

# **Comment Response Document for the Nitrogen and Phosphorus for Wicomico Creek in Wicomico and Somerset Counties, Maryland**

## **Introduction**

The Maryland Department of the Environment (MDE) has conducted a public review of the proposed Total Maximum Daily Loads (TMDLs) for Nitrogen and Phosphorus in the Wicomico Creek. The public comment period was open from October 27, 2000 through November 27, 2000. MDE received one set of written comments.

The commenter, his affiliation, and the date he submitted comments are identified below. In the pages that follow, comments are summarized in conjunction with MDE's responses.

## **Commenter**

<b>Author</b>	<b>Affiliation</b>	<b>DATE</b>
James R. Trader	Citizen and taxpayer of Wicomico County	11/25/00

## **Comments and Responses**

1. The commenter questions the distribution and number of water quality and biological samples taken in Wicomico Creek and its tributaries. They also observe that no studies on aquatic life were noted in the draft TMDL document.

**Response:** MDE used all readily available data and information in the development of the TMDL for Wicomico Creek. MDE, in particular, conducted six water quality surveys in the Wicomico Creek basin during 1998. The locations are depicted in Figure 1 of the main document of the TMDL, and the specific dates as well as the key nutrient parameters for all six surveys are presented in Appendix A. Neither bacteriological samples nor surveys of living aquatic resources were conducted as part of MDE's six surveys in 1998.

2. The commenter questions how the low flows and average annual flows were calculated.

**Response:** Freshwater flows for both low flow and average flow were calculated using nearby

United States Geological Survey (USGS) gage data. The watershed was divided into five subwatersheds that closely correspond to the Maryland Department of Natural Resources 12-digit basins. A flow to area ratio was calculated based on data from three nearby USGS gages (#0148500, #0148550, and #0148600). The flow to area ratio was then multiplied by the area of each subwatershed to estimate the flow. Table A8 in Appendix A shows the distribution of subwatershed flows into the water quality model segments.

The low flow ratio was calculated by averaging July, August, and September 1998 flow data, which matched the time period of the water quality data. It was assumed that during summer, flow was only draining to those model segments that receive free-flowing streams. The average flow ratio was calculated by averaging 1984 to 1987 annual flow data, which matched the hydrologic time frame used to develop the Chesapeake Bay Program average annual loads. Table A4 in Appendix A presents the flows for the subwatersheds.

3. The commenter questions why the draft TMDL does not limit sediment including the different sources of sediment.

**Response:** The draft TMDL at issue addresses water quality problems associated only with nutrients. This waterbody is also on Maryland's 303(d) list for suspended sediments. This second impairment will be addressed at a later time.

4. The commenter questions how MDE proposes to control nonpoint source loads to achieve the draft TMDLs set for phosphorus and nitrogen as well as maintaining the dissolved oxygen criteria. The commenter specifically questions how MDE proposes to control eutrophication and sedimentation in Allen Pond.

**Response:** The allocations expressed in a TMDL are intended to serve as an outline of viable means for implementing the TMDL. MDE's rationale for not including a detailed implementation plan detailing the methods to be used to control the nonpoint source loads, is to allow for a separate, thorough process, involving the appropriate stakeholders. MDE considers implementation issues during the TMDL development process and establishes allocations at a level of detail that meet the intent of the law and meet the expectations of stakeholders to be involved in the future process of conceiving detailed TMDL implementation plans. Thus, rather than risk the appearance of imposing a detailed implementation plan from the top down during the relatively short time-frame available for conducting the TMDL analysis, the Department's current approach preserves the many future options for implementing the TMDL goals.

5. The commenter questions the source of nutrients in the basin, and how the total average annual nitrogen and phosphorus loadings were estimated.

**Response:** Most land uses in the basin contribute nutrients to the creek. MDE considers sub-allocations of nonpoint source loads to individual sources to be a detailed implementation issue, which is beyond the scope of this TMDL, as discussed above.

The baseline average annual nonpoint source loads were determined using land use loading coefficients based on the results of the Chesapeake Bay Watershed Model multiplied by land use information based on 1997 Maryland Office of Planning data, with cropland acreage refined by 1997 Farm Service Agency data. The Chesapeake Bay loading rates represent edge-of-stream loads for the year 2000 assuming Best Management Practice (BMP) implementation at levels consistent with current progress and account for atmospheric deposition, and loads from septic tanks, urban development, agriculture, and forestland.

6. The commenter questions whether runoff from a sod farm situated near Passerdyke Creek may adversely impact Wicomico Creek or its tributaries.

**Response:** The runoff from the sod farm was not considered as a separate load during the development of the TMDL. The loads from the farm, however, were included in the TMDL as part of the background load from Allen Pond. The low flow load reflects water quality data measured in 1998 just below Allen Pond. The average annual load was based on 1997 land use data and thus, also indirectly captures the load originating from the farm. (See comment # 5 for more detail on annual loads)

Determining the impacts of loads from specific properties is beyond the scope of a TMDL report but will be dealt with in an implementation plan for the draft Wicomico Creek TMDL. (See comment # 4)

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