

Comment Response Document
Regarding the Total Maximum Daily Loads of Fecal Bacteria for the Non-Tidal Rock Creek Basin
in Montgomery County, MD

The Maryland Department of the Environment (MDE) has conducted a public review of the proposed Total Maximum Daily Loads (TMDLs) of Fecal Bacteria for the Non-Tidal Rock Creek Basin. The public comment period was open from August 12, 2005 through September 12, 2005. MDE received three sets of written comments.

Due to several comments the Department received, specifically with regard to critical conditions, the referenced TMDL document was revised and made available for a second public comment period. The public comment period was open from November 22, 2005 to December 21, 2005. MDE received one set of written comments.

Below is a list of commentors, their affiliation, the date comments were submitted, and the numbered references to the comments submitted. In the pages that follow, comments are summarized and listed with MDE's response.

List of Commentors

Author	Affiliation	Date	Comment Number
Jeff Zyontz	Montgomery County Department of Park and Planning	September 2, 2005	1 through 5
Jennifer Murphy, Staff Attorney, and Matthew Stack, Intern	Mid-Atlantic Environmental Law Center c/o Widener University School of Law	September 12, 2005	6 through 22
Thomas Henry	U.S. Environmental Protection Agency; Region III	September 12, 2005	23 through 27
Gwen Wright	Montgomery County Department of Park and Planning	December 13, 2005	28 through 30

Comments and Responses

1. The commentor states that the documents cite a 75% reduction assumption for domestic sources using certain best management practices (BMPs). The commentor asks if it was based on a comparison with areas with a "poop-scoop" law or without such a law. The commentor further states that if it was based on data from an area without such a law, then the potential domestic source reductions in Montgomery County, which does have this law, may be much less than 75%.

Response: No, the TMDL was not estimated based on the "poop-scoop" law. The 75% Maximum Practical Reduction "goal reflects uncertainty in effectiveness of urban BMPs¹ and is also based on best professional judgment" as written on page 32, Table 4.7.2. This is

based on the following literature: USEPA. 1984. Health Effects Criteria for Fresh Recreational Waters. EPA-600/1-84-004. U.S. Environmental Protection Agency, Washington, DC.

2. The commentor states that the documents should consider cumulative management effects. The commentor continues that it may be more feasible to do more than necessary upstream to meet downstream standards. The commentor suggests that the TMDLs should address this kind of approach and provide the necessary flexibility to implement them.

Response: Neither the Clean Water Act nor current EPA regulations direct states to develop a detailed implementation plan as part of the TMDL development and approval process. Implementation measures, therefore, are beyond the scope of this process.

3. The commentor states that on page 5, Table 2.1.3; their staff estimates for 2005 the total population for the Rock Creek basin is 222,000. The commentor further states that their population figure is not broken down further by subwatershed.

Response: MDE estimated the population using Maryland Department of Planning and the Bureau of Census data. Please refer to page 4 of the document for a brief description of how the population was estimated.

4. The commentor states that on page 9, Figure 2.1.4, the colors in the figure should be adjusted so that it is legible when copied in black and white.

Response: Your comment has been taken into consideration and figure 2.1.4 was updated.

5. The commentor states that on page 14, in the top paragraph, Lower Rock Creek is Use I-P.

Response: The TMDL analysis includes only from upstream station RCM0111, at Route 410 (East West Highway) and above. The Lower Rock Creek, stated by the Commentor, is not included in this TMDL analysis.

6. The commentor states that the proposed TMDL does not include combined sewer overflows (CSOs) or sanitary sewer overflows (SSOs) as potential point sources of pathogen contribution in the point source assessment. The commentor continues that the Rock Creek watershed is within a Phase I National Pollution Discharge Elimination System (NPDES) Municipal Separate Stormwater Sewer System (MS-4) permit jurisdiction. The commentor further states that CSOs are within the permit jurisdiction of an MS-4 permit. The commentor states that CSOs and SSOs must be included in the point source assessment; therefore, the proposed TMDL is inadequate. The commentor finishes with, in the proposed TMDL CSOs and SSOs are incorrectly characterized as nonpoint sources.

Response: SSOs are “accidents” that should not occur and are difficult to quantify. SSOs are not permitted and, therefore, are not included in the Waste Load Allocation. Currently, there are no CSOs in the Rock Creek watershed.

7. The commentor references page 19, and states that there were a total of 36 reported SSO overflows between November 2002 and October 2003. The commentor continues that there is only one consent decree addressing SSOs negotiated between EPA and MDE. The commentor recommends that there should be more information regarding other SSOs, who owns or controls such overflows, how many other overflows exist and any other, negotiated consent decrees.

Response: Washington Suburban Sanitary Commission (WSSC) provides safe drinking water and sewer services to Montgomery and Prince George’s Counties. All sewer lines in the Rock Creek watershed in Maryland are owned by WSSC. All the SSOs that occurred were with WSSC. The only Consent Decree in the Rock Creek watershed is the one for WSSC which involved EPA and MDE.

8. The commentor states that seasonal variation has not been fully considered in establishing the proposed TMDL. The commentor continues that the method chosen for including seasonal variation in the TMDL must be described. The commentor further states that there is no specific time of year mentioned; the TMDL states that only that monitoring data contains a year’s worth of data under varying conditions. The commentor summarizes that the Rock Creek TMDL does not discuss or describe the method chosen for consideration of seasonal variation; therefore, the TMDL is not sufficient.

Response: MDE is taking this into consideration and revising the TMDL analysis to include seasonal variations.

9. The commentor states that the critical conditions have not been considered as part of the analysis of the TMDL loading caps. The commentor continues that critical conditions must be considered as part of the analysis to determine loading capacity. The commentor further states that critical conditions were accounted for by applying the steady state geometric mean (as explained in the document), but were not considered as part of the loading capacity analysis. The commentor summarizes that this TMDL fails to meet the regulatory requirements of a TMDL.

Response: MDE is taking this into consideration and revising the TMDL analysis to include critical conditions.

10. The commentor, referencing the TMDL Pages 32 - 34, states that the maximum practicable reduction results for monitoring station RCM0111sub are not achievable within the target reduction estimate. The commentor continues that the practicable reduction targets are based on available literature and best professional judgment. The commentor recommends that the reduction targets for station RCM0111sub should be reconsidered in order to meet all target reductions for nonpoint source contribution.

Response: MDE defines all reductions to meet the TMDL.

11. The commentor states that there is no explanation of the reasonable assurance that the nonpoint source reductions will occur. The commentor continues that in a water impaired by both point and nonpoint sources, where point sources are given less stringent wasteload allocations based on the assumption that nonpoint source load reductions will occur, reasonable assurance must be explained, stating how the nonpoint reductions will happen. The commentor further states that the nonpoint reductions are briefly mentioned, but not explained in depth. The commentor concludes that this TMDL is inadequate.

Response: Neither the Clean Water Act nor EPA regulations require states to develop a detailed implementation plan as part of the TMDL development and approval process. Maryland's rationale for not including a detailed implementation plan within the TMDL documentation is to allow flexibility for those other government programs and stakeholders currently developing mechanisms to reduce bacteria loads to Rock Creek and other waters of the state.

12. The commentor states that the implementation plan does not account for any future point or nonpoint sources that may enter the watershed. The commentor continues that the proposed TMDL briefly mentioned wildlife growth and management, but does not address other growth of nonpoint sources, such as domestic, livestock or human populations or consider the addition of any new point sources. The commentor recommends that future point and nonpoint sources be taken into consideration when implementation plans are established. The commentor continues that future growth in the community, such as new point sources and additions to runoff, including, domestic, livestock and human population growth, should be considered with the implementation plan.

Response: Neither the Clean Water Act nor current EPA regulations direct states to develop a detailed implementation plan as part of the TMDL development and approval process. Implementation measures, therefore, are beyond the scope of this process.

13. The commentor states that MDE has done a thorough job of assessing contributing nonpoint sources and using BST to determine contributions of the pollutant.

Response: Thanks.

14. The commentor states that for TMDL analysis, there is difficulty in simulating bacteria in water quality models. The commentor continues that there is also difficulty in estimating bacteria sources due to the number of assumptions made and the limited data available. The commentor further states that these difficulties should be incorporated into the TMDL through use of the Margin of safety (MOS). The commentor maintains that it is not clear from the TMDL how conservative the included implicit MOS is. The commentor recommends that to account the difficulty in simulating the bacteria, the MOS should be even more conservative.

Response: TMDLs are required to include a MOS to account for uncertainties in a manner that is conservative toward protecting the environment. There are no strict guidelines or methodologies provided by the EPA for selecting a MOS, except to suggest that a MOS may be an explicit value held aside or conservative assumptions built into the analysis. The margin of safety proposed in this TMDL analysis is based on other TMDLs approved by EPA and was adopted in consideration of built-in conservative assumptions of the analysis. The MOS for the TMDL was selected with the understanding that the analysis and the MOS may be revised in the future as better information comes available.

15. The commentor commends MDE on its identification of problems with water monitoring stations and the use of a subwatershed approach.

Response: Thanks.

16. The commentor states that the TMDL loading cap is based on a long-term geometric mean, not literal daily limits. The commentor, referencing Table 4.6.1, the baseline load and TMDL load are expressed in terms of daily numbers. The commentor states that this creates confusion as to what the actual unit of measure is for the long-term geometric mean used to estimate loading caps.

Response: The TMDL daily average load must be met by any given period (i.e. 30-day period, seasonally, or yearly, etc.) The TMDL loading cap is based on a long-term geometric daily term, Most Probable Number(MPN)/day.

17. The commentor, referencing page 31, states that for the purpose of TMDL analysis and allocations, unknown sources were removed and known sources were scaled proportionally to reach 100%. The commentor continues that this allows contributions from the unknown sources to remain in the total waste load, while the scaled known sources will be given an inflated percentage. The commentor further states that this will then allow the inflated unknown sources to remain at a high level and allow for more contribution after reduction. The commentor asserts that the way it is set up any addition of an unknown source to the load will automatically violate the TMDL because the proposed TMDL does not leave room for unknown sources. The commentor ends with the conservative MOS is not enough to remedy this problem because even though the source of the pollutant is unknown, the fact there is additional unknown source is known.

Response: The goal of the Bacteria Source Tracking is to estimate the four sources with high probabilities in one category: domestic (pets and human associated animals), human (human waste), livestock (agricultural animals), and wildlife (mammals and waterfowl). There were some samples that were sampled that had high probability for all sources. These were assigned as Unknown Sources. When the unknown sources are removed, the known sources were scaled proportionately upward, which would include the unknown sources.

18. The commentor commends MDE on its analysis of the maximum practicable reduction targets.

Response: Thanks.

19. The commentor states that it is unclear as to why there is 0% in applied reductions for domestic and livestock at station NBR0002up. The commentor continues that it is not explained why there are no values for these bacteria sources or if there are simply no sources of that distinction.

Response: The TMDL analysis has been reviewed and revised.

20. The commentor states that it is unclear as to how TMDL reductions for wildlife contribution will be accomplished. The commentor continues that it is unclear if there is any way to implement these reductions, if in fact that is what MDE is implying.

Response: Neither the Clean Water Act nor current EPA regulations direct states to develop a detailed implementation plan as part of the TMDL development and approval process. Implementation measures, therefore, are beyond the scope of this process.

21. The commentor states that the MOS is implicit and not specific as a separate term. The commentor continues that when the MOS is implicit, the conservative assumptions and the analysis of the MOS must be explained. The commentor asserts that there is no explanation regarding the MOS in the proposed TMDL and therefore, the TMDL is inadequate.

Response: In Section 4.5, the implicit MOS is explained. See also the response to Comment 7.

22. The commentor states that it is unclear as to whether all nonpoint human source loads are attributed solely to septic systems or if there are contributions from other bacteria sources from humans.

Response: It is unclear at this time. A more detailed sampling program is needed to address this issue. During the implementation plan phase, a more detailed sampling program would be conducted to address this. Implementation measures, are beyond the scope of this process.

23. The commentor is concerned that the following TMDL requirements are not being met by this TMDL: the TMDLs are designed to implement the applicable water quality standards; the TMDLs consider critical environmental conditions; the TMDLs consider seasonal environmental variations.

Response: MDE is taking this into consideration and revising the TMDL analysis to include applicable water quality standards, seasonal variations and critical conditions.

24. The commentor states that the Designated Uses and Water Quality Standard section in the draft TMDL cited the previously applicable water quality standards. The commentor continues that the EPA approved revised standards on August 29, 2005 that removed COMAR 26.08.02.03.A(1) and (2) through (5).

Response: The public comment period for this TMDL began on August 12, 2005. The water quality standards that were applicable at the time of the public comment period were noted in the TMDL document. Since the “new” standards have been approved, the document will be revised to reflect the new criteria.

25. The commentor states that the draft TMDL report calculated a weighted year-long geometric mean which was compared to the fecal bacteria criterion. The commentor further states that the year-long geometric mean appears to be inconsistent with the cited State regulations and also the new applicable regulations.

Response: MDE is taking this into consideration and revising the TMDL analysis.

26. The commentor presents a table of a number of calculations of geometric means “demonstrating the effects of ignoring seasonal and/or critical environmental conditions” for StationNBR0002. Based on their calculations, Rock Creek does not meet its designated use during the critical period, Memorial Day through Labor Day. The commentor continues that the draft report does require a reduction in fecal bacteria loads from the subbasin but the approximately 4% reduction appears unlikely to achieve water quality criteria during the critical period. It should be noted that the rolling geometric appear more sensitive to changing conditions and should be used for comparison with the criterion. As a result, EPA would be unable to approve the Rock Creek Bacteria TMDL report as written.

Response: MDE is taking this into consideration and revising the TMDL analysis.

27. The commentor requests that the actual calculations be provided, including but not limited to, flows at all monitoring stations and any spreadsheets, etc. used in the analysis.

Response: After the completion of the TMDL, all actual calculations will be provided.

Comments from the Second Public Comment Period

28. The commentor states that the documents cite a 75% reduction assumption for domestic sources using certain best management practices (BMPs). The commentor asks if it was based on a comparison with areas with a “poop-scoop” law or without such a law. The commentor further states that if it was based on data from an area without such a law, then the potential domestic source reductions in Montgomery County, which does have this law, may be much less than 75%.

Response: See response to Comment #1.

29. The commentor states that the documents should consider cumulative management effects. The commentor continues that it may be more feasible to do more than necessary upstream to meet downstream standards. The commentor suggests that the TMDLs should address this kind of approach and provide the necessary flexibility to implement them.

FINAL

Response: See response to Comment #2.

30. The commentor refers to page 12, top paragraph: Below Norbeck Road (Rt. 28), Rock Creek is Use I.

Response: The document has been corrected.