Maryland Department of Environment
Water and Science Administration
Compliance Program
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Inspector: Mohammed Umoru
AI ID: 3076

Site Name: Patapsco WWTP
Facility Address: 3501 Asiatic Ave, Curtis Bay, MD 21226
County: Baltimore City County
Start Date/Time: June 18, 2026, 10:00 AM
End Date /Time: June 18, 2026, 12:30 PM
Media Type(s): NPDES Municipal Major Surface Water

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NPDES Municipal Major Surface Water

Permit / Approval Numbers: 15-DP-0580
NPDES Numbers: MD0021601
Inspection Reason: Routine Scheduled
Site Status: Active
Compliance Status: Noncompliance
Site Condition: Satisfactory/Compliance
Recommended Action: Continue Routine Inspection
Evidence Collected: Photos or Videos Taken, Record Review, Visual Observation
Delivery Method: Email
Weather: Calm, Clear, Good

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Inspection Findings:

Introduction:

The Patapsco Wastewater Treatment Plant (WWTP) is permitted to discharge to the Patapsco River which is designated as Use II waters protected for estuarine and marine aquatic life. The Patapsco WWTP features advanced treatment processes to achieve enhanced nutrient removal (ENR), chlorination and de-chlorination. The Patapsco WWTP is rated to treat an average daily flow of up to 73 MGD. The current permit authorization expired on September 30, 2022; the reapplication was received by the Department on September 1, 2021. The permit has been administratively extended until the new permit is issued.

The treatment system includes preliminary treatment (grit removal and fine screening), primary treatment (primary settling tanks (PSTs)), secondary treatment (biological nutrient removal activated sludge process and additional filter

nitrification), tertiary treatment (denitrification filters for enhanced nutrient removal) and disinfection (chlorination).Primary sludge (PS) and waste activated sludge (WAS) produced by the primary treatment and secondary treatment process is thickened on-site. The solids thickening process consists of Gravity Sludge Thickeners (GSTs) and dissolved air flotation tanks. A third-party, Synagro, pulls sludge directly from the GSTs for processing in the drying facility.

On this day, I inspected the WWTP with the contacts listed above.

Consent Decree:

As of November 2023, Baltimore City and the Department signed a Consent Decree, Case No. 24-C-22-00386, which establishes specific goals and objectives related to the operations and maintenance of the Patapsco WWTP. As a result, maintenance items observed during the site inspection will be notated in the relevant areas of the inspection report and not itemized in the Violation(s) section as in previous inspection reports. The goals and objectives in the Consent Decree are noted below for monitoring and tracking progress. The table has been updated with the information included in the Consent Decree Report provided on May 15, 2026.

Patapsco WWTP Consent Decree (CD) Overall Progress Tracking Summary				
CD Paragraph Reference	**Activity**	**CD Deadline**	**Actual Date Completed**	**Compliance Status (11/25/23)**
147-PAT	Provide the Dryer Facility with access to, and control of, GST thickened sludge pumps to automate sludge withdrawal from the GSTs until the existing stored sludge from the SBTs is removed and the SBTs are returned to normal operating mode.	11/15/2023	October 2023	Complete
148-PAT	Have and maintain contracts for on-call hauling services to serve as back-up to the Dryer Facility.	Ongoing		Compliant
149-PAT	Complete replacement or rehabilitation of the grit facility, which includes provision for odor control and proper ventilation. Workers entering the grit facility to comply with Grit Facility SOPs.	4/30/2024 (RFP) 12/31/2027 (Complete Rehabilitation Or Replacement)	4/19/2024	RFP Completed NTP issued 2/10/2025 48% Complete
150-PAT	Repair or refurbish Industrial Plant Influent Facility (IPI) screens and pumps and replace or fully rehabilitate the IPI Facility to operate as designed.	6/30/2024	4/17/2024	Complete
151-PAT	Repair all non-functional screens in the Fine Screen Facility, increase screen opening size for three screens, and install new conveyors, northern screen compactors, and curtains from the screen chutes to the belt.	6/30/2024	4/17/2024	Complete
152-PAT	Repair and upgrade scum trough actuators associated with the PSTs to allow for automatic operation of the scum removal system, and upgrade mechanisms of clarifiers #1-3 to provide automatic operation.	6/30/2024	10/23/2023	Complete
153-PAT	Ensure all six PSTs are fully functional and operating as designed.	12/15/2023	9/5/2023	Complete
154(a)-PAT	Repair all RAS/WAS pumps for secondary clarifier #6a to operate as designed.	11/25/2023	8/16/2023	Complete
154(b)-PAT	Replace missing skimmer sections to increase scraper effectiveness.	11/25/2023	9/22/2023	Complete
154(c)-PAT	Remove BAF media from secondary clarifier influent and BAF mudwells.	11/25/2023	11/18/2023	Complete
155(a)-PAT	Complete evaluation of need for secondary clarifier #3. Within 10 days of evaluation: Request approval to discontinue or alter use of clarifier.	4/1/2024 (Complete Evaluation) 5/1/2024 (Request Approval to Discontinue / Alter)	3/26/2023	Complete Complete Project to Rehab Clarifier is 15% Complete
155(b)-PAT	Submit a plan for Department approval to improve the clarifier #3 (Clarifier #3 Improvement Plan) and implement immediately upon approval	5/1/2024		Complete Project to Rehab Clarifier is 15% Complete

156-PAT	Investigate Biological Aerated Filter Facility ("BAF") media state	12/15/2023	March 2023	Complete
157-PAT	Submit a plan and schedule to address BAF media loss and prohibit any discharge of media to waters of the State	1/14/2023	11/25/2023	Complete
158-PAT	Automate time scum log operation of the Chlorine Contact Tank (CCT)	1/31/2025 Mod. Letter Sent 1/10/2025	4/4/2025	Complete
159-PAT	Ensure staff are present at all times during each shift to maintain manual skimming of FOGs or floating solids at the CCTs until 158-PAT is complete.	Complete upon completion of P. 159	4/4/2025	Complete
160-PAT	Rehabilitate GST #4 and associated pumps.	3/14/2024	2/10/2023	Complete
161-PAT	Ensure all GSTs are fully functional and operating as designed. Baltimore City shall notify Plaintiffs upon receipt of parts.	11/25/2023 or within 30 days of receipt of parts (whichever is sooner)	July 2023	Complete
162-PAT	Submit a PCB Minimization Plan	12/15/2023	11/25/2023	Complete
162-PAT	Begin implementation of PCB Plan	6/30/2024	6/28/2024	Complete
162-PAT	Submit 10-year solid waste management plan	7/31/2024	6/28/2024	Complete
162-PAT	Complete historical Patapsco WWTP PCB effluent data analysis	9/30/2024	9/24/2024	Complete
162-PAT	Complete source tracking desktop evaluation	11/30/2024	11/30/2024	Complete
162-PAT	Complete sampling analysis plan for Phase I and Phase II sampling	2/28/2025	2/28/2025	Complete
162-PAT	First annual PCB Plan update submission	3/31/2025	3/31/2025	Complete
162-PAT	Phase I sample collection and deployment of Phase II passive samplers	6/30/2025	6/17/2025	Complete
162-PAT	Collection of Phase II passive samples and grab samples	9/30/2025	9/24/2025	Complete
162-PAT	Revise PCB Plan and update timeline based on evaluation of Phase I and Phase II results	3/31/2025	3/27/2026	Complete
162-PAT	Complete Phase III sampling and analysis plan	5/31/2026		
163-PAT	Complete investigation into flow meter and complete root cause analysis of the discrepancy between influent and effluent flow volume.	12/15/2023	5/29/2023	Complete
164-PAT	Submit a revised FOG Mitigation Plan	11/25/2023	11/25/2023	Complete
164-PAT	Annual FOG Mitigation Report	12/31/2024	12/31/2024	Complete
165-PAT	Submit a Staffing Report and Staffing Plan	12/31/2023	12/22/2023	Complete
166-PAT	Have, maintain, and make available to the Department Patapsco WWTP SOP	6/30/2024	6/28/2024	Complete
167-PAT	Submit a report that identifies what processes at the Patapsco WWTP are currently automated and conduct a feasibility study for the automation of additional processes, with a plan and schedule for future automation.	5/13/2024	5/13/2024	Complete
168-PAT	Have, maintain, and update a Computerized Maintenance Management System (CMMS) as functional work order system to ensure that the plant and its equipment and components operate as designed.	Ongoing		Compliant
169-PAT	Complete a condition assessment and inventory of existing assets in order to develop an asset management program, and within 90 days of the completion of the assessment and inventory, begin implementing the asset management program.	11/15/2024 (Completion of assessment) 2/13/2025 (Commence Implementation)	11/15/2024 2/6/2025	Complete Complete

Site Walk / Observations:

The inspection began with a pre-inspection meeting in the facility office to establish the inspection's objectives and review all non-compliance and bypass events reported to the Department since the last inspection of March 17, 2026. Following this meeting, we conducted a facility walkthrough to observe active operations. Throughout the tour, Mr. Charles Oliver provided an overview of the site's current processes and infrastructure.

Patapsco Capital Improvement Projects:

Following the pre-inspection meeting, Mr. Charlie Oliver provided a status update on the Patapsco Capital Improvement Projects. Under contract SC938R, construction of the new Grit Facility, concrete repairs on the influent and effluent channels, and new roof member placement are all currently underway.

