

STATUS REPORT Progress and Improvements

DPW BUREAU/OFFICE: Back River Wastewater Treatment Plant (Back River) Date: 3/10/2023

Parameters	February 2023	Monthly Permit limit	Meeting Requirement
Total Suspended Solids (TSS)	3 MG/L	10 mg/l	Yes
Biochemical oxygen demand			
(BOD)	4 MG/L	10 mg/l	Yes
Total phosphorus (TP)	.11 MG/L	0.20 mg/l	Yes
*Ammonia (NH3)	1.3 MG/L	5.1 mg/l	N/A
E-coli	1 MPN/100 ML	126 MPN/100 ml	Yes

MPN = Most Probable Number; **N/A =** Not Applicable *NOTE: THERE IS A MONTHLY PERMIT LIMIT OF 2.0MG/L DURING THE SUMMER SEASON (FROM 5/1-10/31) AND 5.1MG/L THE REST OF THE YEAR.

Parameters	Annual Limit	2023 Annual Cummulative Limit	Seasonal Limit	2023 Summer Season	February Unofficial Totals	Meeting Requirements
Total	1,582,055	163,328lbs		Not		
Nitrogen	lbs		99,782 lbs	currently	67,806 lbs	Yes**
(TN)	cumulative			in effect		

** = Still awaiting ten days of data. With the current trends, the plant will meet its parameter goals. Note: At current winter performance (80klbs x 6 mos.) + max permit allowance during summer season (99,782lbs x 6 mos.), we are on pace to only send ~1Mlbs for the year. SIGNIFICANTLY lower. This is with an assumption that we will actually perform WORSE in summer than we are currently.

Maintenance Updates

Repairs to Primary Settling Tank (PST) #2 are underway for scheduled completion in June 2023. PST #9 and #10 are currently under repair, with completion timelines of July and September 2023, respectively. PST #3 will be in service in November 2023. PST #4 will be ready in January 2024. Repairs to PST #5 is slated for Fall 2023, and PST #6 needs to be cleaned out and assessed for repairs. These timelines would provide eight in-service PSTs by the end of 2023. PST #7 has some punch list items to be completed by the MES contractor and will be returned to service the week of 3/10/2023.



1Primary Settling Tank at Back River

Currently, 15 of 18 reactors are available for the process (12 in service and three on standby). The remaining three are out for various proactive repairs and maintenance. The contractor will be onsite the week of 3/6/23 to begin proactive repairs and preventive maintenance on the reactor mixers, returning the remaining reactors to an available/on standby status. The optimal number for regular flow is ten reactors. The secondary treatment process has 32 of 36 final clarifiers available (26 in service, with six available on standby). The remaining clarifiers are out for various proactive repairs and maintenance. The optimal number for regular flow is 20 clarifiers. Plant staff is slowly scaling back the number of in-service reactors and clarifiers to meet the optimal amount of in-

service equipment for average flow. This change will increase the overflow rate through the process and reduce detention times that can lead to algae and phragmites growth within the process areas.

All 52 De-Nitrification Filters (DNF) are available for service, including 13 filters for redundancy purposes. All methanol sensors are replaced and calibrated, allowing the system to function automatically.

Currently, two centrifuges, #1 and #3, are available for operations. Repairs to #2 are complete and will be put back into service by mid-March. Parts for #4 are still pending and awaiting a shipping update.

Preventive maintenance efforts continue to be the primary focus of the maintenance staff.

Compliance and Safety

The Office of Environmental Regulatory Compliance and Safety (ERCS) participated in site inspections, at Patapsco WWTP and Back River WWTP, with MDE environmental compliance specialists. ERCS provided compliance support in coordinating plant update reports to MDE. ERCS also assisted WWTP personnel: in improving Standard Operating Procedures related to quality control, equipment verification processes, routine monitoring, and sample data reporting to MDE. ERCS has begun meeting routinely with the WWTP's management and the Program Management Team on health, safety, and facility asset management.

Training

The City's Program Management Team, Atkins, is conducting a review and analysis of plant information to assist with establishing the training and certification needs of the staff, in coordination with the City's Training and Development Chief. The goals are to develop a robust apprenticeship

training and continuing education for current staff. Additionally, supplemental support classes for operations staff enhance permanent certification rates.

The B'More WISE cohort continues their training and prepares for their first rotation from Water to Wastewater and vice-versa. The fellows attend two days of intensive in-class learning and three days of on-the-job training each week to help bring them up to speed to be future operations apprentices.

The City's computer-based training continues to be a focus of the Bureau of Water and Wastewater as we enhance our operations at our wastewater facilities. We encourage our employees to complete one 360Water course every two weeks for continuing education. Approximately 300 courses have been completed so far this year.

Maryland Certified Environmental Training (MCET) classes were held at Patapsco for operator certification training on 2/8/2023, 2/15/2023, and 2/22/2023. The City had 17 operators attend each of the three separate trainings. The City is generating a list of participants for June's 4-day short course, a series of classroom trainings to prepare operators for the certification exam.

HVAC training through National Technical Training Institute is for March 6-10. This is for electrical and HVAC techs from all 3 maintenance sections. This will provide improved maintenance practices and updated technology trainings.

Summary

DPW has made substantial progress toward full compliance at Back River. All monthly parameters are currently under permit limits, and Back River has maintained compliance since June 2022. More specifically, suspended solids, biochemical oxygen demand, total phosphorus, ammonia, and total nitrogen have decreased significantly since March **2022**.

DPW recognizes that Back River is a valuable asset to the Baltimore region, and we are excited about the path to sustained compliance.