



COG WATER RESOURCES PROGRAM UPDATES (AS OF 1/15/16)

Chesapeake Bay Program:

Summary of key CBP activities that COG staff are monitoring or actively involved in that have critical impacts or potential implications for COG’s members & the RWQM Work Program

Bay TDML – Mid-Point Assessment	COG Contact
<p>The year 2016 will be the final year of preparation of the tools the Bay Program will use in its mid-point assessment of progress under the Bay TMDL and the development of the third iteration of watershed implementation plans (WIPs) by the Bay states and the District of Columbia. The plans are expected to provide more detail on how the Bay partner jurisdictions will achieve by 2025 the nutrient and sediment reductions deemed necessary to eventually meet water quality standards in the Bay.</p> <p>Much of the work to be done and decisions to be taken during the year involve highly technical issues regarding updates to the Bay Program’s suite of models and its framework for assessing the impact of reduction measures on achieving water quality standards.</p> <p>An abbreviated list of key developments includes:</p> <ul style="list-style-type: none"> • Review and comment on beta versions of a new watershed model; final decisions on model inputs and processes • Inclusion of new/expanded/update loading data (e.g., land applied biosolids, septic/on-site systems, and CSOs) • Various modeling workshops and peer review of the models by the Bay Program’s Scientific and Technical Advisory Committee • Decision on whether the Phase III WIPs should be set using forecasted values for 2025 land use, animal numbers and other model inputs • Local government review of new land use for the model (February – June) • Decisions on how to address the impact of changing flow dynamics in the dams on the lower Susquehanna River, climate change and chlorophyll-a levels in the James River on attainment of Bay water quality standards <p>By the end of the year, the Bay Program expects to have completed its model revisions and other updates to the attainment framework. The Phase III WIPs should be developed in 2017-18.</p>	<p>Tanya Spano (202) 962-3776 tspano@mwkog.org</p>
Watershed Model – Activities and Issues	COG Contact
<p>Land Use</p> <p>The Bay Program is incorporating both local land use information and data from high resolution imagery into its updated land use data layer for the Phase 6 watershed model currently under development. Local governments will have the opportunity to review and comment on the updated land use starting in February; COG staff will continue to work with local government members to ensure the accuracy of that data.</p> <p>Model Inputs</p> <p>COG and NVRC staff are continuing to monitor the data that the states supply to the Bay Program on wastewater discharges, nutrient pollution from septic systems, biosolids and fertilizer application, and stormwater BMP implementation. This data, which the Bay Program estimates back in time (1985)</p>	<p>NOTE: COG staff presented these technical points to the WRTC on Oct. 29th. With WRTC support, COG staff is now evaluating how to obtain specialized consultant support to supplement staff’s ongoing technical</p>

as well as in the present, is the key component of measuring progress toward meeting the TMDL goals. COG staff will continue to work with COG’s members to ensure that this data is accurate and assumptions are scientifically sound.

NEW - COG staff are also leading efforts to ensure that the data and technical model assumptions related to land application of biosolids are accurate Bay-wide; and coordinating efforts to ensure that CSO, septic, and wastewater data is accurate for the COG region.

Load Estimates / Target Loads

The Bay Program is using a new approach for setting the basic rates of nutrient and sediment loading from the major sources of these constituents to the Bay – which are agriculture, urban land and forests – and for determining the geographic variation in these loads. COG staff will evaluate options for conducting an independent scientific evaluation of these key model components.

Reservoirs

The Bay Program is simulating the water quality impacts of thousands of small impoundments not currently simulated in the model. This has the potential to provide local governments with new credits for nutrient and sediment reduction, but there are several accounting issues to settle under the new approach. COG staff will work with our members to ensure the accuracy of this data.

Lag Time

For the first time, the Bay Program will explicitly incorporate estimates of the lag time between when nutrients run off the surface of the land or leach into groundwater and when they emerge into surface waters into its models. This is expected to improve the agreement between modeled and monitored estimates of loads and provide scientific support for the Bay TMDL’s expectation that improvements in water quality will lag behind the expected impact of installing BMPs. COG staff will evaluate options for conducting an independent scientific evaluation of these model assumptions.

Scale/Applicability

Despite the many improvements the Bay Program is making to the watershed model, its accuracy will continue to vary at different scales - which has major policy implications, especially for COG members’ MS4 stormwater permits. COG staff will evaluate options for conducting an independent scientific evaluation of model accuracy at different geographic scales.

work on these issues. Some of this work would involve technical work similar to work COG lead during the development of the Bay TMDL. However, because of the expansion of the issues and modeling tools being used, there are many more issues that will need to be considered during the Bay TMDL 2017 Mid-Point Assessment process.

Key policy issues related to these CBP activities will be presented at an upcoming 2016 CBPC meeting.

Tanya Spano
(202) 962-3776
tspano@mwcog.org

Karl Berger
(202) 962-3350
kberger@mwcog.org

Water Quality Sediment Transport Model & Others - Activities & Issues

Conowingo Dam

The Bay Program and other parties are updating the scientific understanding of the changing dynamics of nutrient and sediment flows through the three reservoirs on the lower Susquehanna River and the impact of those changes on the attainment of the TMDL’s water quality goals. The update is likely to result in a major policy decision regarding who has the responsibility for additional nutrient and sediment reductions beyond those currently required by the TMDL – which could have clear policy implications for COG’s members. COG staff will continue to monitor this issue and seek CBPC input on any regional policy positions to be taken.

Attainment Assessment

COG Contact

Karl Berger
(202) 962-3350
kberger@mwcog.org

The Bay Program uses a complex combination of monitoring and modeling information to determine what constitutes attainment of water quality goals under the TMDL. COG staff continues to track changes in the attainment methodology to ensure that it maintains equity among all the parties involved in the restoration effort. COG staff will evaluate options for conducting an independent scientific evaluation of this attainment approach.

Air Model

Deposition of various forms of airborne nitrogen emitted by vehicles, power plants and other sources onto the land and water surfaces of the Bay watershed is one of the major sources of nitrogen to the Bay. The Bay Program is updating its models for estimating these inputs, which COG water program staff will continue to track in conjunction with COG’s air program staff.

Climate Change

The Bay Program has begun to incorporate estimates of future changes in temperature, rainfall and other factors likely to result from climate change into its modeling framework. COG staff will continue to track how these changes could affect the attainment of water quality goals under the TMDL. COG staff will also evaluate options for conducting an independent scientific evaluation of the model’s climate-based assumptions. COG staff also participates in the Climate Workgroup, which is tasked with identifying how climate changes may influence the ability of various management strategies to restore the Bay.

Tanya Spano
 (202) 962-3776
tspano@mwkog.org

See related Note: in section above for proposed technical work.

Karl Berger
 (202) 962-3350
kberger@mwkog.org

Tanya Spano
 (202) 962-3776
tspano@mwkog.org

Other – Activities & Issues

COG Contact

FARM BUREAU BAY TMDL APPEAL TO SUPREME COURT

The American Farm Bureau Federation and other industry groups have requested the Supreme Court to revisit the legality of the Chesapeake Bay cleanup plan. The Farm Bureau coalition is arguing that the EPA overstepped its authority when it established the Chesapeake Bay Total Maximum Daily Load in December 2010. However, that argument was rejected in previous decisions by the Middle District Court of Pennsylvania and the 3rd U.S. Circuit Court of Appeals.

Heidi Bonnaffon (202) 962-3216
hbonnaffon@mwkog.org

To read the full Bay Journal Article, [click here](#).