MIDPOINT ASSESSMENT PRIORITY WORK PLAN:
ANALYSIS OF MONITORING DATA TO ASSESS PROGRESS
LEAD: STAR

Full Title of Priority: Enhanced Use and Explanation of Monitoring Data for the TMDL Mid-Point Assessment

High / Low Priority "Low" but had 10 total votes for activities reflected in this work plan

Short Description of Priority: The Chesapeake Bay Program (CBP) will enhance the use of monitoring information as part of the Mid-Point Assessment to assess attainment of water-quality standards in the Bay, water quality responses in the watershed, and relationships to actions being implemented for *Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus and Sediment* (Bay TMDL). The CBP partners have endorsed (PSC, May 2012) an integrated approach that includes three primary pieces of information to assess progress toward water-quality standards:

- Reporting of water-quality practices.
- Trends of nitrogen, phosphorus and sediment in the watershed.
- Attainment of dissolved oxygen, chlorophyll-a, and water clarity/SAV standards.

Supporting Partners: STAR NTWG (all jurisdictions), STAR TMAW (including MD DNR, VA DEQ); USGS, CBP office modeling and monitoring teams,

Necessary Datasets, Analyses, or Decisions: The integrated approach relies on information and enhanced analysis of BMP implementation data and monitoring results from the Bay and its watershed. The following priority activities will be coordinated through the CBP Scientific, Technical Analysis and Reporting (STAR) team and the WQGIT to help to assess and communicate progress for the Mid-Point Assessment:

- *Using BMP information being reported for progress toward the Bay TMDL*. The CBP is working to enhanced tracking and verification of BMP implementation. The CBP Principals' Staff Committee has approved an initiative to enhance verification of BMP implementation that will increase the accuracy of annual progress reports that are used to track 2-year milestones. The same BMP information will be used to help explain observed WQ trends. Lead: Rich Batiuk
- *Expanding monitoring of nutrients and sediment in the watershed*. The EPA has worked with the jurisdictions and USGS (through the STAR NTWG) to add 35 monitoring sites in suburban, urban, and agricultural areas. With the new sites, CBP nontidal water-quality network will have about 120 locations where monitoring data can be used to help assess status and trends of nitrogen, phosphorus and sediment loads and concentrations. This information will be used for enhanced analysis (see next bullet). Lead STAR NTWG
- *Enhancing analysis of trends of nitrogen, phosphorus and sediment in the watershed*. The USGS will work with the NTWG to provide an annual update of concentration trends in nitrogen, phosphorus and sediment concentrations for two time periods: 1985 to present, and the last 10 years. The USGS has also developed an additional technique to assess change in nutrient and sediment loads and is working with the CBP Office and STAR NTWG on how to best compare these loads with watershed model results and Bay TMDL allocations/targets loads. The initial emphasis will be focused on the nine river-input stations. Lead: USGS, CBP modeling team, NT WG.
- *Using tidal monitoring data to assess attainment of water-quality standards in the Bay and its tidal tributaries*. EPA is working with the partners to develop a combined indicator of progress toward attainment of DO, clarity/SAV and chlorophyll-standards in the tidally-influenced segments of the

Bay and tributaries. Work is underway through the Criteria Assessment Protocol Workgroup to develop criteria assessment procedures addressing the full suite of DO criteria. Leads: CAP WG and TMAW

- *Providing more explanation of water-quality trends.* The CBP STAR team is summarizing information from case studies in the Bay watershed and other national efforts for a "lessons learned" report about the effect of BMP implementation on water-quality improvements (to be released in spring, 2013). The USGS will produce reports better explaining nontidal nutrient and sediment trends for the Delmarva (2013) and Potomac (2015) and work with STAR to help explain estuary trends. Leads: USGS, TNWG, TMAW with support from CBP modeling team

Start Date: October, 2012

Interim Deliverables, Including Lead and Deadlines:

- USGS report on flow-normalized trends in nutrient and sediment loads (Jan, 2013)
- Annual update of water-quality trends in watershed and Bay (Bay Barometer and supporting indicators (Jan, 2013)
- Lessons learned on BMPs implementation and water-quality improvements (CBPO monitoring team, NTWG, TMAW, Spring, 2013)
- Factors affecting nutrient trends in nontidal waters on the Eastern Shore (USGS, Dec. 2013)
- Factors affecting nutrient and sediment trends in nontidal watershed in the Potomac basin (USGS, CBPO modeling team, NTWG, 2016/17)
- Factors affecting nutrient and sediment trends in nontidal watershed in VA Rivers (USGS, CBPO modeling team, NTWG, 2016/17)
- Response of tidal waters in selected estuaries (ones listed for USGS/CBP reports), TMAW

Completion Date: October, 2017

Level of Effort for Lead and Supporting Partners, Including (as relevant) CBPO Modeling Team: High level of effort for CBP monitoring team, USGS, NTWG, TMAW, CAP, moderate effort for CBPO modeling team

Potential Conflicts with Other Priorities: CBP modeling may not be able to provide effort needed to help explain trends given other commitments.

Issues Requiring Input from Full WQGIT: indicator development, verification protocols, review of key findings.

Issues Requiring Input from Management Board and/or Principals' Staff Committee? A Approach already approved by MB and PSC, similar decisions as above.

Other Notes: