

Comment Response Document for the Nutrient TMDL for the Chicamacomico River, Dorchester County, MD

Introduction

The Maryland Department of the Environment (MDE) has conducted a public review of the proposed Total Maximum Daily Loads (TMDLs) to limit Nutrient loadings to the Chicamacomico River. The public comment period was open from June 24, 2000 through July 25, 2000. MDE received one set of written comments.

Below is a list of commenters, their affiliation, and the date they submitted comments. In the pages that follow, comments are summarized in conjunction with MDE's responses.

List of Commenters

Author	Affiliation	Date
Robert M. Tenanty	Dorchester County	7/24/00

Comments and Responses

1. The commenter observed that the model calibration for dissolved oxygen (DO) does not appear to match the lowest values in the observed data at Station CCM0136 (downstream end of Big Millpond). The commenter requested an explanation and asked if adjustments were necessary.

Response: The Water Quality Analysis and Simulation Program (WASP) model was used for assessing TMDL for Chicamacomico River. The WASP model simulates the eight most significant water quality parameters associated with eutrophication. This model, maintained by the U.S. EPA Laboratory in Athens, GA, was used in a steady-state configuration, which simulates the waterbody system in dynamic equilibrium. Steady-state modeling is appropriate when the condition of interest approximates a steady state, which is the case when there exists a relatively constant summer low-flow.

The approach in developing the model is to calibrate the model parameters so that the model output matches the longitudinal trend in a range of data observed during low flow conditions. Then the model is used to simulate the rare situation of an extreme low stream flow condition. A range of observed data is used during the calibration process in order to provide a stabilized set of data for comparison. This is necessary because observed data, for the water body system, which may not be in equilibrium, is highly variable. Matching the trend of the data provides confidence that the

model is simulating the interactions of the key variables of the eutrophication process, which in turn provides confidence that these processes will be properly simulated for other the critical low flow stream condition.

Thus, given that a range of observed data is used for the comparison, the model calibration step is not necessarily intended to match the lowest dissolved oxygen, or highest chlorophyll *a*. Rather, it is to provide confidence that the model is simulating the various processes properly for use as a predictive tool. For these reasons, MDE feels that the calibration performed is appropriate, and adjustments are not necessary.