



Wastewater Performance Tracking

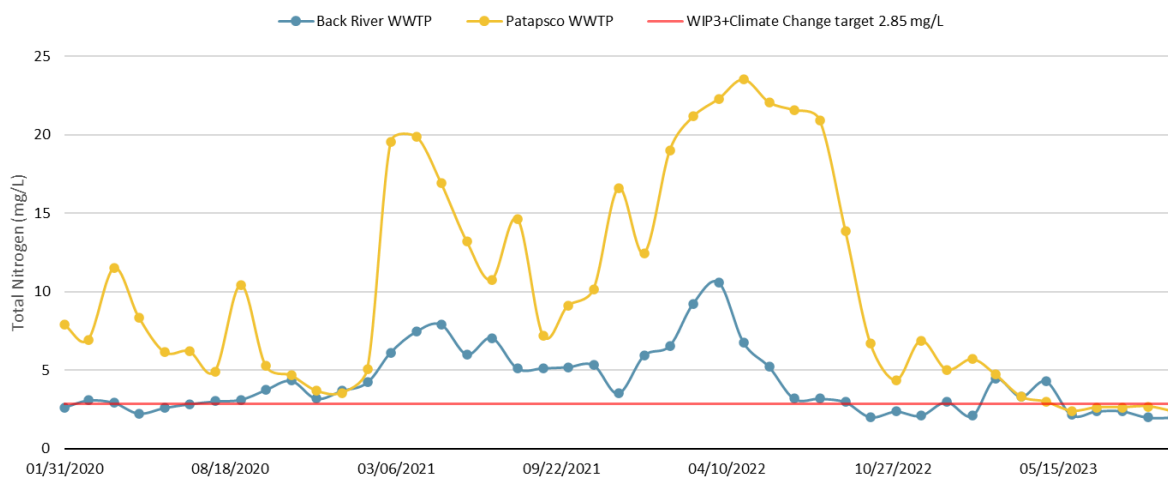
Maryland has invested over \$1.2 billion in Enhanced Nutrient Reduction (ENR) upgrades for wastewater treatment plants (WWTPs). Ensuring WWTP compliance with ENR standards is one of Maryland’s priority [Chesapeake Bay Restoration Plan \(WIP3\)](#) strategies for reducing nitrogen and phosphorus pollution. To achieve Maryland’s WIP3 and Chesapeake Bay [Climate Change Goals](#), the Maryland Department of the Environment (MDE) set a 2.85 mg/l average total nitrogen concentration as a target across Maryland’s major (> 500,000 gallon/day) WWTPs.

Recent WWTP Performance

By early/mid 2020, Maryland was on track to meet its Phase 3 WIP and Climate Change Targets of 2.85 mg/l target (See Figures 1 and 2 below). However, in 2021, MDE’s compliance inspections at Maryland’s two largest WWTPs ([Back River](#) and [Patapsco](#)) uncovered significant permit violations. Numerous actions were taken by MDE, the Maryland Environmental Service (MES), and the Office of the Attorney General to bring the plants back into compliance. Those efforts recently culminated in a [settlement](#) with Baltimore City that includes penalties, enforceable timelines for corrective actions at the Back River and Patapsco WWTPs, and competitive grants for water quality and aquatic habitat improvement projects in the Patapsco and Back River watersheds.

In addition, and to prevent future performance problems at our major WWTPs, MDE performed a comprehensive review of its wastewater permitting and compliance framework. These “Reinvigorated Strategies to Reduce Nutrients in Wastewater” can be found [HERE](#), and include monthly WWTP performance tracking. The graphs below show the performance tracking results at Maryland’s significant WWTPs starting in January 2020. Recent compliance inspections also confirm that Baltimore City has been meeting nutrient limits in their permits.

Figure 1: Patapsco WWTP and Back River WWTP Average Monthly Total Nitrogen Concentration from 2020 to Present compared to Maryland’s WWTPs 2.85 mg/l target





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Figure 2: Maryland’s Major Municipal WWTP Aggregate Average Monthly Total Nitrogen Concentration from 2020 to Present compared to Maryland’s WWTPs 2.85 mg/l target

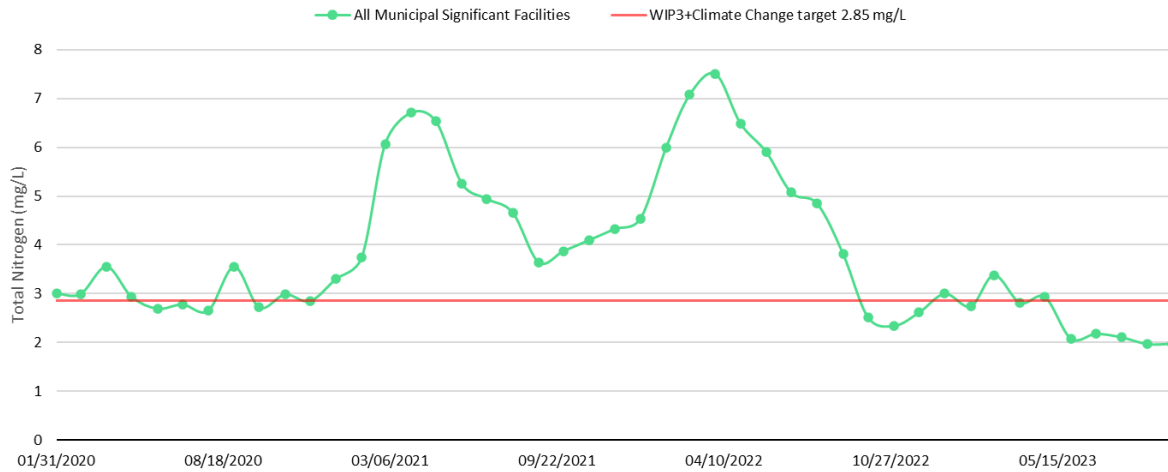


Figure 3. 2023 Average Monthly Tracking Results of Total Nitrogen Concentration Compared to 2025 WIP3 Target of 3.25 mg/l and 2025 WIP3 + Climate Change Target of 2.85 mg/l

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<i>Number of Facilities</i>	76	76	76	75	75	75	75	75	75
<i>WIP3 + Climate Change Target</i>	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
<i>All Municipal Significant Facilities Aggregate TN (mg/L)</i>	2.74	3.38	2.81	2.93	2.08	2.17	2.10	1.96	1.97
<i>Patapsco WWTP TN (mg/L)</i>	2.09	4.44	3.31	4.28	2.15	2.38	2.39	1.98	1.98
<i>Back River WWTP TN (mg/L)</i>	5.69	4.71	3.30	2.97	2.39	2.61	2.62	2.68	2.37

Questions

Please direct questions or comments concerning Significant Wastewater Treatment Facilities Early Detection Tracking Results to mde.chesapeakewip@maryland.gov.