Additionally, a walkthrough of the SC987 - Return Sludge Pumping Station 2 (RSPS2) confirmed that contract work is actively progressing. Two Return Activated Sludge (RAS) pumps, two polymer dosing pumps, and the primary polymer transfer pump were all conditionally accepted and placed in operational service. A detailed status report of these Patapsco WWTP Capital Improvement Projects is provided below.

Status Report - Patapsco Capital Improvement Projects

Contract Number	Contract Name	Scope of Work	NTP	Status	Contract Completion Date
SC926RR	Electrical Distribution System Reliability Improvements, Physical Security Upgrades & On-Site Power Generation at PWWTP	Electrical Upgrades and 3rd Feeder	8/2/2021	In Construction	10/15/2026
SC938R	Headworks Facility Improvements at the Patapsco Wastewater Treatment Plant	Upgrades to Grit Removal Facility	2/10/2025	In Construction	8/18/2027
SC987	Improvements to Return Sludge Pumping Station No. 2 at PWWTP	Upgrades to Return Sludge Pumping Station No. 2	8/5/2024	In Construction/ Time Extension being reviewed	8/4/2026
SC983R	Improvements to the PST Scum Collection System at PWWTP	Upgrades to Primary Settling Tank Scum Collection System	8/5/2024	In Construction	8/4/2027
SC988	Secondary Reactors Rehabilitation at PWWTP	Rehabilitation of oxygen reactors		Design Started - Currently at 60% Design Phase	
SC991	PWWTP Liquid Oxygen Plant Facility Rehabilitation	Installation of new VPSA system		30% Design	
SC994	Clarifier and Gravity Sludge Thickeners Rehabilitation at PWWTP	Clarifier and GST rehabilitation	7/28/2025	In Construction	7/25/2030
SC990	PWWTP Administration Building Repairs, Rehabilitation and Upgrades	Administration Building, Maintenance Building and Laboratory rehabilitation		Started Design - Currently at 30% Design Phase	

The Industrial Plant Influent (IPI) and Combined Influent Building:

The Industrial Plant Influent (IPI) contains two (2) fine screens and four (4) pumps for conveying flow to the primary clarifiers. The IPI building has approximately 2-3 MGD capacity for industrial influent. The two (2) fine screens in the IPI building receive flow by means of individual channels and gates for flow control. During the today's inspection, Screen #1 was operational, while screen #2 was offline. It was reported that due to the recent power outage that severely disrupted the facility's power supply and treatment processes, the facility has stationed two emergency generators for powering the primary screens.

Image 01: The two (2) screens in the IPI building.

The inspection proceeded to the Fine Screen facility, which operates eight screens split evenly between the South Group (1A, 1B, 2A, 2B) and the North Group (3A, 3B, 4A, 4B). Each group uses a dedicated conveyor and compactor system to move captured screenings to waste dumpsters. At the time of the inspection, screen 2A (South Group) and screen 3B (North Group) were offline awaiting replacement bearings. During the pre-inspection meeting It was reported that the project to replace the compactors and conveyor belts for both screen groups is currently paused. Although the new belts and rollers have already arrived on-site, the facility is waiting on the delivery of remaining components and updated technology integrations. On-site installation will be scheduled as soon as all necessary parts are available.

Transfer Station:

The facility's transfer station features a roofed, three-walled enclosure with concrete floor trench drains to contain screening grease and grit. Liquid runoff from the trenches is pumped to the gravity sludge thickeners for reprocessing, while dried waste is hauled to the Quarantine Road Landfill. During the inspection, the trench drains were clean, clear, and free of debris.

Gravity Sludge Thickeners (GSTs):

The facility's sludge handling infrastructure includes three 65-foot diameter gravity sludge thickeners (GSTs). During the walkthrough, the at-grade GST #1 and the elevated standby GST #4 were fully operational. Sludge was visible in the scum troughs of GST #1 due to recent line-televising work by a contractor, but Mr. Charlie Oliver noted that they expect this to be cleared and flushed into the scum collector box by the end of the day.

Meanwhile, GST #2 remains offline for rehabilitation under Consent Decree Project SC994. The tank has been drained and cleaned, and it is expected back online within a week once replacement parts and the drive unit are installed. At that point, rehabilitation work will shift to GST #1. It was mentioned that the contractor has completed measurements for a new drive unit for GST #4, and the equipment submittal is currently under review to account for long manufacturing lead times.

