

Conowingo WIP Steering Committee

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Ed Dunne (WQGIT Chair), District of Columbia Department of Energy & Environment (DOEE)
Suzanne Trevena (WQGIT Vice Chair), U.S. Environmental Protection Agency - Region 3
Dave Montali (Modeling Workgroup Chair), Tetra Tech, West Virginia Department of Environmental Protection
Mark Bennett (Modeling Workgroup Chair), U.S. Geological Survey (USGS)
Cassandra Davis (Watershed Technical Workgroup Chair), New York State Department of Environmental Conservation

Dear WQGIT, Modeling Workgroup and Watershed Technical Workgroup Chairs,

Please accept this request and update from the Conowingo WIP (CWIP) Steering Committee (SC) regarding modeling efforts to determine the nutrient reduction efficiency of Conowingo dredging. This request and update is in follow up to the Conowingo modeling approach presented at the [July 26, 2021 WQGIT meeting](#).

Nutrient reductions associated with Conowingo dredging are site-specific and influenced by local hydrodynamic processes, watershed inputs, sediment biogeochemistry, and estuarine fate and transport. It would be inappropriate to derive nutrient reductions from the scientific literature as is typically done by the Chesapeake Bay Program partnership's BMP Expert Panels. As such, and with the concurrence of EPA Chesapeake Bay modelers, the CWIP SC proposed back in July that nutrient reduction efficiencies associated with any Conowingo dredging are best quantified by integrating new or existing Chesapeake Bay and Conowingo modeling tools updated with the most current local data and information regarding Conowingo Pool nutrient bioavailability and geochemistry. We also proposed that oversight and technical evaluation of

the modeling tools was better suited to the charge and technical capacities of the Modeling Workgroup, but that we would also keep the WQGIT closely tied in (also now the Watershed Technical Workgroup) as the body approving loading rate reductions used in the Chesapeake Bay Watershed Model per the [BMP Expert Panel Protocols](#). Please consider the following requests and model status updates with this background and understanding in mind.

Currently, two options are being explored for model development: (1) use of Constellation Energy's (formerly Exelon) Conowingo Pond Mass Balance Model (CPMBM); and, (2) new Corps of Engineers (CoE) modeling through their Planning Assistance to States program. The two options are being pursued in parallel as contingencies. The CWIP SC recently received model documentation for the CPMBM (attached) and are requesting Modeling Workgroup review of this documentation for sufficiency and to provide recommendations on next steps for using the CPMBM to quantify nutrient credits. This is a critical step for deciding whether the CPMBM should continue to be pursued as a viable modeling approach. The CWIP SC is requesting a 60-day timeframe for this review and appropriate coordination with the WQGIT and Watershed Technical Workgroup.

For the CoE Conowingo modeling approach, the CWIP SC worked with EPA modelers to send a draft scope of work to the CoE Baltimore District for comments. The draft scope is being reviewed by the CoE's Engineering Research and Development Center (ERDC). Once we hear back from ERDC we will work with the CoE on next steps and share the draft scope with your teams.

Lastly, and as part of Maryland's Innovative and Beneficial Reuse Pilot, a regression model was also completed to estimate Conowingo nutrient reductions under different dredging scenarios. This is also being submitted for evaluation and comment on how this might fit into the broader modeling approach.

Given this modeling-based approach for Conowingo dredging evaluation which is different from the typical BMP Expert Panel process, we want to ensure that we are proceeding in a proper and transparent way with this effort which would be consistent with the BMP Expert Panel Protocols. We also want to express our strong support for updating the expert panel process and funding the panels. This aligns with the CWIP's goal to advance BMP innovations that will help the partnership meet and sustain our Bay restoration commitments. Thank you in advance for your consideration of these documentation review requests and help in determining appropriate modeling next steps. Please let us know if you have any questions or concerns.

Best regards,

Jill and Matt

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Cc: Michelle Price-Fay, Acting Director, USEPA Chesapeake Bay Program

Lee McDonnel, Chief, Science, Analysis and Implementation Branch, USEPA Chesapeake Bay Program