

Modeling Workgroup Activities

CBP Modeling Quarterly Review
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Lew Linker and the CBP Modeling Team
Chesapeake Bay Program Office, Annapolis, MD

llinker@chesapeakebay.net



Chesapeake Bay Program
Science, Restoration, Partnership



Phase 3 WIP Support

- Documentation:
 - Phase 6 Documentation ~ half finalized and available on cast.chesapeakebay.net or in the documentation section of Modeling Workgroup web page
 - WQSTM main document almost complete (but numerous appendices covering climate change and Conowingo applications, assessment of nutrient limitation, assessment of Bay wide hypoxia and others need attention).



Phase 3 WIP Support

- Progress in Optimization:
 - major developmental steps anticipated for first beta release of the optimization tool in early 2019 (10/17/18 at 11:00)
- James River Chlorophyll Assessment Support:
 - key scenarios for James chlorophyll assessment and WQS assessment procedures (10/17/18 at 1:00 and 1:30)



Phase 3 WIP Support

- **Open Water DO Standard Attainment**
 - a new analytical approach that relates nutrient loads from different geographical regions to chlorophyll and DO responses in Open Water designated uses (10/16/18 at 1:35)
- **WQSTM Tech Transfer Workshop:**
 - planned for Chesapeake PIs and model practitioners for the use and application of the CBP's water quality model of the tidal Bay on January 9, 10, and 11. (10/17/18 at 10:10)



Phase 3 WIP Support

- Progress in Watershed Assessment of Future Climate Risk:
 - decadal series of climate change assessment for the years 2025, 2035, and 2045 as well as an evaluation of MACA downscaling (10/16/18 at 10:40)
- Progress in Estuarine Assessment of Future Climate Risk:
 - model sensitivity to future climate winds, humidity, and the assessment of refined algal temperature-growth curves encompassing future temperatures (10/16/18 at 11:20)



Climate Change Workshop

Workshop Motivation and Goals

- The motivation for the workshop stems from the decision of the Chesapeake Bay Program (CBP) Principals' Staff Committee to develop a framework for addressing climate change impacts in jurisdictions Phase III Watershed Implementation Plans (WIPs). The CBP Partnership recognizes that further work is needed to have jurisdictions account for additional nutrient and sediment pollutant loads, due to anticipated 2025 climate change conditions, in their 2-year milestones beginning in 2022.
- The goal of the workshop is to develop recommendations for new and/or refined methods and modeling techniques to be completed and fully operational by 2019, to assess the potential impacts of 2025 and longer term climate change on watershed loads and estuarine processes, to characterize and manage the risk of climate change impacts to CBP goals.
- In addition, guidance is sought in formulating a long-term plan of study, including field sampling and data analysis, monitoring and modeling that will improve understanding of long-term climate change impacts, vulnerability and risk management in the Chesapeake watershed and estuary, which could be considered in the conceptual framework in the next phase of CBP model development.



Climate Change Workshop

- Very successful. Expect first draft of workshop report to be distributed to the steering committee by the close of the month.
- Important outcome is a multiple model intercomparison project that Marjy Friedrichs, will lead on assessing the impact of sea level rise on Chesapeake hypoxia (looking for the what and the why). (10/16/18 at 1:00)