



STATUS REPORT

Progress and Improvements

DPW BUREAU/OFFICE Back River Wastewater Treatment Plant (Back River)

Date /12/9/2022

Parameters	Week ending 11/28/22	Week ending 12/5/22	Weekly Permit limit	Meeting Requirement
Total Suspended Solids (TSS)	<1 mg/l	XX mg/l	15 mg/l	Yes
Biochemical oxygen demand (BOD)	2.0 mg/l	XX mg/l	15 mg/l	Yes
Total phosphorus (TP)	0.14 mg/l	XX mg/l	0.30 mg/l	Yes
Ammonia (NH3)	0.3 mg/l	XX mg/l	N/A	N/A
Total nitrogen (TN)	2.1 mg/l	XX mg/l	4.0 mg/l	Yes
E-coli	3 MPN/100 ml	XX MPN/100 ml	126 MPN/100 ml	Yes

MPN = Most Probable Number

NOTE: WEEKLY AMMONIA PERMIT IS SEASONAL FROM 5/1-10/31. THERE IS NO WEEKLY PERMIT LEVEL OTHERWISE

Training Updates

The B 'More WISE program has a signing event on December 8 at City Hall to officially kickoff. This program will help to bring potential staff in with a mix of classroom and on-the-job training.

Operator Certification classes were held December 6-8 to help operations staff attain necessary credits for their operator certification. Lubrication training for mechanical staff at both plants was held December 6-7. This class is designed to help improve preventive maintenance practices to keep critical assets in service.

Maintenance Updates

Maintenance staff continues to focus on the preventive maintenance (PM) of the process areas. The Cityworks Computerized Maintenance Management Software (CMMS) was deployed on 11/28/22. The existing maintenance management software, ELKE, will be used concurrently with the Cityworks software in order to continue to capture all necessary information until such plant staff is comfortable that all pertinent information has been transferred to the new software and the ELKE system will be phased out.

The City continues moving toward a Reliability Centered Maintenance culture. This culture change focuses on critical assets, identifying potential problems with these assets and determining what should be done to make sure those assets continue to produce at maximum capacity. The maintenance team will analyze breakdowns to determine maintenance methods and unique maintenance schedules for individual assets. In support of this

effort, the maintenance teams are taking a lubrication course on December 6 and 7. This is being taught by Des-Case, an industry leader in lubrication support of equipment life.

In-Ground Digester cleaning and repairs for #1 are nearing completion in approximately two weeks. In-Ground digester #4 will be finished after #1 with completion in February 2023. The contract for rehabilitation of all remaining digesters, in ground and egg shaped, is being processed for award. Notice to proceed on that contract will be in the first quarter of 2023. The digestion process reduces the amount of biosolids requiring treatment prior to removal while improving methane production for the plant co-generation efforts which supply power to the plant facilities.

Primary Settling Tank (PST) #7 is being tested with flushing water to ensure proper operation. This will be completed by 12/9/22 before placing into regular service. The focus will then shift to repairs of PST #2 and #9, which will tentatively return to service by February 2023.

Centrifuge #3 has been placed into service. Centrifuge #2 is having regular maintenance conducted at this time, leaving #1 and #3 in-service/available. Centrifuge #4 is awaiting delivery of a shaft and bowl which will then be installed and providing the City with four operational centrifuges. The centrifuges help to dewater biosolids for disposal with our composting vendor. Normal operation calls for one centrifuge and for two during heavy weather events. Having three working centrifuges provides tremendous flexibility to the plant and having the fourth will complete the redundant operational needs.

Compliance Updates

Proactive efforts to improve the health and safety conditions for all employees are well underway. This month we completed safety assessments to ensure that we are addressing concerns proactively. DPW continues planning and developing optimized and uniform Standard Operating Procedures (SOP) related to sampling, chain of custody, analysis, and reporting. Staff are reviewing updated industrial stormwater guidance from the Maryland Department of the Environment (MDE).

Plant representatives will attend training for the new 20-SW permit. The 20-SW permit is a National Pollution Discharge Elimination System (NPDES) permit for stormwater from industrial activities. Authorization under the permit is required for both plants and is to be submitted to MDE by July 2023.

Summary

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

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