

Bay TMDL & WIPs Blog Series 2012

First published in *Conduit Street*, written by Les Knapp, Legal & Policy Counsel, Maryland Association of Counties

Part 1 – Watershed 101: Q&A About Watershed Implementation Issues

September 7, 2012

With much attention across Maryland, including the county community, focusing on Watershed Implementation Plans (WIPs), MACo seeks to help better inform these discussions with some information and analysis relevant to their ongoing implementation. This item seeks to lay out some of the basics of current watershed issues, provide helpful links to sources for more exhaustive information, and to set up some more detailed treatment in the weeks ahead.

Q: What is a Watershed Implementation Plan, and who has to comply with it?

The plan is part of a “pollution diet” for the Chesapeake Bay area, to reach ambitious targets in reducing the “total maximum daily load” (TMDL) of specific nutrients – nitrogen, phosphorous, and sediment – into the Chesapeake Bay. To comply, the load of these nutrients into the Bay must be substantially reduced in the coming years.

[US EPA summary of the Chesapeake Bay TMDL and WIP](#)

[Maryland Department of the Environment – “How Maryland Will Implement The WIP”](#)

Q: How did all this get started?

The U.S. Clean Water Act of 1972 (expanding and consolidating a variety of preceding regulations) was the main federal legislation empowering the United States Environmental Protection Agency (US EPA) to monitor and regulate a variety of water issues, including making declarations of impaired waterways.

[US EPA – Summary and information about the Clean Water Act](#)

[US EPA – Overview of the Regulatory Process](#)

Q: What happened more recently?

Amidst a variety of consent decrees arising from stakeholders in several Bay watershed states, the US EPA issued a declaration of the Chesapeake Bay TMDL in December of 2010. That finding, essentially that the Bay constituted an impaired waterway, placed its watershed under much greater scrutiny by the federal government’s rule-making powers.

[December 2010 TMDL Document](#) (93 pages)

[Executive Summary of TMDL](#) (14 pages)

[May 2009 Executive Order](#)

Q: Is Maryland the only state affected?

No, the Bay TMDL affects six states (New York, Pennsylvania, West Virginia, Maryland, Delaware, and Virginia) and the District of Columbia, all of whom at least partially lie within the Chesapeake Bay's 64,000 square mile watershed. This is the largest geographical area that the US EPA has subjected to a TMDL limitation.

Maryland, along with each other affected jurisdiction, is required to comply with the EPA's assigned targets for nutrient reduction under the TMDL.

[US EPA – TMDL Document, Watershed Description](#)

[US EPA – Implementation Letter, November 2009](#)

Q: Why is this arising as an issue in each county, rather than statewide?

The Maryland Department of the Environment (MDE) developed an overall strategy calling for a state plan to target governmental facilities and state-controlled resources, but then delegated to each county its own targets for nutrient reduction. This process, stalled at several points by difficulties with data and modeling systems, has yielded aggressive goals for each county to address nutrient loads from its territory. No state legislation was passed to govern or direct this administrative process.

[Local Government Advisory Committee Report, July 2011](#)

[Maryland Department of the Environment – Bay TMDL Site](#)

[Maryland Department of the Environment – Phase II WIP Development Support](#)

Q: What is the total timetable for the effort?

Each affected state is required by US EPA to meet its targets for 2025, with an interim check (generally intended to have made 60% progress toward reduction goals) in 2017. The US EPA also intends to develop two-year progress milestones.

[US EPA Timeline](#)

[Feedback on Maryland's First Two-Year Milestone Report, February 2012](#)

Q: What are the deadlines facing the counties?

Counties were asked for WIP Phase II plans by 2012. Many counties have submitted final or tentative documents, and others are still undertaking a review process.

[Maryland Department of the Environment – County WIP Phase II Documents](#) (may not be fully updated)

Q: What is the concern about this implementation?

While counties, and nearly all stakeholders, agree with the goals of water quality and Bay cleanup, the potential costs of implementing the full WIPs have been staggering for many jurisdictions. Even under optimistic cost estimates, many individual counties face potential costs in the billions, with statewide implementation potentially totaling \$20-40 billion. Technical and timing concerns with the available data, modeling systems used to generate nutrient load estimates, and measuring results have also clouded the progress on these fronts.

