

STATUS REPORT

Progress and Improvements

DPW BUREAU/OFFICE: Patapsco Wastewater Treatment Plant

Date: 9/18/2023

Parameters	August Parameters	Monthly Permit limit	Meeting Requirement
Total Suspended Solids (TSS)	5 mg/l	30 mg/l	Yes
Biochemical oxygen demand (BOD)	4 mg/l	30 mg/l	Yes
Total phosphorus (TP)	0.2 mg/l	2.0 mg/l	Yes
Ammonia (NH3)	0.4 mg/l	6.3 mg/l	Yes
Enterococci	2 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 LIMIT FROM NOVEMBER 1 – APRIL 30.

Parameters	Annual Limit (cumulative)	Seasonal Limit (cumulative)	August Official Totals	Meeting Requirements
Total Nitrogen (TN)	889,300lbs	333,330lbs	33,196 lbs	Yes

Maintenance Updates

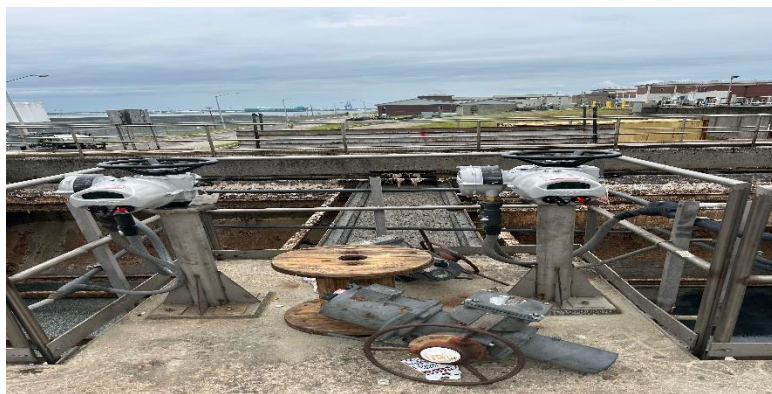


Fig 1: PST #1 New Actuators

The contractor continues work on the scum troughs at the Primary Settling Tank (PST) to prevent Fats Oil and Grease (FOG) from intruding into the effluent process. PST #1 repairs were completed on August 29, 2023. The scum troughs for PSTs #2 and #3 continue to operate manually while repairs are underway. The PST troughs help remove scum/FOG from the process and divert it into dumpsters for hauling to the landfill. Patapsco has six PSTs, four are in service, with two on standby for redundancy.

All screens have been repaired and installed. The facility has eight functional screens for plant operations, with four needed for average flows. New compactors are being installed for both the north and south conveyor systems. The south side was completed on August 28, 2023, and the north side replacement is now underway.

There are currently four of six Oxygen Reactors available for the treatment process. The optimal number for regular flow is four reactors. The remaining two oxygen reactors are being cleaned out in preparation for return to service. DPW continues to work toward having all six reactors ready for service by the end of 2023.

The Liquid Oxygen (LOX) Plant continues to operate fully and provides ample oxygen for the reactors to begin the nitrification process.

The secondary treatment process has seven of eight secondary clarifiers available. The optimal number for regular flow is five clarifiers. The remaining clarifier, #3, is out of service for repairs and is currently used as a temporary holding tank. A repair assessment is underway for this clarifier. All secondary skimmer arms have been repaired and have new rubber blades.

The Biological Aerated Filters (BAF) continue to have all 22 cells available for operation. The plant needs 14 cells for design flow.

The Denitrification Filters (DNF) remove the Nitrogen from our effluent and are critical to maintaining permit compliance. All 34 DNF filters remain fully functional and available to be placed in operation. Twenty-four are required for average flows, allowing for 10 redundant filters.

The drying facility operated by our partner, Synagro, continues the operation of its biosolids drying process. The dryers produce biosolids, which are used for fertilizer. Producing this fertilizer is one way the Patapsco plant supports DPW's environmental protection mission. Preventive maintenance efforts remain the primary focus of the plant operations and maintenance staff.

Compliance and Safety

On August 29, 2023, The Office of Environmental Regulatory Compliance and Safety (ERCS) participated in a field inspection with MDE environmental compliance specialists at Patapsco WWTP.

The City and Atkins Global, the City's partner in ensuring compliance, continue implementing the weekly safety meeting to increase efforts to improve site safety. A review of OSHA 300 data and incident reports is ongoing to determine personal protection equipment needs and safety training needs. Health and safety professionals have been conducting a comprehensive safety audit, which is ongoing.

ERCS met with the plant staff to review monthly operating report data and work on the development of data governance for plant sample data.

Training

DPW's Program Management Team (PMT), Atkins Global, continues working with the DPW staff to develop curriculum and training systems to help meet operations and maintenance staff's apprenticeship and ongoing training needs.

The Office of Safety and Training (OST) continues developing and conducting various leadership and staff trainings to support the professional growth of future plant leaders and improve the work culture. Investment in DPW staff is critical to the department's long-term sustained success.

The next B'More WISE (Baltimore Infrastructure Water Strategic Educational Program) cohort will begin in late September 2023. The cohort includes current DPW personnel attending training classes twice weekly for six months. Their participation in the program will prepare them to take the operations certification exam. This program has received positive feedback from the previous cohort and the host facility staff.

DPW's Bureau of Water and Wastewater continues focusing on 360Water training for operations and maintenance staff. The plant operations team met their August 2023 goal of 40 training hours utilizing the 360Watersystem.

Summary

DPW is confident in a clear path to sustained compliance at the Patapsco Wastewater Treatment Plant. **Monthly parameters have remained under permit limits since September 2022 and are in full effluent permit compliance starting in January 2023.**