

**Comment Response Document
Regarding the Total Maximum Daily Load of Mercury for Tuckahoe Lake
Caroline County, MD**

Introduction

The Maryland Department of the Environment (MDE) has conducted a public review of the proposed Total Maximum Daily Load (TMDL) of mercury for Tuckahoe Lake. The public comment period was open from November 22, 2002 to December 21, 2002. 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
Patricia Gleason	U.S. Environmental Protection Agency	December 20, 2002	1 through 4

Comments and Responses

1. The commentors ask that Section 5.0 "Assurance of Implementation" include a more detailed discussion of the percentage reductions and timeframe by which such reductions are anticipated by the Clean Air Act. They also ask that Section 5.0 include more discussion of efforts being undertaken by Maryland's regulatory programs, for example, controlling mercury in solid waste streams to reduce emissions from incinerators.

Response: The purpose of a TMDL analysis is limited to determining the maximum loading limit that meets existing water quality standards. Neither the Clean Water Act nor current U.S. Environmental Protection Agency regulations direct states to develop a detailed implementation plan as part of the TMDL development and approval process. Although formal implementation planning is currently beyond the scope of the TMDL development process, Maryland is committed to enforcing applicable laws and supporting initiatives necessary to implement this and other TMDLs. Furthermore, the Department is committed to ensuring that the integrated activities of the administrations responsible for air and water are coordinated in response to the challenge of addressing mercury in fish tissue. This commitment extends to working with other State and federal agencies to explore a number of implementation issues (e.g., the use of air shed models to estimate the relationships between sources and receptors).

The Department recognizes that water quality management programs do not have direct control over air programs. One motivation for developing the mercury TMDLs is to provide information to government officials and the public to guide the on-going debate on the pace

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of controlling atmospheric sources. It is our understanding that actions under the Clean Air Act will reduce mercury by significant percentages, which are in the range of the estimated reductions needed to achieve the TMDLs. However, an estimate of the timing by which these reductions will be achieved is elusive, and made more uncertain by the on-going national debate on details of implementing the Clean Air Act.

EPA has taken a number of actions to advocate reduced mercury pollution, including promulgating regulations for industries that contribute significantly to mercury pollution. These actions, once fully implemented, are expected to reduce nationwide mercury emissions caused by human activities by about 50% from 1990 levels. Examples include the following, which are cited in Section 5.0 of the mercury TMDL document:

- Municipal waste combustors. EPA issued final regulations on October 31, 1995. These regulations were expected (by 2000) to reduce mercury emissions from these facilities by about 90%, from 1990 levels;
- Medical waste incinerators. EPA issued emission standards on August 15, 1997. These were expected (by 2002) to reduce mercury emissions from these facilities by about 94%, from 1990 levels.¹

In addition to controls on mercury air emissions, proper management of mercury containing productions and source reduction are critical components to reducing mercury in the waste stream and to the environment. Maryland has taken several steps toward source reduction:

- About 11 counties in Maryland have instituted household hazardous waste collection programs, where wastes including mercury containing products can be collected for safe management and disposal;
- Effective October 1, 2002, there is a prohibition on the sale and distribution of mercury fever thermometers in Maryland except by prescription (with certain exceptions, such as hospitals);
- Effective October 1, 2003, primary and secondary schools cannot use or purchase elemental or chemical mercury. MDE is required to provide outreach to schools on the management, recycle and disposal of mercury products.²
- Effective November 1, 2002, MDE will be implementing EPA's Universal Waste Rule which encourages the collection and recycling of wastes including mercury containing thermostats, lamps, and other products.
- Maryland is part of EPA Region 3's "e-cycling" project, which encourages the collection, refurbishment, and recycling of electronic devices. Four permanent sites in Maryland have been established for collection of computers, tv's, monitors, etc.
- Five sites in Maryland are partners and another MD company is a champion in the Hospitals for a Healthy Environment (H2E) program. Under this program, a Memorandum of Understanding was signed between USEPA and the American Hospital Association, calling for, among other things, virtual elimination of mercury-

¹Source: www.epa.gov/mercury/information.htm

²Source: www.mde.state.md.us/assets/document/Retailers_Manu_web_version.pdf

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containing hospital wastes by the year 2005. As of November 1, 2002, the program has 338 partners representing 1021 health care facilities.³ The program's website, www.h2e-online.org/tools, provides additional tools to these facilities for waste management and pollution prevention.

As additional data and information are collected, and as new legal requirements are imposed under the Clean Air Act and other environmental statutes, MDE will continue to evaluate the effectiveness of the regulatory and non-regulatory programs in achieving the water quality targets under this TMDL.

2. The commentors suggest several refinements to the point source loading estimates. In particular, they suggest MDE determine whether any of the treatment systems also treat stormwater (i.e., those that have combined sewer overflows).

Response: No useful observed data was available for the point sources. A monitoring initiative is under development, which will characterize the point source contributions. With this in mind, the TMDL analysts did not attempt to develop an accurate estimate of point source contributions. Rather, they sought to over estimate the potential point source contributions in order to develop a future allocation that was large enough to accommodate point sources, leaving the Department the option to require reduction actions if warranted. In addition, an additional amount was set aside to serve as a reserve for future regional negotiations on atmospheric deposition. MDE is confident that the future allocation is large enough to provide ample flexibility to address future needs.

If future estimates of sewer overflows indicate the allocation is not sufficient, then the Department has the authority to further refine the allocations to meet the TMDL. Given the transient nature of overflows, and the dilution that accommodates such overflows, it is likely that the high estimates used in the analysis will prove to be sufficient.

3. The commentors note that subtraction of the relative source contribution from the reference dose corresponds to a maximum allowable fish tissue concentration of about 172 ug/kg. They ask that we clarify whether this is intended to be a margin of safety.

Response: This was intended to be noted as a margin of safety in the TMDL report. The report has been modified to address this comment.

4. The commentors note that, in Appendix C, the references to Gilmour 1971, Gilmour and Henry 1991, and Shimonomora 1989 should be included in the references.

Response: This has been noted, and refinements will be made to the report.

³Source: www.h2e-online.org