Watershed Model	
October 2015	Phase 6: Recommendations due for considering both land and in-stream sources with the in-stream sink terms applying to both sources	Land Use Workgroup/Modeling Workgroup
	Phase 6: Complete investigation of methods to map and evaluate the nutrient and sediment effects of impervious surface connectivity, urban stream corridors, riparian forests, riverine wetlands, and urban tree canopy	
October 2015	Phase 6: Complete incorporation of groundwater lag time simulation for initial calibration	Modeling Workgroup
October 2015	All inputs are final and delivered to the Chesapeake Bay Watershed Model by the Scenario Builder team for the initial calibration run. Final pollutant loading targets based on this information	Modeling Workgroup
December 2015	Draft Phase 6 Watershed Model is complete	Modeling Workgroup
December 2015	Partnership evaluation of Phase 6 modeling tools begins; key scenarios available	Modeling Workgroup

YEAR 2016		
2016	James River Chlorophyll-a regulatory proposal development (if appropriate)	VA
2016	Possible uncertainty analysis for Phase 6 Watershed Model begins	Modeling Workgroup
2016/2017	Monitoring: Trend summaries complete	STAR
Early 2016	STAC review of Phase 6 Watershed Model	STAC/Modeling Workgroup
May 2016	All local data from jurisdictions must be submitted	LUWG
Mid 2016	Follow up with CBP model assessments of the new research and monitoring findings to support final decisions on Conowingo infill	Modeling Workgroup
September 2016	Final partnership comments on draft Phase 6 Watershed Model	
October 2016	EPA presents preliminary expectations and seeks initial input from WQGIT and its workgroups on expectations for Phase III WIPs	EPA
December 2016	EPA presents preliminary expectations and seeks input from Management Board on expectations for Phase III WIPs	EPA
Close of 2016	Climate change: Wetland impacts of sea level rise analysis complete	CoE ERDC
	Climate change: Changes in SAV habitat analysis complete	
December 2016	Partnership evaluation of Phase 6 modeling tools concludes; all models are final. The partnership decision-making process begins to discuss how these modeling tools will be used in the Phase III WIP process	Modeling Workgroup
YEAR 2017		
2017	James River Chlorophyll-a: complete regulatory review and WIP coordination	VA/EPA
2017	Partnership decisions on how to offset impacts of Conowingo	Modeling Workgroup

	Partnership decisions on how to address climate change	
February 2017	EPA presents preliminary expectations and seeks input from PSC on expectations for Phase III WIPs	EPA
March-April 2017	EPA presents updated expectations and seeks input from WQGIT and Management Board on expectations for Phase III WIPs	EPA
May 2017	EPA presents updated expectations and seeks input from PSC Board on expectations for Phase III WIPs	EPA
June 2017	Based on input from the Partnership, EPA provides expectations for scope and content of Phase III WIPs	EPA
December 2017	EPA sets Phase III WIP planning targets	EPA
YEAR 2018		
June 2018	Draft Phase III WIPs due from the jurisdictions to EPA	Bay jurisdictions/EPA
December 2018	Final Phase III WIPs due from the jurisdictions to EPA	Bay jurisdictions/EPA
YEAR 2019		
2019	Determine if modifications to the Chesapeake Bay TMDL, if necessary	EPA