

**Comment Response Document
Regarding the Total Maximum Daily Loads of Fecal Bacteria for the Non-Tidal Jones Falls Basin
in Baltimore City and Baltimore 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 Jones Falls Basin. The public comment period was open from August 4, 2006 through September 5, 2006. MDE received two sets 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
Jennifer Schaafsma	Maryland Department of Agriculture	August 24, 2006	1 through 2
Eric Schott	Jones Falls Watershed Association	September 5, 2006	3 through 9

Comments and Responses

1. The commentor states that there is only one watershed that shows a significant crop or pasture land (JON0184) and it would appear to have a lower concentration of bacteria from livestock than the city watershed. The commentor also points out that JON0184 shows a lower percentage of livestock bacteria than UQQ0005 which has only one small plot of pasture land. The commentor would dispute that it is possible to make reductions from livestock where they do not live. The commentor also says that the human percentage in UQQ005 looks wrong, calculating that it should be 70.6%.

Response: The relative percentage of bacteria sources into the stream is calculated using a scientific and widely acceptable technological method designed to distinguish the origins of bacteria found in environmental waters and not only based on the percentage of landuse in the watershed. The use of antibiotic resistance analysis (ARA) was successful for identification of bacterial sources in the Jones Falls Watershed as explained in Appendix C of the report, which shows a percent rate of correct classification of bacteria sources of 72%. The human percentage as shown in Table 4.7.1 is 70.5% for subwatershed UQQ005. MDE believes this percentage is correct and is very close to the percentage estimated by the commentor (70.6%).

2. The commentor states that the city land use shows the zoo as forested, but that there should be a different category because it won’t have the same kind of runoff as a forest: the park land is full of roads with urban type drainage. The commentor further states that the city has mounted police and the Arabers use horses to pull their carts. The commentor adds that the

Zoo, the Araber Association and the Police should be able to give an estimate of animal numbers. The commenter concludes that the wide variety of animals suggests that a wider range of animal bacteria should be included in the reference library.

Response: As explained in the response to Comment 1, the percentage of each bacteria source category used in the TMDL analysis is not estimated using landuse acreages or animal counts in the watershed but by using a widely acceptable scientific method that estimates these percentages of sources in water samples collected within the watershed

3. The Jones Falls Watershed Association urges MDE to set TMDL thresholds to reflect the increasing use of the Jones Falls and its tributaries as a recreational necessity in Baltimore. Specifically, refraining from setting precedents that may result in downgrading intended uses of waters and on the contrary increase the accepted uses if at all possible. The commenter states MDE must understand that streams coursing through neighborhoods and parks will be in contact with children and adults and bacterial TMDLs must be set to reflect the actual risk. The commenter continues that attempting to set lower standards because of expense or difficulty in attaining more responsible standards cannot be acceptable.

Response: MDE does not intend to downgrade designated uses in the Jones Falls. To the contrary, the main purpose of the TMDL, as stated in several sections of the report is to establish the limits for fecal bacteria in Jones Falls and its tributaries that will allow for the attainment of the designated use primary contact recreation.

4. The commenter is concerned about what he sees as an inadequate set of data used to establish the TMDL. The commenter continues that perhaps MDE applied a formula for monitoring that was developed for other simpler watersheds. The commenter states the paucity of data collected by MDE, and the failure to take a more watershed-wide look at bacterial counts and inputs stands in contradiction to recommendations made by the extension service of our neighbors in Virginia, who recognize the potential value of bacteria source tracking (BST), but emphasize that BST is not a stand-alone method, and must be paired with robust information on the watershed. The commenter also states that the examination of the BST data in Appendix C reveals the percentage of “source unknown” bacteria in many samples to be extraordinarily high.

Response: As explained in the TMDL report, bacteria occur in concentrations that vary widely and estimating loads of constituents that vary sometimes by orders of magnitude can introduce many uncertainties. The one-year monitoring period for the Jones Falls TMDL analysis covers all the seasons, and the analytical methodology applied, when combined with the bacteria source tracking (BST), provide reasonable results without the need of expensive and time consuming, longer monitoring periods. In addition, 2003 was a wet year representing a conservative assumption in the analysis. Furthermore, the Code of Federal Regulations (40CFR130.7) states that all readily available data should be used in the development of the impaired waters list and subsequent total maximum daily loads (TMDLs). The percentage of “unknown” sources in the Jones Falls BST results are within the normal range of unknown sources when compared to other BST in other watersheds in the State.