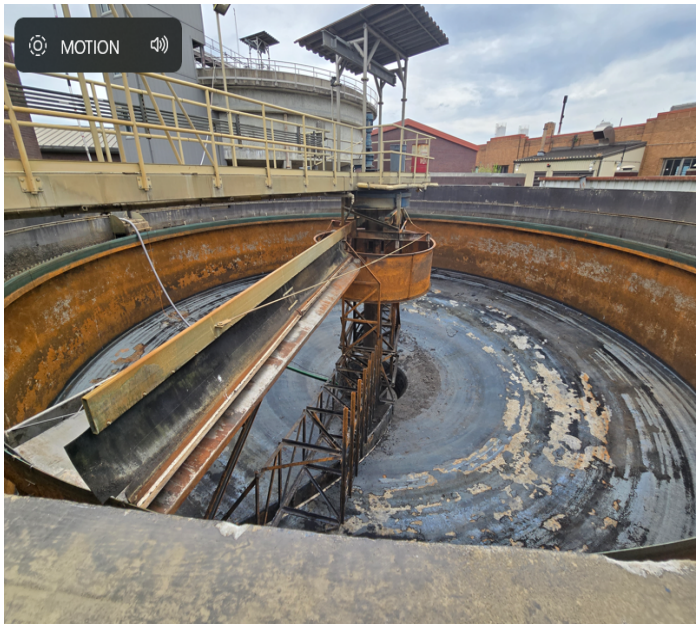

Image 02: GST #2

Sludge Processing to Synagro:

It was reported that the treatment plant does not currently have an excess accumulation of solids within its system, and Synagro continues to process the plant's active sludge production without interruption. Sludge processing data is provided in the monthly MOR submitted with the NetDMR submissions. The provided data for April 2026 is presented in the table below.

April 2026

Sludge Processing to Synagro, January, 2026					
Date	KGAL Feed Sludge	%Total Solids in Feed Sludge	Feed Sludge, Dry Tons	Synagro Product Cake, Dry Tons	Synagro Pellet Production, Dry Tons
4/1	427.057	4.08	72.66	91.28	0.00
4/2	541.379	4.25	95.95	69.67	0.00
4/3	169.925	5.43	38.48	94.33	0.00
4/4	0.000		0.00	0.00	0.00
4/5	0.000		0.00	0.00	0.00
4/6	354.095	3.72	54.93	0.00	0.00
4/7	337.516	4.00	56.30	58.63	0.00
4/8	181.144	5.51	41.62	19.39	0.00
4/9	463.834	5.06	97.87	13.02	0.00
4/10	558.715	3.91	91.10	72.34	0.00
4/11	184.967	3.68	28.38	0.00	0.00
4/12	561.913	3.94	92.32	0.00	0.00
4/13	563.923	3.88	91.24	51.82	0.00
4/14	615.297	3.91	100.32	44.63	0.00
4/15	300.596	6.49	81.35	90.77	18.79
4/16	231.953	4.11	39.75	30.82	17.82
4/17	270.516	4.02	45.35	5.48	41.25
4/18	69.546	4.18	12.12	0.00	21.92
4/19	10.145		0.00	0.00	0.00
4/20	485.810	4.33	87.72	0.00	41.52
4/21	587.586	4.28	104.87	29.05	42.28
4/22	617.081	3.73	95.98	30.98	22.88
4/23	425.488	5.91	104.86	30.98	23.04
4/24	206.207	5.47	47.04	26.15	46.15
4/25	0.000		0.00	0.00	0.00

4/26	0.559		0.00	0.00	0.00
4/27	146.336	6.21	37.89	0.00	0.00
4/28	234.452	4.05	39.60	0.00	108.45
4/29	232.548	3.21	31.13	0.00	22.53
4/30	328.240	2.36	32.30	0.00	65.28
Total	9,106.83	109.72	1,621.13	759.34	471.91
Average	303.561	4.39	54.04	23.31	15.73

Primary Treatment:

The facility's primary treatment system utilizes six Primary Settling Tanks (PSTs) to remove suspended solids and surface scum via a mechanical network of chains, paddles, and collectors. During the inspection, PSTs #2, #3, #5, and #6 were active, PST #4 was out of service, and PST #1 (including Reactor #1) was offline in standby mode, while the aerator 1C remains under technical review due to an operational issue. To manage ongoing scum removal, operators are using a temporary frac tank to skim and decant water, with the concentrated scum hauled off-site for disposal every Tuesday and Friday. Mr. Charlie Oliver reported that the SC983R PST Scum Collection Project is progressing, with contractors having installed new knife gates and actuators, began pulling electrical and control wiring, and secured approval for the new scum concentrator equipment submittal.

