



STATUS REPORT

Progress and Improvements

DPW BUREAU/OFFICE: Back River Wastewater Treatment Plant (Back River WWTP) Date: 8/14/2023

Parameters	July 2023	Monthly Permit limit	Meeting Requirement
Total Suspended Solids (TSS)	1 mg/l (Outfall 001) 2 mg/l (Outfall 002)	10 mg/l (both outfalls)	Yes
Biochemical Oxygen Demand (BOD)	3 mg/l (Outfall 001) <2.0 mg/l (outfall 002)	10 mg/l (both outfalls)	Yes
Total phosphorus (TP) *	<.10 mg/l (Outfall 001) <.10 mg/l (Outfall 002)	0.20 mg/l (both outfalls)	Yes (Outfall 001) Yes (Outfall 002)
Ammonia (NH3)	0.6 mg/l (Outfall 001) 0.7 mg/l (Outfall 002)	5.1 mg/l (Nov,1 to Apr. 30) 2.0 mg/l (May 1 to Oct. 31), both Outfalls	Yes
E-coli	2 MPN/100 ml (Outfall 001) 2 MPN/100 ml (Outfall 002)	126 MPN/100 ml (both outfalls)	Yes

Parameters (Outfall 001)	Annual Limit	Seasonal Limit (May 1 to Oct. 31)	July Official Total	Meeting Requirements
Total Nitrogen (TN)	1,582,055 lbs./yr. cumulative	99,782 lbs./month	62,589 lbs.	Yes

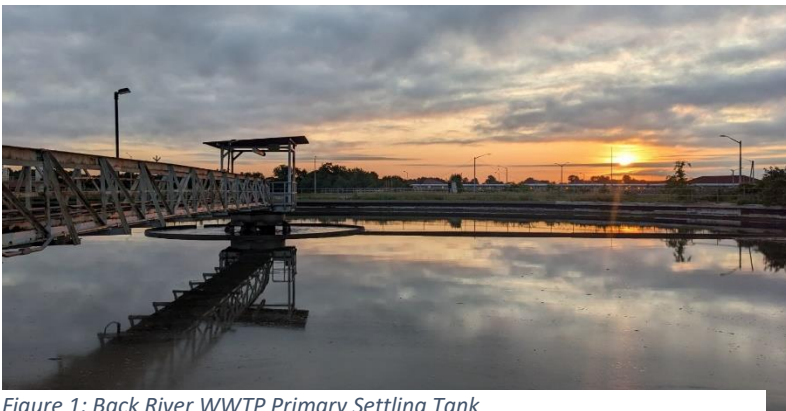


Figure 1: Back River WWTP Primary Settling Tank

Maintenance Updates



Figure 2 New Polymer units installation nearing completion

Back River WWTP continues with four Primary Settling Tanks (PST) in full service (#1, #7, #8, and #11). Seven PSTs are necessary for maximum design flow. The following are the PSTs scheduled to be in place by the end of 2023. PST #2: slated to return to service by mid-September. PST #3: scheduled to be placed in service November 2023. PST #4: scheduled to be placed in service January 2024. PST #5: slated to begin repairs this summer once #2 is returned to service. PST #6: to be cleaned out and repaired once the odor control system has been installed. PST #9: expected to be in service in mid-to-late August due to shipping error delay. PST#10: implementation date moved to October 2023 due to shipping issue.

All 18 reactors are available for the process (12 are in service with six on standby). The optimal number for regular flow is 10 reactors. The secondaries have 34 of 36 final clarifiers, 23 in service, with 11 available on standby. Plant staff continue to monitor the number of in-service reactors and clarifiers to ensure the optimal amount for the influent flow. This change has increased the overflow rate through the process and reduced detention times.

All 52 De-Nitrification Filters (DNF) filters are available for service, including 13 filters for redundancy.

Currently, three of four centrifuges are available for operation. Additionally, new polymer units and polymer expansion day tanks have been installed. This allows the polymer to stretch and increases solids' capture rate during dewatering. This will improve the centrate quality, which is returned to the treatment process. The cake material produced from the City centrifuges is hauled out for composting. Composting is one way Back River WWTP supports DPW's environmental protection mission. Our mission statement states, "We support the health, environment, and economy of our City and region by providing customers with safe drinking water and keeping neighborhoods and waterways clean."

Rehabilitation of the in-ground and egg-shaped digesters will begin August 16, and construction will take four years to complete. This critical work will rehabilitate processes and equipment at the end of their useful life cycle. The work will aid the plant in biosolids digestion (which reduces the amount of biosolids to process and dispose of by ~ 40%) while also generating methane gas used for heating and electrical generation to offset utility costs for the plant.

Compliance and Safety

On July 20, 2023, DPW's Office of Environmental Regulatory Compliance and Safety (ERCS) participated in a Maryland Department of the Environment (MDE) field inspection with MDE environmental compliance specialists at Back River WWTP. ERCS conducted a follow-up investigation to address areas observed during the MDE site walk.

The City and Atkins Global, the City's partner for ensuring compliance, continue to implement Weekly Asset Management and Safety Meetings to address current site hazards and prior MOSH violations.

Job hazard assessments for operations staff have been completed and are currently under review. Health and safety professionals have been conducting a comprehensive safety audit, which is ongoing.

The City has submitted the Notice of Intent (NOI) for the 2023 SW Industrial Stormwater Permit and its updated stormwater pollution prevention plan (SWPPP) to MDE.

ERCS met with the plant staff to review the quality control data. ERCS continues to work with Synagro Technologies Inc., the contractor responsible for drying out waste at the plant, on the root cause analysis of the March 2023 explosion and to review the current emergency action plan for Pelletec.

Training

The City's Program Management Team (PMT) and Atkins Global continue to work with the City staff to help meet apprenticeship and ongoing training needs.

The next B'More WISE cohort is beginning in early September. The cohort includes current City personnel attending training classes twice weekly for six months. Their participation in the program will allow for the opportunity to successfully take the operations certification exam and become licensed. This program has received positive feedback from the cohorts and the host facility staff.

The Bureau of Water and Wastewater continues focusing on 360Water training for operations and maintenance staff. The plant operations team met their June goal of 70 training hours utilizing the 360Watersystem.

Synagro Facility Update

Synagro continues operating its existing and temporary centrifuges while repairing the onsite dryers. Synagro is also coordinating the hauling of the cake material for land application.

Summary

DPW has made substantial progress toward full compliance at Back River WWTP. **All monthly effluent permit parameters have been met for July 2023.** DPW recognizes that Back River is an asset to the

Baltimore region, and we are excited and confident in the path forward and in sustaining our compliance.