



STATUS REPORT

Progress and Improvements

DPW BUREAU/OFFICE: Patapsco Wastewater Treatment Plant

Date: 2/10/2023

Parameters	January 2023	Monthly Permit limit	Meeting Requirement
Total Suspended Solids (TSS)	3 mg/l	30 mg/l	Yes
Biochemical oxygen demand (BOD)	9 mg/l	30 mg/l	Yes
Total phosphorus (TP)	.10 mg/l	2.0 mg/l	Yes
Ammonia (NH3)	1.1 mg/l	N/A	N/A
Enterococci	11 MPN/100 ml	35 MPN/100 ml	Yes

N/A= Not Applicable; MPN= Most Probable Number

NOTE: THERE IS A MONTHLY AMMONIA PERMIT LIMIT OF 6.3MG/L DURING THE SUMMER SEASON MAY 1 - OCTOBER 31 AND NO MONTHLY PERMIT NOVEMBER 1 – APRIL 30.

Parameters	Annual Limit	Seasonal Limit	January Unofficial Totals	Meeting Requirements
Total Nitrogen (TN)	889,300lbs	333,330lbs	72,025lbs	Yes**

** = Still awaiting 3 days of data. With the current trends it appears that the plant will meet its parameter goals.

Maintenance Updates

Repairs to the Gravity Sludge Thickener (GST) #4 are underway for completion in March 2023. Upon completion of these repairs, the plant will have 3 operational GST's. The optimal number for average flows is two GST's.

Primary Settling Tank (PSTs) #1-3 have had baffle walls installed behind the scum troughs to prevent Fat Oil Grease (FOG) from intruding into the process effluent. The scum troughs continue to be operated manually and the scum/FOG removed from the process and into dumpsters for hauling to the landfill. There are 6 PST's available for service with 4 being needed for average flow.

Fine screens #5 and 6 have been removed and sent to the manufacturer for proactive repair and replacement with coarse screens to be used in the event of high flows and reduce bottlenecks. Only 1 of the fine screens remains to be repaired as part of our preventative maintenance improvements and this will be picked up for refurbishment upon delivery of the two screens out for service. This leaves 5 functional screens available for plant operations with 4 being needed for average flows. Additionally, aprons have been installed on the chutes to reduce screenings falling onto the floor.

The ferric chloride introduction point was moved to the secondary distribution boxes to allow for better reaction and mixing. The benefits have resulted in Total Phosphorus numbers of <0.1mg/L since November 2022.



1 Removal of fine screens for refurbishment

There are currently 4 of 6 Oxygen reactors available for process. The remaining two are out for various proactive repairs and maintenance. The optimal number for regular flow is 4 reactors.

The secondaries have 7 of 8 secondary clarifiers available. The remaining clarifier is out for proactive repairs. The optimal number for regular flow is 5 clarifiers.

The BAF has 21 of 22 cells operational. The one BAF cell out of service cell is having the gate repaired to be placed back in service. 14 cells are needed for design flow.

All 34 DNF filters are available for service. 24 are required for average flows and allows for 10 filters for redundancy purposes. All methanol sensors have been replaced and calibrated allowing the system to work in automatic.

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

Our partner, Synagro, has restarted the dryers effective January 10, 2023 with a gradual restart plan implemented. It is expected that 100% dryer operations will be in place by February 14, 2023. The utilization of the dryers supports DPW's mission in protecting the environment as the biosolids are used for fertilizer. As our mission statement states that "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".

Compliance and Safety

The Office of Environmental Regulatory Compliance and Safety (ERCS) participated in site inspections, at Patapsco WWTP and at Back River WWTP, with MDE environmental compliance specialists. Compliance support was provided by ERCS in coordinating plant update reports to MDE. ERCS also assisted WWTP personnel: in improving SOP's 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 has procured the services of a Program Management Team, Atkins, to assist with the establishing the training and certification needs of the staff. This team will be coordinating with the City's new Training and Development Chief to establish apprenticeship training, continuing education for current staff, and establishing a robust system that promotes educational growth and opportunities for staff. Additionally, supplemental support classes for operations staff to enhance permanent certification rates.

The BMore WISE cohort of 11 new members began and, each week, are participating in 2 days of intensive in class learning and 3 days of on the job training to help bring them up to speed to be future operations apprentices.

Training continues to be a focus of the Bureau of Water and Wastewater as we enhance our operations at our wastewater facilities. We are encouraging our employees to complete 1 360Water course every 2 weeks for continuing education.

A Maryland Certified Environmental Training (MCET) class is being held at Patapsco for operator certification trainings on 2/8/2023 and 2/15/2023.

Summary

As we continue, we are confident in a clear path forward to compliance at the Patapsco Wastewater Treatment Plant. **Monthly parameters have remained under permit limits since September 2022 and is starting 2023 in compliance for the month of January.** The Patapsco is an asset to the greater Baltimore Region and DPW is excited about its path forward to sustained compliance.