Modeling Workgroup Quarterly Review

January 7, 2020

CBPO Conference Room - The Fish Shack
410 Severn Avenue Annapolis, MD 21403

Event webpage:
https://www.chesapeakebay.net/what/event/january_2020_modeling_workgroup_quarterly_review

For Remote Access:
Zoom Link: https://zoom.us/j/569368345
Phone number: 929-205-6099 **Meeting ID:** 569-368-345
To enter the webinar, please open the webinar link first

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

10:05 Updated Climate Change Scenarios – Richard Tian, UMCES and Lew Linker, EPA-CBPO

A refined set of Climate Change (CC) Only Scenarios for 2025, 2035, 2045, and 2055 will be presented. The scenarios remove all elements directly unrelated to climate change but do add the influence of sea level rise (SLR) on tidal wetland attenuation. In addition, a new set of Climate Change with Land Use Change Scenarios for 2025, 2035, 2045, and 2055 will be presented that will include all elements related to 2025 oysters with full build out 2025 oyster aquaculture, 2025 sanctuaries, and 2025 sanctuaries with habitat reconstruction, estimates of population and land use change, as well as the influence of SLR on tidal wetlands.

10:50 Nutrient Reduction Sensitivity Runs to Water DO Attainment – Gary Shenk, USGS-CBPO

Gary will present an initial group of sensitivity scenario runs to examine nutrient reduction effectiveness in the reduction of Open Water DO nonattainment.

11:10 Approaches to Allocating Climate Change Risk in the CBP – Gary Shenk, USGS-CBPO

Different approaches to the allocation of nutrient reductions needed to address climate change risk in the CBP will be examined.

11:30 Assessing Sources of Uncertainty in Climate Projections of Chesapeake Bay Hypoxia – Kyle Hinson, VIMS

The ChesROMS hypoxia modeling group at VIMS will discuss the extent of uncertainty in climate change simulations due to the choice of global climate model, downscaling methodology, and watershed model. These findings will be reviewed within the context of changes to future watershed discharge and nutrient loadings.

12:00 LUNCH

1:00 Development of an Uncertainty Envelope for the 2055 Climate Change Scenario – Isabella Bertani, UMCES

Ideas and approaches to developing an uncertainty envelope for the 2055 Climate Change Only Scenario will be discussed. Options could include the P10 and P90 scenarios of the 32 member GCM ensemble, using different RCPs for 2055, using different downscaling techniques, or other approaches.

1:40 Estimated Riverine Scour Under Future Climate Change Conditions – Gopal Bhatt, Penn State

Estimated increased riverine and reservoir scour due to increased precipitation volume and intensity will be presented.

2:00 ADJOURN

Modeling Workgroup Quarterly Review

January 8, 2020

CBPO Conference Room - The Fish Shack
410 Severn Avenue Annapolis, MD 21403

Event webpage:
https://www.chesapeakebay.net/what/event/january_2020_modeling_workgroup_quarterly_review

For Remote Access:
Zoom Link: https://zoom.us/j/569368345
Phone number: 929-205-6099 **Meeting ID:** 569-368-345
To enter the webinar, please open the webinar link first

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

10:05 Estimated Atmospheric Deposition in 2100 – Jesse Bash, EPA
Preliminary findings from a 2100 CMAQ scenario will be presented.

10:30 Chesapeake Regional Hydrologic Model Workshop – Gary Shenk, USGS-CBPO
A workshop oriented toward planning a series of refined hydrologic models designed to incorporate updated weather and watershed data with enhanced modeling practices to simultaneously benefit multiple goals and outcomes will be discussed.

11:10 Refinements to the CBP Hypoxia Forecast Model – Isabella Bertani, UMCES
Work on the revision and transition of the University of Michigan's Chesapeake Bay hypoxia forecasting model to UCMES/CBPO will be presented. The work includes the recalibration of the model to multiple sets of hypoxic volume estimates, different hypoxic volume metrics, and different loading periods.

11:45 Update on Scenario Optimization Tool for CAST – Daniel Kaufman, CRC
Danny will provide a status report on the ongoing development and improvement of a CAST BMP optimization tool.

12:00 Adjourn