# CBP Model Workgroup July Quarterly Review

Day 1 – July 14, 2026

**Event webpage:** Link
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**10:00 Announcements and Amendments to the Agenda – Mark Bennett, USGS and Dave Montali, Tetra Tech**

**10:05 Phase 7 Watershed Model Progress – Gopal Bhatt, Penn State-CBPO**
Gopal will review the final hydrology calibration of the Phase 7 WSM and outline the next steps for the sediment and nutrient calibration. The Modeling Workgroup will be asked to approve the current Phase 7 hydrology calibration in order to move forward with the sediment and nutrient calibration.

Request Action: Decisional.

**10:35 Discussion of the Phase 7 Model Progress**

**10:45 CalCAST Flow Model Calibration and Sediment Edge of Field Loading – Joseph Delesantro, Koniag-CBPO**
An overview of the CalCAST total flow and stormflow modeling framework, highlighting the calibration results for 16 land-class flow yields that support flow simulations within the Dynamic Watershed Model will be presented. The presentation also summarizes the updated Phase 7 edge-of-field sediment loading estimates, including the incorporation of new land-use categories.

**11:05 Discussion of CalCAST Flow Model Calibration and Sediment EoF Loading**

**11:15 Determining a Potential New Ten-Year Average and Three-Year Critical Period – Robin Glas, USGS**
Progress on the analysis for examining a new CBP ten-year average and a three-year critical period will be described.

**11:45 Potential for New CBP Hydrologic Period Discussion**

**12:10 LUNCH**

**12:50 Future Environmental Conditions and CBP BMP Efficiencies – Maya Struzak, Sarah Fakhreddine, and David Rounce, Carnegie Mellon and Michelle Miro and Krista Grocholski, RAND**

Progress will be presented on the application of the APEX model under different future climate hydrologic conditions to determine the change in relative pollutant removal efficiencies of current CBP-approved NPS BMPs.

**1:10 Discussion of CBP BMP Efficiencies Under Changing Environmental Conditions**

**1:20 Advancing Phosphorus Modeling Through Integrating pH, Salinity, and Other New Predictors – Joseph Delesantro Koniag-CBPO and Conor Keitzer, UMCES**

This presentation summarizes preliminary results from analyses of phosphorus mobilization and transport within the watershed, focusing on the influence of pH, ionic strength, and other key environmental predictors. The presentation will highlight model development and evaluation efforts, discuss the relative importance of these factors in controlling phosphorus dynamics, and explore potential applications for improving phosphorus representation in the Phase 7 Watershed Model.

**1:35 Discussion of Advancing Phosphorus Modeling**

**1:45 Modeling Workgroup Membership – Lew Linker, EPA-CBPO**

Consistent with the Modeling Workgroup's association with the Clean Water Goal Team, the Workgroup's decision making and membership will be reviewed.

**2:00 Discussion of Modeling Workgroup Membership**

**2:10 STAC review on the Phase 7 Watershed Models – Larry Sanford, UMCES (*ret.)* and Previous STAC Chair**

Larry will describe the upcoming 2027 STAC review on the Phase 7 Watershed Model and Main Bay Model. The STAC review of the 4D interpolator, as well as the current position of STAC on reviewing the proposed CBP living resource/shallow water modeling will also be described.

**2:20 Discussion of the STAC Phase 7 Model Review**

**2:30 ADJOURN**

# Modeling Workgroup July Quarterly Review

Day 2 – July 15, 2026

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**10:00 Announcements and Amendments to the Agenda – Dave Montali, Tetra Tech and Mark Bennett, USGS**

**10:05 Current Assessment of DO and SAV with the MBM – Richard Tian, UMCES-CBPO**
Richard will present the current assessment of the DO and SAV-water clarity standard with the MBM.

**10:15 Current Assessment of DO and SAV with the MBM**

**10:25 Update on Main Bay Model (MBM) Progress – Zhengui Wang, Joseph Zhang, Jian Shen, and Wenfan Wu, VIMS**
The MBM calibration refinements since the last Quarterly Review will be reviewed. Improvements in the MBM water quality calibration and an overview of the coupling between the April *beta* watershed loading and the MBM will be reviewed.

**10:55 Discussion of the Main Bay Model (MBM) Progress**

**11:05 Linkage of April Beta DWSM Inputs to the MBM –Wenfan Wu and Zhengui Wang, VIMS**
The innovative analysis of coastal plain and RIM nutrient and sediment loads using tidal water quality stations close to the watershed discharge point will be used to assess the April *beta* Dynamic Watershed Model inputs relative to previous inputs from the Watershed Model.

**11:20 Discussion of Linkage of April *Beta* DWSM Inputs to the MBM**

**11:30 Approach for the MBM SAV Simulation – Jian Shen and Joseph Zhang, VIMS**
There are different approaches that need to be taken in the MBM for the calibration of SAVs and the projection by scenarios of SAV responses to future environmental conditions and loads. The presentation will outline an approach to reconcile the SAV with two approaches for SAV calibration and simulation of future conditions.

**11:50 Discussion of Approach for the MBM SAV Simulation**

**12:00 LUNCH**

**1:00 Update on Conowingo Model Development – Earl Hayter and Jodi Ryder, CoE-ERDC and Matt Rowe, MDE**
Progress in the development of the Conowingo Model will be reviewed.

**1:10 Discussion of the Conowingo Model Development and Application**

**1:20 Analyses of Nearshore ConMon, Dataflow, and Other Data, from Multiple Sites – Wes Slaughter, UMD**
**A**nalysis techniques based on tools developed for the new 4D Interpolator were used to combine multiple continuous and discrete monitoring sites. This could provide another MBM/MTM calibration approach that is based on the statistics of nearshore observations, not instantaneous observations, and set up to examine frequencies of criteria exceedance providing some independence from precise space/time instantaneous comparisons.

**1:35 Discussion of Potomac Nearshore ConMon Data Analysis**

**1:45 Progress on Patapsco/Back MTM – Harry Wang, Breanna Maldonado, VIMS and Jeremy Testa, Allison Dreiss, UMCES**
Progress on the Patapsco/Back MTM will be reviewed.

**1:55 Discussion of Patapsco/Back MTM Progress**

**2:05 Progress on the Choptank MTM – Jeremy Testa, William Nardin, Elizabeth North, Larry Sanford, UMCES and Jiabi Du, Texas A&M**
Progress on the Choptank MTM will be presented.

**2:15 Discussion of Choptank MTM Progress**

**2:25 Progress on the Patuxent MTM – Amir Azarnivand and Jeremy Testa, UMCES**
Progress on the Patuxent MTM will be presented.

**2:35 Discussion of Patuxent MTM Progress**

**2:45 ADJOURN**