PST Status During Inspection:

- PST #1 – offline in standby mode
- PST #2 – operational and in service
- PST #3 – operational and in service
- PST #4 – out of service
- PST #5 – operational and in service
- PST #6 – operational and in service

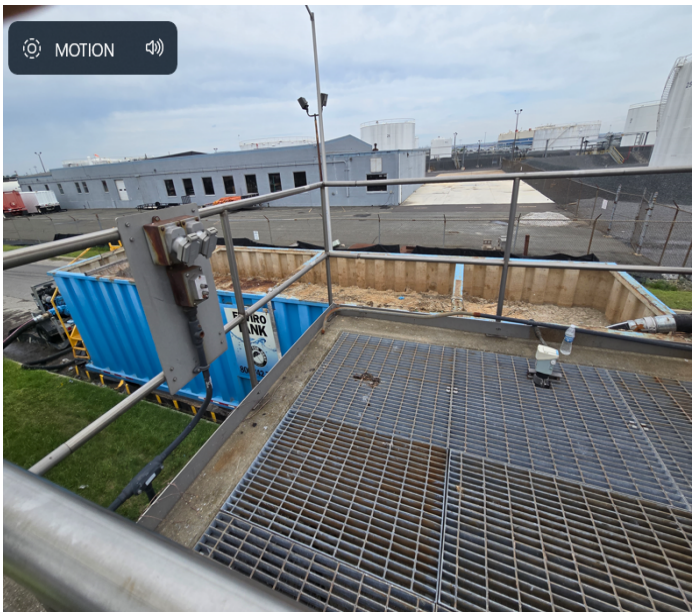

Image 03: Temporary frac tank use to skim and decant water

Pure Oxygen Reactors and Liquid Oxygen Plant (LOX Plant):

The LOX Plant turns air into a liquid that is 95% oxygen, which is then used in the reactors to help clean the water by removing organic waste. The main system is running smoothly, and there's a backup system with four large oxygen tanks that can automatically take over if needed. The facility has six reactors, each with three aerators (18 total) that

mix oxygen into the water. At the time of the visit, reactors #2, #3, #5, and #6 were operating, reactor #1 was on standby, and reactor #4 was shut down for mixer repairs. Mr. Oliver also shared that a new LOX Plant is being planned as part of a bigger upgrade project (SC991), and the design is about 30% finished and currently being reviewed by the city's Design and Construction team.

Secondary Treatment:

The Patapsco WWTP has eight secondary clarifiers (#1, #2, #3, #4, #5A, #5B, #6A, and #6B) used to separate biological solids from treated wastewater. Clarifier #3, which use to functioned as a mud well for denitrification and biological aeration filter backwash water, is undergoing an upgrade under the SC994 Secondary & GST Rehabilitation Project (Consent Decree); however, it is temporarily been used as a standby flow-equalization basin during high-flow events. According to Mr. Charlie Oliver, the rehabilitation involves a complete replacement of all internal mechanisms while retaining the original concrete slab and walls to optimize long-term plant performance. Structural inspections and field measurements have already been completed for Clarifiers #1, #2, and #3, and while the new drive assembly for Clarifier #3 has been ordered to accommodate its long manufacturing lead time, contractors expect to begin preparatory regrouting of the tank's concrete slab and walls by September 2026.

Secondary Clarifier # / Status:

- #1- in operation, one skimmer flap missing
- #2 - in operation, one skimmer flap missing
- #3 - Standby for flow equalization. (High flow events)
- #4 - in operation, free from scum
- #5A - in operation, arm bent / dipping
- #5B - in operation, arm bent / dipping
- #6A - in operation, skimmer flap missing
- #6B - in operation, both skimmer flaps missing

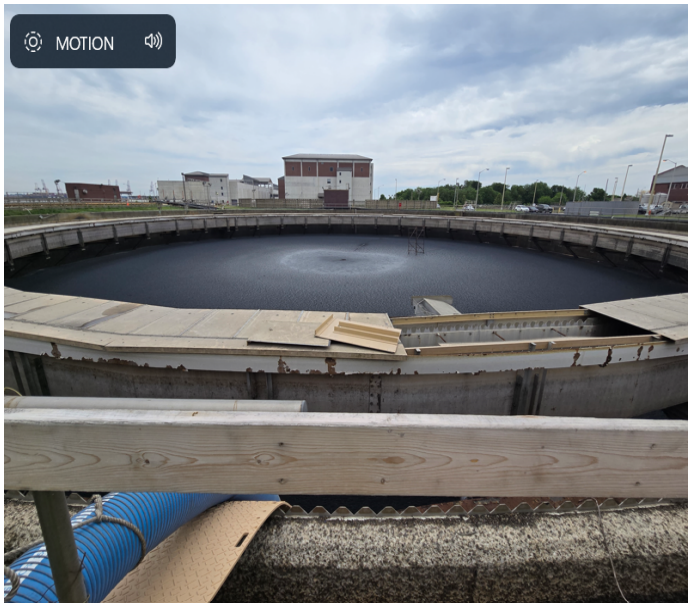

Image 04: Clarifier #3 is currently used as standby for flow equalization.

