Modeling Workgroup Update

WQGIT Meeting May 11, 2015

Midpoint / ssessment Timeline

Evaluation of Pr Monitoring dat

Jurisdiction Im ementation of WIPs & Two Year Milestones rammatic and Load Reduction Commitments assessments/factors affecting trend findings

ablish Phase III

•2017

Phase III WIP

expectations finalized

Partnership informs

reallocation process

final decisions on

P targets

Evaluation of 60% by 2017 target using Phase 5.3.2 modeling tools

•2018

 Comprehensive monitoring and trend findings through 2016

Agreement on framing Agreement on path forward and data the priority issues inputs

- •2014
- New land use classifications and loading rates approved
- BMP panel recommendations for Phase 6.0 inclusion
- Agreement on Midpoint Assessment Schedule

•2015

- · Early review of decision support tools
- James River chlorophyll assessment criteria completed
- Conowingo Dam study complete
- Review and incorporate decisions of climate change impacts
- BMP panel recommendations for Phase 6.0 inclusion

Approval of decision support tools

- •2016
- Final partnership comments on suite of
- Partnership input to any updates to local area target expectations
- Review and incorporate decisions of climate change impacts

CREATE The Models

2015

REVIEW The Models

2016

USE The Models

Complete Phase III

2018

Support for Phase III

WIP development

using Phase 6.0

modeling tools

2017

Mid Point Assessment Modeling Workgroup Priorities

Watershed Model

- Revise Watershed Model system structure
- Revisit Watershed Model calibration methods, including regional factors

Water Quality and Sediment Transport Model

- Refine and update the Water Quality and Sediment Transport Model (WQSTM)
- Refinement of shallow water simulation for improved assessment of open water DO and SAV/clarity standards

Airshed Model

Update Airshed Model to new CMAQ Bidirectional Ammonia Model

TMDL Charges

- Effects of Conowingo infill on Chesapeake Bay WQS
- Examine the influence of climate change (CC) on Chesapeake WQ standards and the 2010 Bay TMDL
- Review James River chlorophyll criteria and James River TMDL allocations
- Influence of oyster filter feeders on water quality, with increased aquaculture and sanctuary development **STAR Requests**
- Support needs of water quality goal team and TMDL Mid-point assessment support
- Assess and Explain Water Quality Trends

April Quarterly

- Big focus on model enhancements, full day on Watershed Model
- Prior work accomplished extension of WSM to recent years and improved hydrology and sediment simulation
- P6 land uses, global targets, N & P sensitivities and lag
- Things are lining up to allow development of first P6 model with P6 landuses by July quarterly
- Estuary modeling explicit simulation of shoreline loads and shallow water simulation in the WQSTM and update on the shallow water multiple model project
- Status of contract for air deposition
- Discussion of STAC workshops relevant to MWG charge that will take place in the coming year - Conowingo, Climate Change, Uncertainty, Optimization, Shallow Water

Schedule Planning

- MWG Chairs and Mod Team to block time in June to develop detailed schedule
- Remainder of 2015, when we need to have tools developed, but equally important thru end of 2016 as related to the review process and "tweaks"
- Schedule to include identification of deliverables and key communication points to WQGIT and other partnership groups/ teams

Future Communications

- Prepping for a "WG chairs" meeting in June to discuss process for application of global targets to P6 landuses (Ag, USW, Forestry, LU)
- Planning a comprehensive, detailed
 Watershed Model presentation to WQGIT in
 September and our recommendations for the
 schedule thru 2016

Questions? Thank you