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Ms. Anna Soehl
Maryland Dept. of the Environment/SSA
1800 Washington Boulevard, Suite 540
Baltimore MD 21230

Dear Ms. Soehl:

I write on behalf of the Severn River Association in response to your announcement of a Notice of Intent to Establish Total Maximum Daily Loads (TDML) of Fecal Coliform (FC). We very much appreciate this opportunity to comment.

We have reviewed the draft document entitled "Total Maximum Daily Loads of Fecal Coliform for the Restricted Shellfish Harvesting Areas in Whitehall and Meredith Creeks, Mill Creek, and the Severn River Mainstem of the Severn River Basin in Anne Arundel County, Maryland." and have the following general comments and specific remarks on the "Key Components."

1. We acknowledge, with thanks, the Maryland Department of the Environment (MDE), and the authors of the document, for the financial, scientific and technical resources they have all devoted to the task of producing this draft document.

2. The Severn River Association has a vital interest in the health of the Severn River watershed, especially with respect to water quality in the Severn River because of its importance to public health and natural ecological values.

3. TDMLs properly protective of these values are in the public interest, and we support them insofar as they will help to achieve the desired results.

4. Fecal Coliform levels are useful indicators of the presence of organisms having potential public health and other environmental effects, and deserve a promulgated TDML that will contribute to measures to control them.

5. A stated purpose of the document is to establish TMDLs of FC, to allow for the attainment of shellfish harvesting designated use in the three restricted shellfish harvesting areas of the Severn River basin. We acknowledge this to be desirable, and hope for a return one day to the use of the Severn River for shellfish harvesting. Nevertheless, we caution that information embodied in a fecal Coliform TDML is but one, perhaps not the most important one, of many factors that ought to influence a decision to permit wider harvesting. For example, minimum shellfish population levels should also be dictated by ecosystem requirements, since water quality itself depends

upon the existence of robust shellfish populations. Shellfish harvest rates must also depend on species diversity and yield sustainability constraints. Compliance with the final TDML for fecal Coliform, while important, cannot be the only criterion for harvesting shellfish.

6. A major concern is focused on the two components that cover the sources of FC in the Severn River watershed. In particular, we are concerned about the relative contributions that are estimated to come from dogs and humans. Although we understand that there are few reliable data on FCs contributed by failing septic systems, boat heads, or leaking sewer pump stations, there must be some basis for estimating contributions from these sources. MDE has included a map showing the widespread distribution of private septic systems throughout the study area. A literature value of 3% failure of septic systems is used as the potential contribution of human sources from septic systems in this document. The Severn River watershed may not reflect this average because there are many former summer houses that have been converted to year-round residences with inadequate septic fields. In this document, using the 3% failure rate of septic systems results in the human contribution of only 1.5% of the total load. As a result of these estimates, all sub-watersheds of the Severn are thought to have nonpoint sources of FC: 17-87% dogs and 9-71% wildlife. Only 0.6-2.4% of the total nonpoint FC contributions are estimated to be human, a value we believe may seriously underestimate reality.

7. Anne Arundel County has a pet waste litter law and many of our members have seen dog owners pick up after their dogs. Perhaps this should result in a lower estimate of the contribution of FC from dogs?

8. The hyperlink on page 35, to the bacterial source tracking schedule, does not function. Information previously provided by MDE states that they are using antibiotic resistance patterns to determine whether a given FC is derived from a human or non-human source. Many investigators are working to come up with a method that will make such a distinction and many have determined that antibiotic resistance patterns are among the least reliable methods to find the source. This area deserves further investigation, since ambitious work underway at Salisbury University will take many years to complete. If a more reliable and affordable method is found, will the State be able to take advantage of this?

9. Another concern is the Implementation topic. This TMDL document states that if wildlife are found to be a primary source of FC in some sub-watersheds, then some water bodies will not be able to meet the standards. Clearly, eliminating wildlife is not a desirable goal and yet there is no mention of improving stormwater control and riparian buffers. Both of these latter processes could go far in reducing input from both pets and wildlife and should be included in an implementation scheme. A review of FC distribution in your document shows wide variations in the numbers of FCs in the river.

10. Although no rain data are included, it seems likely that the great variation is due to rain events. Data from Anne Arundel County Health Dept. on the input of enteric bacteria into the Severn River after rain will confirm the need for stormwater reduction and treatment to reduce FC levels in the watershed after heavy rains. The Severn River Association has sponsored the program Operation Clearwater for over thirty years. This

program monitors the number of enteric bacteria found at beaches and marinas throughout the Severn River watershed. Data for the last few years can be found on the SRA website severnriver.org, under "Operation Clearwater Results", Sally Hornor, Director. The single most striking aspect of these data is the correlation between recent rainfall and numbers of enteric bacteria. These data confirm a need for retrofits for stormwater control for existing developments, roads and parking lots, and a need for better systems for controlling stormwater in future developments.

11. Finally, we encourage MDE to avail themselves of existing and emerging resources to monitor and model the Severn River with respect to environmentally significant parameters. For example, the US Naval Academy's Center for Chesapeake Bay Observation and Modeling , David L. Kriebel, Director, is developing and will deploy instrumentation and models that may be useful in future work on TDMLs for some pollutants. The Severn River Watershed Management Tool may also be useful in modeling phenomena of concern.

Again, we thank you for the opportunity to comment on this important document, and we express our continuing interest in promulgating fully protective TDMLs. Further, we support such actions and regulations as will be found necessary to achieve the levels they specify.

Sincerely,

Kurt Riegel
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