BAFs and Mud Wells:

The Biological Aeration Filter (BAF) facility consists of 22 filter cells supported by air blowers, with a minimum of 14 cells required to effectively treat the daily wastewater flow. During the inspection, 20 filter cells were in service, with

only cell #16 remaining offline due to a long-standing air valve issue and cell #8 which is offline. No other operational problems were observed or reported regarding the BAF system or the associated mud well.

Denitrification Filters:

The Denitrification Filter (DNF) facility consists of 34 gravity filters supported by five backwash blowers. At the time of inspection, 30 of the 34 filters were operational. Filters #32 and #33 were offline for mechanical repairs, while #1 and #34 were held in standby.

Tertiary Pump Station:

The facility has five tertiary pumps (#1, #2, #3, #4, and #5). During the inspection, pumps #1, #2, and #5 were in active service. Pump #3, which was recently rebuilt and returned to operation, has since developed an electrical shock issue and is currently offline, while pump #4 is offline due to a control part that has failed, they reported that they are following up with supplier for delivery date and there is no timeline for it to be back online. In addition to the pumps, the facility operates five primary blowers (#1, #2, #3, #4, and #5). For the majority of the year, only blowers #2 and #4 have been functional, while blowers #1, #3, and #5 remain offline awaiting repairs. To maintain continuous operations and ensure system reliability during these extended maintenance periods, management has installed three temporary rental blowers to supplement the operational units.

Chlorine Contact Chambers:

The facility operates four chlorine contact chambers (CCC #1, #2, #3, and #4) to disinfect treated wastewater before its final release, with each chamber utilizing mixers and scum troughs to remove surface scum. At the time of the inspection, CCC #2, #3, and #4 were actively online and operating properly, though some unwanted vegetation was noted growing inside CCC #4 that needs to be cleared off. Meanwhile, CCC #1 was temporarily offline for routine maintenance, and plant personnel were observed scrubbing and power washing its walls and floors to remove accumulated algae and debris. No other operational issues or compliance violations were observed.

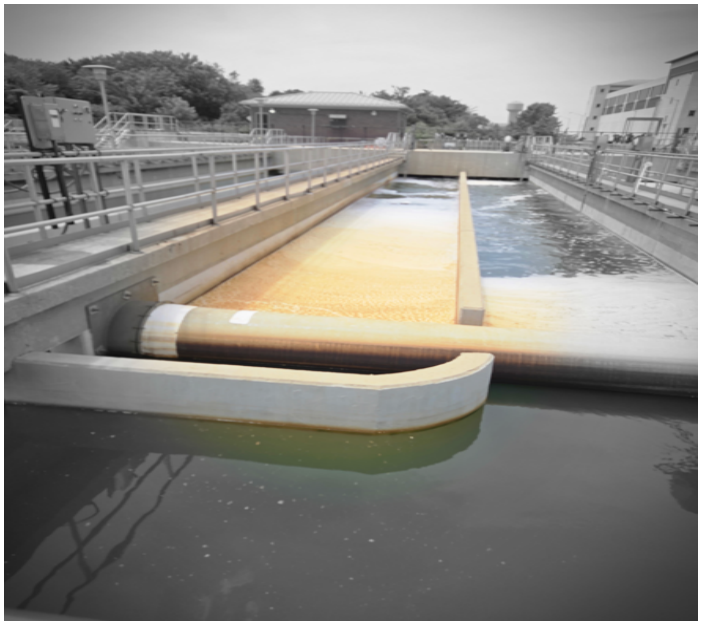

Image 05: Chlorine contact chambers (CCC #2)

Outfall 001:

During today's inspection, foam was observed on the surface of the final discharge channel, though it dissipated rapidly. No Biological Aerated Filter (BAF) media or Fats, Oils, and Grease (FOG) were detected exiting the site

through the effluent channel. Additionally, when viewed from the wastewater treatment plant vantage point, no visible foam had reached the Patapsco River.

Image 06: Final effluent discharge with minimal amount of foam.

Self-Monitoring / In-House Lab:

The following records were reviewed:

- Daily pH calibration records from 6/1/26 to 6/17/26.
- Daily zero oxygen verification / dissolved oxygen (DO) calibration from 6/1/26 to 6/17/26.
- Daily composite samplers' temperatures from 6/1/26 to 3/17/26.
- Chlorine Colorimeter calibrations for 6/1/26 to 6/17/26.

No violations were observed in the review of the above records

The facility's operator lab for the outfall has two composite samplers. The temperatures of the composite samplers #1 and #2 were 4.7°C and 5.2°C, respectively, while the refrigerator thermometer registered a temperature of 4.5°C All readings were within the regulatory limit of 6°C for sample preservation, as specified in 40 CFR Part 136.3, Table II. The three thermometers were last calibrated on September 18, 2025.

