



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

Mr. Richard Eskin, Ph.D., Director  
Science Services Administration  
Maryland Department of the Environment  
1800 Washington Blvd., Suite 540  
Baltimore, Maryland 21230-1718

MAY 18 2012

Dear Dr. <sup>Rich</sup>Eskin:

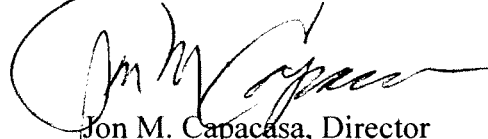
The U.S. Environmental Protection Agency (EPA), Region III, has reviewed the report *Water Quality Analysis of Total Phosphorus for the Conowingo Dam/Susquehanna River Watershed, Cecil and Harford Counties, Maryland*, which was submitted by the Maryland Department of the Environment (MDE) for final review on September 30, 2011. The Conowingo Dam/Susquehanna River watershed (MD-02120204) has been identified on Maryland's 2010 Section 303(d) list as impaired by nutrients (1996) and sediments (1996). The 1996 nutrients listing was refined on Maryland's 2008 Section 303(d) list to indicate that phosphorus (total) was identified as the specific impairing pollutant. This water quality analysis (WQA) addresses only the nutrients/phosphorus impairment. The listing for sediments will be addressed in a separate water quality analysis.

EPA agrees with MDE that current data indicates that a phosphorus Total Maximum Daily Load (TMDL) is not necessary for the Conowingo Dam/Susquehanna River watershed. Maryland's 2010 Integrated report did not make a determination regarding impairment to aquatic life within the Conowingo Dam/Susquehanna River watershed due to a limited amount of biological monitoring data; however, the watershed was reassessed in 2011 using Maryland's biological listing methodology (BLM) and additional biological monitoring data recently collected by the Susquehanna River Basin Commission (SRBC). The additional SRBC monitoring data increased the total number of biological monitoring sampling sites in the Conowingo Dam/Susquehanna River from five sites to 15. Of these 15 sites, only three had Benthic Index of Biological Integrity (IBI) scores less than the 2010 Integrated report minimum allowable limit of 2.65, and none of the sites had Fish IBI scores less than the 2010 Integrated report minimum allowable limit of 2.5. According to Maryland's BLM, if there are a total of 15 sampling sites within a Maryland eight-digit watershed, and there are no more than three sites with Benthic IBI or Fish IBI scores less than the minimum allowable limit, the watershed is considered to be similar to the population of reference sites, and therefore supportive of aquatic life. Since this reassessment indicates that aquatic life is not impaired in the Conowingo Dam/Susquehanna River watershed, all impairment listings for this watershed related to the protection of aquatic life, including phosphorus, should be removed, and TMDLs for these listings are not required.

In addition to the biological listing reassessment, further analysis was performed using available dissolved oxygen (DO) data collected from the smaller order streams of the Conowingo Dam/Susquehanna River watershed to determine whether phosphorus levels, which can influence DO concentrations, are excessive. The available DO data was compared to Maryland's DO water quality criteria for Use I-P waters (Water Contact Recreation, Protection of Aquatic Life, and Public Water Supply), which "may not be less than 5 milligrams per liter (mg/l) at any time" (COMAR 2010d). The analysis shows that all samples from the Conowingo Dam/Susquehanna River watershed have DO concentrations above the Use I-P criteria of 5 mg/l.

Thank you for the opportunity to review the Water Quality Analysis. If you should have any questions, please contact Mrs. Helene Drago, TMDL Program Manager, at 215-814-5796.

Sincerely,

A handwritten signature in black ink, appearing to read "Jon M. Capacasa", written over a circular stamp or seal.

Jon M. Capacasa, Director  
Water Protection Division

cc: Melissa Chatham, MDE-SSA