

**MIDPOINT ASSESSMENT PRIORITY WORK PLAN:  
ADDRESSING SEDIMENT IN THE CONOWINGO RESERVOIR AND OTHER DAMS IN THE BAY  
WATERSHED**

**LEAD: SCIENTIFIC, TECHNICAL ASSESSMENT, AND REPORTING (STAR) TEAM**

**Full Title of Priority:** Trapping capacity behind dams, esp. Susquehanna, and greater capture of local impoundments and reservoirs.

**High Priority, 9 Votes**

**Short Description of Priority:** There are three primary objectives: (1) develop and assess options for addressing increased amounts of sediment and nutrients from the Lower Susquehanna Reservoirs, (2) better characterize trapping of sediment in reservoirs, and (3) develop an approach to simulate effect of impoundments in the Bay watershed.

**Supporting Partners:** USACE, EPA-CBPO modeling team, USGS, Urban Stormwater WG, Agricultural WG, MDE and DNR and other jurisdictions.

**Necessary Datasets, Analyses, or Decisions:**

For objective 1 (STAR lead: Bruce Michael): The current US Army Corps of Engineers (USACE) Lower Susquehanna River Watershed Assessment study will be the primary activity. This is a 3-year partnership of USACE, USGS, Maryland Department of Natural Resources, Susquehanna River Basin Commission, and The Nature Conservancy to assess watershed impacts to the upper Bay. An analysis of the entire system/watershed will enable USACE to make recommendations that will address habitat restoration and water-quality goals under the EO strategy. USACE is looking at many potential options such as dredging, bypassing, offsets/trading and BMP implementation. The study options will play a critical role in guiding the future restoration strategies undertaken by the Chesapeake Bay Program. Information about the Lower Susquehanna River Watershed Assessment:

<http://mddnr.chesapeakebay.net/LSRWA/index.cfm>

Other activities for objective 1 (beyond the USACE study) include:

- Use results and new models from the USACE study to address any remaining issues about Conowingo for the mid-point assessment (MD DNR, CBPO modeling team, USACE, USGS)
- Analysis of sediment and nutrients trends at selected upstream sites of the Lower Susquehanna Reservoir System (USGS with Johns Hopkins University)
- Analysis of changes in the upper bay related to water-quality standards and what might we expect to see. (CBPO monitoring team, MD DNR, and STAR Tidal Monitoring and Assessment WG)
- Communication of how large events impact the Bay (UMCES, CBP Communications office)

STAR will provide a coordination role for these on-going and planned activities.

For Objective 2 (STAR leads: Mark Bennett and Lew Linker): This will be a longer-term objective led by the CBPO modeling team in partnership with USGS, and jurisdictions. The CBP

watershed model currently simulates 50 reservoirs in the Bay watershed. The USGS is developing a new data set with 1900 reservoirs and will work with the CBP to test the significance of trapping of sediment and associated phosphorous by the increased number of reservoirs using the CBP watershed model and the USGS SPARROW model.

For Objective 3 (STAR leads: Lew Linker and Mark Bennett): The CBP modeling team will work with the USWG and AgWG to considering approaches to better represent storm water and farm ponds as BMPs in the watershed model.

**Start Date:** Objective 1: The USACE Lower Susquehanna River watershed study began in September, 2011. The additional activities (that are not part of the USACE study) will begin in 2013. Objective 2: Activities would begin in 2013. Objective 3: would not start until 2014

**Interim Deliverables, Including Lead and Deadlines:**

Objective 1: The USACE study has a Draft assessment report, planned for May 2014. Other agencies may be publishing reports associated with the USACE study (such as new model of reservoirs, USGS, Langland, planned for 2013). Other reports objective 1 activities include a report on trends at key sites upstream of Susquehanna Reservoirs (USGS, Hirsch with JHU). Reports for objectives 2 and 3 need to be determined.

**Completion Date:** Objective 1, USACE study is to be completed in December 2014 (assuming funding is provided as scheduled) and other objective 1 activity by 2015. Objective 2 by 2016 so improvements can be made to CBP watershed modeling system by Sept, 2016. Objective 3 needs to be determined.

**Level of Effort for Lead and Supporting Partners, Including (as relevant) CBPO Modeling Team:** Need to determine

**Potential Conflicts with Other Priorities:** CBPO modeling team has multiple high priorities for the mid-point assessment.

**Issues Requiring Input from Full WQGIT:** Consideration of options to increase sediment trapping in the Conowingo Reservoir under objective 1. Modeling approaches and data needs for objective 2.

**Issues Requiring Input from Management Board and/or Principals' Staff Committee?** Funding is not in the President's budget for 2013 for the USACE study so finding solutions for funding would be important input.

**Other Notes:** *(include what Guiding Principle relates to; see Attachment E2)*