

**Comment Response Document  
Regarding the Total Maximum Daily Loads of Fecal Coliform for the Restricted Shellfish  
Harvesting Area in the Lower Choptank River Mainstem in Dorchester and Talbot  
Counties, Maryland**

The Maryland Department of the Environment (MDE) has conducted a public review of the proposed Total Maximum Daily Loads (TMDLs) of Fecal Coliform for the Restricted Shellfish Harvesting Area in the Lower Choptank River Mainstem. The public comment period was open from July 28, 2006 through August 28, 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**

<b>Author</b>	<b>Affiliation</b>	<b>Date</b>	<b>Comment Number</b>
Jennifer Schaafsma	Maryland Department of Agriculture	August 10, 2006	1 through 4
Jim Newcomb	Dorchester County Soil Conservation District	August 17, 2006	5

**Comments and Responses**

1. The commentor states that until source tracking is completed they can't know the sources of the bacteria so publishing a TMDL seems premature. The commentor asks has source tracking shown the methods of allocating the load to be reasonable.

**Response:** MDE is committed to developing TMDLs for all of its impaired waters on a schedule developed in cooperation with the U.S. Environmental Protection Agency (EPA). In keeping with that schedule, Maryland slated this and other fecal coliform/bacteria TMDLs to be completed in this timeframe. MDE is currently conducting bacteria source tracking (BST) for all fecal coliform TMDLs currently scheduled or completed for TMDL development as soon as possible. Unfortunately, MDE's completion of BST analyses for these watersheds is constrained by the laboratory capacity with which the State has contracted to perform the work. This is a necessary constraint, given that BST is a new science. MDE is using one research laboratory to reduce possible discrepancies in source library building between multiple laboratories. It is expected that the BST results will provide a more accurate estimate of bacteria sources within the embayment. The TMDL reports will be revisited upon receipt of the BST results.

MDE has received approval from EPA to proceed in this manner, with the understanding that the TMDL reports will be revisited and receive potential revisions that are subject to public consideration upon receipt of the BST results. In the mean time, the State is using the best available information to estimate the bacteria loading contributions by the four major source

categories (human, pet, livestock and wildlife). It is expected that these data will be used as a tool to identify significant source contributions in the basin.

Please note that the TMDL is an estimate of the assimilative capacity of the water body and is based on the water quality criteria. We typically estimate the current condition (baseline) to give an approximation of the reduction that will be required for attainment of water quality standards. Therefore, the BST source information will not change the estimated assimilative capacity, but will provide more precision and accuracy to the current source distribution. The BST information will be available for Lower Choptank River Basin in 2008.

Data is not yet available to compare between the method for source allocation in the TMDL with bacteria source tracking study currently underway.

2. The commentor states that the dense concentration of septic systems and the shallow water table of the Eastern Shore would indicate a human origin for more than 0.01% of the fecal coliform. The commentor continues that recreational water vessels that discharge directly into the water should be figured in somehow. The commentor also states that since there is no distance, it all goes in the water while other uses have reduction factors.

**Response:** The State is undertaking bacteria source tracking (BST) in an effort to obtain more accurate information regarding human loads. If the BST results indicate higher human loads than estimated, the load allocation will be revised.

3. The commentor asks what livestock numbers are being used. The commentor continues that avian livestock are mainly kept indoors and that increasingly, poultry farmers are having their manure cleaned out and hauled away so the manure available to wash off is reduced. The commentor continues that the spikes of activity in the spring and fall are likely to be due to migrating waterfowl. Poultry litter is usually applied in the spring and Maryland Department of Agriculture (MDA) discourages farmers from applying any nutrients in the fall because the plants are not there to use them. However, there is very little run off on level ground so on the Eastern Shore one would not expect much coliform from manure, except in a year with major rains at that time. Hurricane season is much later. The sandy soils percolate quickly. The migrating waterfowl have a major input in the spring and fall and it is directly in the water.

**Response:** MDE recognized the fact of improvement in applying poultry litter management in the TMDL development process and only 10% of poultry litter was assumed to be subject to runoff. The assumption is based on the overall condition of the State. For each watershed, different practices may result in less runoff. Because of the large drainage area of the estuary, BST results will not be able to identify correctly the source distributions at the subwatershed level. The estimation can be considered as a first-order approximation without detailed information regarding the litter practices. By combining BST results and seasonal distribution of fecal coliform, the source contribution can be better assessed.

4. The commentor asks should subwatershed 1030 be included in the analysis; it is below the impaired section of the Choptank.

**Response:** The subwatershed 1030 was included in the model simulation. The potential fecal coliform source was analyzed. Because no load reductions are required of this area and it is located outside of the restriction area, the model results were not included in Table A-3.

5. Since subwatersheds #1010, #1020, and #1030 are the only watersheds that include Dorchester County, the commentor questions the accuracy of the loading distributions amongst these watersheds. The commentor continues that the percentage of loading divided between Livestock, Pets, Human and Wildlife seems to vary excessively between similar watersheds. The commentor presents the following example: this change can be seen when comparing watersheds 1010 and 1020, both watersheds are very similar in make up, yet livestock loading ranges from 43% to 90% while Wildlife loading ranges from 55% to 9%. The commentor states that it is hard for him to know if the numbers are accurate or not, but feels that the numbers for 1030 would be more realistic for this area. The drastic change in percentage is what was of concern to him.

**Response:** The possible cause of source differences among these subwatersheds are due to wildlife data coverage. Although the best data set of wildlife has been used, the total number of birds, for example, is based on the survey results at each subwatershed. However, the survey may not cover the entire area. Therefore, some discrepancies can be expected. The results may be adjusted if additional information of individual sources is provided. The estimation provides a guideline, and the BST results will help clarify the sources of fecal coliform.