

Pollution violations found at Baltimore's sewage treatment plants

Questions raised about oversight after months of discharges into Baltimore rivers

By Timothy B. Wheeler

Baltimore has long been plagued by sewage leaks and overflows fouling its waters. Now, the city has a new pollution woe: poorly maintained municipal sewage treatment plants that for more than a year have been daily dumping millions of gallons of bacteria — and nutrient-laden wastewater into rivers that flow into the Chesapeake Bay.

After a watchdog group's discovery of high bacteria levels in wastewater coming from one of the city's two sewage treatment plants, an inspector for the Maryland Department of the Environment has found "numerous deficiencies and violations" at both facilities.

In visits to the city's Patapsco Wastewater Treatment Plant in May and to the Back River plant in June, the MDE inspector found operational and maintenance problems, with key treatment equipment malfunctioning or out of order, staffing shortages and botched sampling for toxic contaminants in the wastewater.

The laundry list of problems uncovered at Maryland's two largest wastewater plants threatens Bay restoration efforts, environmentalists warn. It also raises questions, they said, about the diligence of state regulators in ensuring compliance with pollution limits.

City public works officials were scheduled to meet Sept. 3 with state regulators after an Aug. 23 letter from the MDE demanded immediate corrective actions and warned the city that it faces fines of up to \$10,000 per day and possible legal action by the state attorney general.

"We're going to hold [the Department of Public Works] accountable," MDE Secretary Ben Grumbles said in an interview. "They have a lot of explaining to do."

In response to press queries, a spokesman released a short statement from Public Works Director Jason Mitchell. He said that his staff "has developed a strategy to get back into compliance and will be providing a timeline for compliance to MDE."

Alice Volpitta, the Harbor Waterkeeper, said she and her colleagues at the nonprofit



Baltimore's Patapsco Wastewater Treatment Plant, in left foreground, discharges about 55 million gallons of treated wastewater daily into the Patapsco River just upriver of the Key Bridge. (Jane Thomas/Integration and Application Network, UMCES)

watershed group Blue Water Baltimore were "pretty shocked" by the scope and severity of problems uncovered at the city's wastewater plants after the group reported detecting high fecal bacteria levels in the Patapsco plant's discharge in April and early May.

In prior years, Volpitta said, Blue Water Baltimore's monitoring program had picked up occasional bacteria spikes at the Patapsco plant, usually when it was overwhelmed by inflows from heavy rains. But this spring, she and her team detected "consistent ongoing high bacteria readings" unrelated to rainfall at the plant's outfall just upriver of the Key Bridge.

The city has spent \$1.6 billion since 2002 to comply with a state-federal consent decree requiring an overhaul of its sewer network to halt frequent overflows and leaks of untreated sewage. At the end of 2020, city officials announced the near completion of a \$430 million "headworks" project at the Back River plant, which officials predict will eliminate 83% of the overflows. The city is also spending millions annually to curb polluted stormwater runoff from streets, parking lots and buildings.

But because those two plants treat a high volume of wastewater, their discharges of inadequately treated sewage threaten to offset those efforts, environmentalists

contend. Back River discharges about 72 million gallons of wastewater daily, while Patapsco releases about 55 million gallons.

According to Blue Water Baltimore, the combined daily discharge of the two plants would fill a 2.5-foot-deep wading pool the size of the city's 155-acre Patterson Park. By sheer volume alone, though not necessarily the pollutants, the plants' daily combined discharge is on par with the cumulative amount of rain-diluted sewage that overflows each year across the city.

"If we can't trust our wastewater treatment plants to actually treat the sewage," Volpitta said, "it doesn't really matter much what other ... best practices we're putting on land."

Documented violations

The MDE inspection reports detail numerous violations at each plant, many of them similar.

At the Patapsco plant, the MDE inspector found that it had repeatedly violated limits since July 2020 on levels of harmful bacteria, phosphorus, nitrogen and total suspended solids. Overall, the plant exceeded its total authorized nitrogen discharge for 2020 by nearly 140,000 pounds and surpassed its total phosphorus load by 47,800 pounds. Fewer than half of the units used to screen incoming sewage were operational, and those were so clogged

with trash and debris they couldn't work properly, the inspector found.

Plant managers blamed the exceedances on equipment failures and on a worker shortage because of the coronavirus pandemic, the MDE report said.

But the MDE inspection found that the Patapsco plant also has failed to comply with a 2016 consent order requiring it to reduce discharges of fats, oils and grease into the river. The city had yet to upgrade or replace equipment needed to remove the pollutants despite a 2018 deadline, and only five of 18 settling tanks to be used for the removal were working at the time of the visit. Some were so full of scum the inspector warned they would also fail soon without prompt maintenance.

At the Back River plant, the MDE inspector said the discharge exceeded permit limits on pollution every month but one from August 2020 through May 2021, with excessive levels of nitrogen, phosphorus, total suspended solids and ammonia, and a couple of instances of elevated bacteria. Plant managers said there had been a malfunction of a key piece of equipment, a centrifuge used to separate solids from liquids. But the inspector noted that the exceedances began months before that breakdown and that managers had failed to report excessive discharges