MORs, and DMRs:

A review of the Monthly Operating Reports (MORs) and Discharge Monitoring Reports (DMRs) submitted via NetDMR for February, March, and April 2026 was conducted. While no issues or violations were observed in the February and April submissions, permit exceedances for Biological Oxygen Demand (BOD) were identified in the March 2026 report. The specific effluent violations reported for March 2026 are detailed below.

Violation: March 2026.- BOD exceedance

- Maximum Monthly Average Concentration: The permitted limit is 30.0 mg/L, while the facility reported an exceedance of 37.0 mg/L.
- Maximum Weekly Average Concentration: The permitted limit is 45.0 mg/L, while the facility reported an exceedance of 47.0 mg/L.

On April 2, 2026, the facility submitted a formal five-day noncompliance letter to the Department. This letter detailed the root causes of the March BOD exceedances and outlined long-term preventive actions designed to optimize plant

performance and prevent future recurrence. A summary of this five-day letter is documented in the Noncompliance section of this report.

Non-compliance Report / Bypass / Sanitary Sewer Overflow Event(s):

Since the last inspection conducted on March 16, 2026, the Patapsco Wastewater Treatment Plant has experienced several instances of non-compliance and bypass events. The following is a summary of the five-day reports detailing these incidents.

1. On March 16, 2025, the Department received notification regarding a partial internal bypass of the Enhanced Nutrient Removal (ENR) at the Patapsco Wastewater Treatment Plant (PWWTP),. In the 5-day letter submitted on March 23, 2026, the following information was provided:

   "1. Description of the Non-Compliance and its Cause
   On 3/15/2026 at approximately 1300, a partial bypass of the Enhanced Nutrient Removal (ENR) system occurred. While the partial bypass was ongoing, a full internal bypass of the Biological Aerated Filters (BAF) system occurred on 3/17/2026 from 0450 until 0800. After flow was restored to the BAF system the partial bypass continued until 0445 on 3/19/2026. The estimated volume of the BAF internal bypass was 7.2 million gallons, and the estimated volume of the partial ENR bypass was 46.3 million gallons.

   Based on our completed investigation, the root cause of the partial ENR bypass was determined to be a mechanical failure of the mechanical drive for Secondary Clarifier #2 which occurred on 3/15/2026. It was determined that the bearing for the clarifier drive gearbox suffered a catastrophic failure, which rendered the arm mechanism for the tank inoperable. Without the drive mechanism solids were unable to settle within the tank, which led to excessive solids loading to increase head losses within the BAF filters. Plant Operators operated the ENR influent pumps to send as much flow into the ENR system while managing the head losses within the BAF system to prevent a shutdown due to the excess solids loading. However, on the evening of 3/16/2026, the Baltimore city region experienced a storm event which accumulated at approximately 0.50 inches of rainfall. This led to flows entering PWWTP to exceed over 120 mgd, the elevated flows increased the solids entering the BAF and head losses to exceed operable levels. The BAF system shutdown at 0450 on 3/17/2026, and Plant Operators performed a series of backwashes to bring the system back online by 0800, but influent flow was still high in solids and the plant operators had to limit how much flow could be processed through the BAF in order to prevent head loss from rising too high and causing the system to go back offline.

   2. Exact Period of Non-Compliance

   The period of non-compliance began on 3/15/2026 at 1300. The non-compliance ended, and the facility returned to compliance on 3/19/2026 at 0445. The total duration of the event was 3 days and 15. 75 hours. The buoy light was on from a previous bypass and was left on for 24 hours after the end on this bypass.

   3. Steps Taken to Reduce and Eliminate Non-Compliance (Immediate Corrective Actions) Upon discovery of the noncompliance, the facility took the following immediate action(s) to mitigate environmental impact and restore compliance:
   A. Limited the flow entering ENR to keep the BAF system in service.
   B. Regularly completing backwashes to keep head losses in operable range.
   C. Sodium hypochlorite feed was started at the "multi-point" location to ensure all plant effluent flow was disinfected.
   D. When the BAF system entered shutdown, influent flow was reduced so the cells could be backwashed and returned to service.
   E. After the BAF system was brought into service on 3/17/2026, continued to monitor and control influent flow to prevent further BAF bypassing.
   F. Worked with a third-party contractor on site to identify and order the required parts to repair Secondary Clarifier #2 gearbox. This repair process is ongoing at the time of this letter.
   G. Remove Secondary Clarifier #2 from service on 3/19/2026.

H. Worked with a third-party contractor on site to replace the out of service drive motor on out of service clarifier #1 using the drive motor from secondary clarifier #2. Secondary Clarifier #1 was returned to service on 3/19/2026.