5. The commentor states that without having conducted an adequate “spatio-temporal assessment” of current bacteria load, there is concern that MDE is asserting that reductions in bacterial numbers are not practicably attainable.

Response: MDE believes the assessment is adequate in both time and space for the Jones Falls watershed TMDL analysis. Similar assessments have been performed in watersheds throughout the State of varying sizes and magnitudes of bacteria contamination with acceptable results. Please also see the response to Comment 4.

6. The commentor states that the MDE assessment is based on sparse data, that “maximum practicable reductions are not attainable in the Jones Falls”. The commentor continues that in the context of whether reductions to meet TMDL targets are “practicably” achievable, the number and location of sampling sites is particularly inadequate in some tributaries, and has obvious implications for the attainability of TMDLs with practicable measures. For example, Western Run is not sampled on its own at all, yet has some of the most significant sanitary sewer overflow (SSO) events. This important tributary may have been overlooked because MDE was looking ahead to infrastructure changes, which will hopefully reduce bacteria in Western Run from SSOs. But, MDE has not presented any baseline data for Western Run on which to build models, or use as reference data for determinations of future improvement. The JFWA and partners in the Baltimore Sewer Coalition have reason to believe that SSOs are more numerous and of longer duration than as recorded in MDE or municipal documents. This may actually be a glimmer of light for the achievability of TMDLs because repairing faulty infrastructure would therefore have a greater effect on bacteria in Western Run or other tributaries with frequent SSOs. Given that these leaks are the greatest threat to human health (as they contain potential human pathogens), they should be addressed very early in the remediation phase. Waiting until 2016 or 2020 to see SSOs repaired is too long from a health perspective. Sparse sampling also means that sources of bacteria are uncertain, which then has ramifications for the Maximum Practicable Reduction targets. More adequate data collection now would provide helpful information for determining where to implement such programs and evaluate their effectiveness.

Response: As in the previous response, MDE believes the amount of data and the assessment is adequate in both time and space for the Jones Falls watershed TMDL analysis. As for Western Run, MDE did not overlook this tributary “because MDE was looking ahead to infrastructure changes”. The sampling plan, as performed, was sufficient for the analysis and sampling all the streams in the watershed is not practicable and will not yield better results. MDE acknowledges that the extent of bacteria contamination due to SSOs is high and that they represent the greatest risk to human health, and as such they are stated in the TMDL report. EPA regulations do not require states to develop a detailed implementation plan as part of the TMDL development and approval process.

7. The commentor requests MDE to take a watershed wide approach to establishing both the number/sources of bacteria in the Jones Falls and in the implementation of reductions. This means using more complete bacterial data, sampled in more tributaries and developing

bacterial reduction plans that include best management practices (BMPs) to achieve reductions beyond the initial reductions associated with infrastructure repairs.

Response: Please see the response to Comment 5 for additional information on the scope of this TMDL's development. For the second part of the comment regarding implementation, 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 Gwynns Falls and other waters of the state.

8. The commentor requests that MDE should play a role in speeding up the repairs to stop SSOs; the commentor believes the effect will be greater than would be indicated by MDE data. The commentor also requests copies of the information that is mentioned in the TMDL draft on page 22, "64 SSO events reported between October 2002 and October 2003. Approximately 454,000 gallons of SSO discharge..."

Response: The first request is beyond the scope of the TMDL analysis. However, in addition to the efforts by Baltimore City and Baltimore County to repair their sewer infrastructures in accordance with the consent decrees referenced in the TMDL document, an implementation plan will be developed for application of best management practices following EPA approval of the TMDL. Please see the response to Comment 7 for additional information regarding implementation and the TMDL development process. The data for the 64 SSO events is available through the MDE website at: <http://www.mde.state.md.us/programs/waterprograms/overflow/>

9. The commentor requests a copy of any MDE responses generated by this and other commenting on the Jones Falls TMDL.

Response: As part of the TMDL Outreach process, all identified interested stakeholders, including commentors, receive a copy of the comment response document to this TMDL and all documents associated with it will be available and posted on MDE's TMDL website after EPA approval.