[U.S. Representative Andy Harris Letter to MACo, July 2012](#)
[Frederick County WIP Costs Estimate Over \\$1 Billion](#)
[Baltimore Sun – County WIP Costs, December 2011](#)

Q: What happens if the county is unable to meet the targets in its plan?

US EPA asserts wide authority to engage a variety of enforcement actions – ranging from the redirection of federal funding to the outright denial of state-issued permits. The EPA website includes this statement: *“EPA’s goal is for jurisdictions to successfully implement their WIPs, but the agency is prepared to take necessary actions in all jurisdictions for insufficient WIP implementation or pollution reductions. Federal actions can be taken at any time, although EPA will engage particularly during two-year milestones and refining the TMDL in 2012 and 2017.”*

[US EPA “Ensuring Results” Webpage](#)
[Maryland Department of the Environment – Implementation Framework, June 2010](#)

Q: Have MACo and the counties been involved in this issue?

MACo has submitted formal comments and letters to all the actors involved, dating back to the inception of this effort, raising multiple points about implementation costs and the need for maximum local flexibility. Watershed issues have been a staple offering at each MACo conference for the duration of the TMDL development. Individual counties have routinely raised their own implementation concerns, especially as estimates of local costs have been developed.

[MACo January 23 Letter to Senator Mikulski and Maryland Congressional Delegation](#)
[MACo 2012 Summer Conference coverage](#)
[MACo Land Use Retreat, June 2012](#)
[MDE/MACo Exchange, February 2012](#)
[MACo Comments on WIP Phase I, November 2008](#)

In the weeks ahead, MACo seeks to write further about the ongoing process of planning and implementing these complex and ambitious programs.

Part 2 – The Conowingo Dam

November 21, 2012

This MACo post is the second in a series of blog articles that will examine the issues raised by the Chesapeake Bay Total Maximum Daily Load (TMDL) and the Watershed Implementation Plans (WIPs). Based on a court consent decree, the Bay TMDL is a United States Environmental Protection Agency (EPA) mandate to the Bay watershed states to reduce nitrogen, phosphorus, and sediment runoff into the Bay and its tributaries. In Maryland, the State has placed significant implementation responsibility at the county level.

THE CONOWINGO DAM

The Conowingo Dam spans the Lower Susquehanna River between Cecil and Harford Counties and is privately owned by the energy generation company [Exelon](#). It's approximately 14-mile reservoir is a source of drinking water for the Baltimore region in Maryland and the Chester region in Pennsylvania. The Dam is also subject to licensing and regulatory oversight by the [Federal Energy Regulatory Commission](#) (FERC).

[Profile on the Conowingo Dam](#) (Exelon)

[Conowingo Dam Background Information](#) (Wikipedia)

THE DAM AND THE BAY TMDL

The Conowingo Dam is important with respect to the Bay TMDL due to the significant amounts of phosphorus and sediment that is intercepted and trapped in the reservoir. The Dam reservoir also traps nitrogen, although to a much smaller extent. However, the reservoir has slowly filled in over the last several decades and there is evidence that during major storm events where the Dam's floodgates must be fully opened, the Dam releases large amounts of sediment and phosphorus into the main stem of the Bay. A 2012 United States Geologic Survey [report](#) summarizes the concern by highlighting the impact that Tropical Storm Lee (2011) had on the Conowingo's nutrient and sediment release into the Bay:

Trends in flow-normalized fluxes at the Susquehanna River at Conowingo, Maryland, streamgage during 1996–2011 indicate a 3.2-percent decrease in total nitrogen, but a 55-percent increase in total phosphorus and a 97-percent increase in suspended sediment. These large increases in the flux

of phosphorus and sediment from the Susquehanna River to the Chesapeake Bay have occurred despite reductions in the fluxes of these constituents from the Susquehanna River watershed upstream from the reservoirs. Although the Tropical Storm Lee flood event contributed about 1.8 percent of the total streamflow from the Susquehanna River to the Chesapeake Bay over the past decade (water years 2002–11), it contributed about 5 percent of the nitrogen, 22 percent of the phosphorus, and 39 percent of the suspended sediment during the same period. These results highlight the importance of brief highflow events in releasing nitrogen, phosphorus, and sediment derived from the Susquehanna River watershed and stored in the Conowingo Reservoir to the Chesapeake Bay.

