

MB Discussion Paper: Assessing Mercury Reductions in the Chesapeake Bay watershed

Management Broad Request: During the May 12 MB meeting, Toxic Contaminant Workgroup (TCW) was asked to develop potential next steps for information on mercury. The MB members would use the findings to decide if more information on mercury and management efforts are needed.

Current Efforts to Reduce Mercury are Focused on Air Emissions

TMDLs demonstrate that the mercury reductions from atmospheric depositional loadings must be implemented in order to reduce levels in fish tissue that are safe for human consumption. The regulations in place for reducing air emissions of Hg from coal-fired powered plants (such as Maryland's Healthy Air Act) have significantly reduced mercury deposition and the decommissioning and conversion of coal fired power plants to oil/natural gas will continue to further reductions.

Trend analyses of mercury data are showing mixed results:

- A young-of-year study, by Maryland Department of the Environment (MDE), provides annual reports of trend analysis however no declining trend has been established to date.
- However recent data for mercury in fish tissue of Channel Catfish, the basis for several impairment listings in central and western Maryland, have demonstrated a decline to levels below the listing threshold.
- MDE plans to collect additional fish species (e.g., smallmouth bass) that also previously exceeded the listing threshold to determine if the mercury impairment can be delisted. The collections are planned for Fall of 2018.
- Trends analysis of mercury have not been summarized from other jurisdictions.

Suggested next steps for the MB

- **Have each jurisdiction conduct trend analyses of existing data to assess if mercury is being reduced.** The TCW would facilitate the sharing of approaches and results between the jurisdictions (and other available data providers). If jurisdictions don't have resources to conduct the analyses, the TCW will explore if the CBP monitoring team can provide support. If trends show mercury is being reduced, jurisdictions could continue with current efforts to control air emissions.
- **If trend analyses do not show reductions of mercury, prepare a plan for synthesis of status, trends, and implications for additional mercury reduction efforts.** The TCW would work with the jurisdictions and other interested parties to develop a scope of work for synthesis of mercury information to inform additional management approaches. The TCW would work with CBP partners to find resources for the syntheses, which would be conducted in 2020 or when funding is identified.

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