Modeling Quarterly Review Meeting

Watershed Modeling

January 28, 2015

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

For Remote Access:

Adobe Connect: https://epa.connectsolutions.com/modeling/ (enter as guest)
Conference Bridge: (866)-299-3188 code 410-267-5731#
Event webpage: http://www.chesapeakebay.net/calendar/event/21917

10:00 Announcements and Amendments to the Agenda – Dave Montali, WVDEP-Lee Currey, MDE

10:05 Review of Modeling Workgroup Priorities – Lee Currey, MDE - Dave Montali, WVDEP
The quarterly review of the Modeling Workgroup priorities with associated timelines will be discussed.

10:15 Phase 6 Watershed Model Schedule Update – Gary Shenk, EPA-CBP
Gary will present further updates of the development schedule with key links to the 2017 Midpoint Assessment schedule. Also reviewed will be what's on schedule (green light), what's running a little late (yellow light), what's really, really late (red light), and the data needs of what's coming up. This topic covers all Modeling WG needs such as land use, nutrient targets, new BMP inputs, Ag WG interaction, etc.

10:15 Representation of Storage and Lag Times in the Chesapeake Watershed – Ciaran Harman, Johns Hopkins
A new approach for representing the storage and lag times of nutrients in the Chesapeake watershed will be described. The process, called rSAS, could have application in Phase 6.

12:30 LUNCH

1:30 PQUAL Sensitivity to Inputs – Guido Yactayo, UMCES
Guido will present final proposed recommendations for PQUAL sensitivity to nitrogen application of input nutrient load to nitrogen output response derived from multiple watershed models for final agreement by the Modeling Workgroup.

1:50 Phase 6 Phosphorus Simulation: Role of APLE in Phosphorus Sensitivities – Guido Yactayo, UMCES - Gary Shenk, U.S. EPA-CBP
The challenges of simulating phosphorus saturation in soils including aspects of scale, phosphorus transport and dynamics in the landscape, and phosphorus management will be discussed

2:30 Phase 6 Development Progress – Gopal Bhatt, Penn State
Progress on the latest version of the Phase 6 operational prototype based on the HSPF PQUAL simulation and with an updated 1985-2013 precipitation input dataset, hydrology, and sediment simulations will be presented. Processes needed for the PQUAL approach, such as a simulation of lag time represented by SAS will be reviewed, and key CBP scenarios will be demonstrated.

3:00 ADJOURN

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10:00 Announcements and Amendments to the Agenda – Lee Currey, MDE - Dave Montali, WVDEP

10:05 Record of Modeling WG Decisions – Lee Currey, MDE – Lew Linker, EPA-CBP

As requested by the WQGIT a record of the Modeling Workgroup decisions with the dates of the decision will be completed. The record will cover the major milestones such as: the change of XYZ precipitation input to NLDAS input; the improvement sediment calibration decision rules; input nutrient load - output response sensitivities and other key decisions.

10:20 Progress in Phase 6 Land Use/Land Cover – Peter Claggett, USGS

Progress in the development of the Phase 6 land use/land cover will be described. A draft version of the land use/land cover data is due by April and the final land/use land cover is due in October. In addition, how the proposed work in precision conservation can assist in the Phase 6 Model development will be discussed. The proposed work includes advanced GIS techniques, remote sensing at parcel scale, high resolution land use, and concentrated flow path analysis.

11:10 USGS' Dynamic Surface Water Extent (DSWE) project for quantifying surface water storage on the landscape – John Jones, USGS

The USGS is developing a methodology to quantify surface water storage on the landscape including small ponds and impoundments through analysis of the Landsat imagery archive (1984 – present). How this approach can be used by CBP to identify and simulate the behavior of small impoundments in the Chesapeake watershed will be discussed.

11:30 Progress with Phase 6 Land Use Target Loads – Olivia Devereux, Devereux Consulting

Olivia will review progress in developing land use loading rates to be used in the Phase 6 Watershed Model calibration, including reviewing the sources of data

used to inform the loading rates, the synthesis process used, and timeline of the development work.

12:00 LUNCH

1:00 Progress in Replacing Regional Factors: A Multiple Model Approach Based – Ross Mandel, ICPRB

Progress in the refined simulation of the fate and transport of nutrients from simulated land uses land to simulated river reaches will be described including an update on the process for using SPARROW to replace regional factors.

1:30 Refinements to Phase 6 Land Segments - Howard Weinberg, UMCES - Peter Claggett, USGS and Gary Shenk, EPA-CBP

An approach using fine scale precipitation fields for the refinement of the Phase 6 land-segments will be discussed.

2:00 ADJOURN