



April 20, 2022 Back River statement

What You Need to Know

In response to an April 16, 2022 complaint regarding discharges from the Back River Wastewater Treatment Plant (WWTP), the Maryland Department of the Environment (MDE or Department) conducted an inspection at the WWTP on April 16 and, as a follow-up, coordinated with the Baltimore City Department of Public Works (DPW) on April 17 to further investigate the complaint.

Inspections on both dates revealed no evidence that raw sewage is being discharged into the river. However, MDE observed ongoing operational and mechanical deficiencies at the WWTP affecting solids management.

Solids are particles that are produced in the wastewater treatment process by the growth of organisms that feed on raw wastewater and consume oxygen, and tend to settle or sink in water. These particles have undergone some level of physical, biological and chemical treatment. **The term “solids” is not equivalent to raw sewage or feces.**

However, the presence of solids at high concentrations in a plant discharge can be an indication that sewage is being partially but not completely treated. Solids currently remain at a higher concentration at Back River WWTP than would occur with a fully performing plant..

During the April 17 field inspection, MDE and Baltimore City DPW assessed the outfall discharge where it enters Back River. The April 17 field observations revealed brown foam accumulating at the end of the outfall. Samples were collected by MDE for microscopic analysis.

MDE’s preliminary analysis of the April 17 samples were compared to March 22 and April 12 samples of material floating in Back River near the outfall discharge. The April 17 samples were a lighter brown color and tended to float. These samples had a slight decomposition odor. The March 22 and April 12 samples were dark black/green in appearance, settled very quickly when agitated, and smelled similar to anoxic marsh sediments. Some similarities between all samples included the presence of particulate matter, Arcella (shelled amoeba), and filamentous bacteria. The differences in the April 17 sample included a higher diversity of microscopic plankton (both plant and animal), and moderate to heavy levels of bacteria.

MDE believes some of this sample material is consistent with the solids management challenges in the wastewater treatment process. The sample also included dead midge larvae that MDE believes may be related to recent midge control efforts in the area. This midge treatment process also introduces bacteria (*Bacillus Thuringiensis*) into the Back River, which could



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contribute to the bacteria concentrations found in samples. The Department will be collecting solid samples from within the WWTP for comparison.

Solids build up, processing and removal is the biggest issue now affecting the Back River WWTP's performance.

The Maryland Environmental Service, as directed by MDE, has begun to take steps toward improving operations at the Back River WWTP, and is prioritizing solids management. In the interim, solids levels may continue to fluctuate due to the increased maintenance activities at the plant and large rain events that push more water through the treatment plant. **Intermittent solids discharges to Back River are also possible, but MDE's expectation is that the discharge will improve as operations improve.**

The Department is also aware of independent water sampling in the Back River showing elevated bacteria levels. **The most recent sampling results shared with MDE showed the sampling location at the WWTP effluent outfall had low bacteria levels -- the lowest of any of the locations sampled -- with the highest results seen up river of the effluent outfall.**

MDE began weekly sampling on April 19 to collect bacteria samples from the river and at the end of the outfall. Results will be provided when they become available. MDE is working with the Maryland Department of Health and Baltimore City and Baltimore County health departments on precautionary public health advisories for water contact while the WWTP is being brought into full compliance with assistance from the state.

MDE continues to work to provide updated, accurate information on conditions at the Back River WWTP and Back River. More information is available on MDE's [website](https://www.mde.maryland.gov).