The report concludes that the Conowingo reservoir is losing its ability to capture nutrients and sediment during major storm events and that the impact of this reduced capacity must be factored into future Bay restoration efforts:

The three dams at the downstream end of the Susquehanna River are important in mitigating the downstream transport of nitrogen, phosphorus, and suspended sediment from the Susquehanna River watershed to the Chesapeake Bay. The reservoirs are known to be more than 80 percent filled with sediment. A consequence of that filling is that they are no longer a major sink for the nitrogen, phosphorus, and sediment coming from the watershed, but rather are approaching steady state, with an approximately equal balance between the fluxes of these materials that enter the reservoir and those that leave the reservoir and enter the Chesapeake Bay. ...

Therefore, efforts to reduce nutrient and sediment inputs to the Chesapeake Bay will need to include consideration of changes in the trapping of sediment entering, and scouring of sediment in, the reservoirs along with the management actions implemented upstream in the watershed. Continued analysis of water-quality and discharge data that help to improve understanding of the future trajectory of these changes (with and without engineered modifications of the reservoirs) will be crucial to planning for the achievement of restoration goals for the Chesapeake Bay.

While the Dam does contribute pollution to the Bay and should be considered as part of the overall Bay restoration efforts, it is only one piece of the TMDL puzzle and is not a “magic bullet” that will alleviate State and local TMDL efforts. Addressing the Dam will not address locally generated sources of pollution nor will it address the pollution generated in streams and tributaries outside of the Susquehanna River and the main stem of the Bay.

FERC LICENSING PROCESS

FERC is the federal agency responsible for licensing the construction and continued operations of hydroelectric dams, including the Conowingo. Exelon provided [notice](#) on September 13 that it was seeking a renewal of its major license for the Dam (FERC Docket P-405, Subdocket 106). As FERC does have some oversight on the environmental impacts of hydroelectric projects, certain stakeholders have

proposed raising the Dam’s impact on the Bay TMDL as part of the licensing renewal process. Those wishing to receive notices about specific FERC dockets, including the Conowingo, can do so through an [eSubscription process](#). FERC has requested additional information from Exelon about its initial renewal application and Exelon has 60 days (until early January) to respond.

Any party may submit public comments that will be considered by FERC as part of the hearing process for license renewal. Additionally, a party has the right to become an [intervenor](#), which allows party to become participants in the hearing proceeding, request a rehearing of a FERC decision, and have standing to challenge FERC decisions in the United States Circuit Courts of Appeal. A party wishing to become an intervenor must [follow certain steps](#).

CONTROVERSY OVER CONOWINGO

Recently, the law firm of [Funk & Bolton](#) has proposed to represent counties in addressing the Conowingo Dam issue and possibly challenge other aspects of the Bay TMDL. Many counties have been approached by the law firm and some have agreed to retain the firm’s services.

[Funk & Bolton Conowingo Proposal](#)

Funk & Bolton’s efforts have generated strong reactions from the [Office of Governor Martin O’Malley](#), the [Midshore Riverkeeper Conservancy](#), and the Chesapeake Bay Foundation (CBF).

[CBF Letter to Governor O’Malley](#)

[CBF Conowingo Dam Fact Sheet](#)

Additionally, Dorchester County submitted [concerns](#) over the Dam to MDE in September. MDE provided a [response](#) in November, stating that while the Conowingo Dam should not halt WIP implementation it does pose a concern:

In short, although sediment behind Conowingo Dam is a valid concern that demands our attention and resources, it should not delay action on Bay restoration by Marylanders.

MACo EFFORTS

MACo is among many stakeholders reviewing the Conowingo issue and will respond based on the policy implications for county governments as they struggle to meet their TMDL targets. It is important to neither underestimate or overestimate the impact of the Conowingo Dam on the Bay TMDL. It is also important to note that the Conowingo Dam is not a “new issue” and stakeholders, including the State and EPA, have been aware of the Dam’s reservoir concerns for many years.

Addressing the problem, and fairly incorporating any connected actions will take a concerted effort — likely involving many key stakeholders, including Exelon, the State, the environmental community,

counties and possibly the federal government. MACo supports raising the awareness of this issue and encourages an ongoing discussion on reaching a solution to this challenge. As MDE noted in its response letter to Dorchester County, the Conowingo issue "demands our attention and resources."

For further information about MACo's efforts regarding the Conowingo Dam, please contact Les Knapp at 410.269.0043 or knapp@mdcounties.org.