Routine plant process control monitoring was conducted to verify the corrective actions were successful and that the BAF was able to return to treating the full volume of the plant flow. These are the results:

A. Testing conducted on 3/16/2026 on the 3/15/2026 effluent composite sample indicated elevated nutrient levels as follows: ammonia was 0.7 mg/I, TKN was 3.23, NOx was 5.01 mg/I, and total nitrogen was 8.25 mg/I.
B. Testing conducted on 3/17/2026 on the 3/16/2026 effluent composite sample indicated elevated nutrient levels as follows: ammonia was 2.65 mg/I, TKN was 5.66, NOx was 3.45 mg/I, and total nitrogen was 9.11 mg/I.
C. Testing conducted on 3/18/2026 on the 3/17/2026 effluent composite sample indicated elevated nutrient levels as follows: ammonia was 6.31 mg/I, TKN was 9.98, NOx was 1.42 mg/I, and total nitrogen was 11.4 mg/I.
D. Testing conducted on 3/19/2026 on the 3/18/2026 effluent composite sample indicated elevated nutrient levels as follows: ammonia was 2.69 mg/I, TKN was 5.24, NOx was 2.31 mg/I, and total nitrogen was 7.55 mg/I.
E. Testing conducted on 3/20/2026 on the 3/19/2026 effluent composite sample indicated elevated nutrient levels as follows: ammonia was 0.95 mg/I, TKN was 3.12, NOx was 3.6 mg/I, and total nitrogen was 6.73 mg/I.

4. Steps Planned to Prevent Recurrence (Long-Term Preventive Actions)
To prevent this type of event from occurring in the future, the facility has implemented, or will implement, the following measures:
1) Maintenance has updated the preventative maintenance schedule to include a monthly analysis on all clarifier pumps.
2) Operations is updating the Standard Operating Procedure to require visual verification of all process pumps and chemical feed pumps on every shift.

These preventive actions are expected to be fully implemented by 3/27/2026."

2. On March 20, 2026 at 4:45 pm, the Department was notified regarding regarding a partial internal bypass of the Enhanced Nutrient Removal (ENR) at the Patapsco Wastewater Treatment Plant (PWWTP). In the 5-day letter submitted on March 25, 2026, the following details were provided:

"1. Description of the Non-Compliance and its Cause
On 3/20/2026 at approximately 1415. a partial bypass of the Enhanced Nutrient Removal System {ENR) occurred. Head losses within the Biological Aerated Filter (BAF) system were elevated such that the system could not receive any additional flow, and excess flow was diverted to the overflow weirs located at the Chlorine Contact Chambers (CCC). The BAF filter began receiving the entirety of the facilities flow at 1500 on 3/20/2026 once head losses were lowered. The estimated volume of the non-compliant discharge was 135,000 gallons.

2. Exact Period of Non-Compliance
The period of non-compliance began on 3/20/2026 at 1415.
The non-compliance ended. and the facility returned to compliance on 3/20/2026 at 1500. The total duration of the event was 45 minutes. The Buoy was turned on and remained on for 24hrs.

3. Steps Taken to Reduce and Eliminate Non-Compliance {Immediate Corrective Actions)
Upon discovery of the noncompliance, the facility took the following immediate action(s) to mitigate environmental impact and restore compliance:
A. Influent flow to the BAF was reduced to keep the facility in service.

B. Operations Staff opened the influent gate to the Out of Service Clarifier #2 tank to act as an equalization basin and lower the wet well level within the ENR pumping station.
C. Sodium hypochlorite feed was started at the "multi-poinr location to ensure all plant effluent flow was disinfected.

Routine plant process control monitoring was conducted to verify the corrective actions were successful and that the BAF was able to return to treating the full volume of the plant flow. These are the results:

A. Testing conducted on 3/21/2026 on the 3/20/2026 effluent composite sample indicated nutrient levels as follows: ammonia was 0.655 mg/I, TKN was 2.95 mg/I, NOx was 2.14 mg/I, and total nitrogen was 5.09 mg/I.

4. Steps Planned to Prevent Recurrence (Long-Term Preventive Actions)

To prevent this type of event from occurring in the future, the facility has implemented, or will implement, the following measures:

1) Maintenance is working with contractors to restore #2 clarifier back to normal, but the outcome is currently undetermined.
2) Maintenance update of the preventative maintenance schedule will include chemical feed pumps.
3) Operations is currently updating the Standard Operating Procedure to visually check chemical feed for all in service tanks and chemical feed pumps on every shift.

These preventive actions are expected to be fully implemented by March 27, 2026”

3. On March 24, 2026 at 4:40 pm, the Department was notified regarding an internal bypass of the Biologically Aerated Filter (BAF) at the Patapsco Wastewater Treatment Plant (PWWTP). In the 5-day letter submitted on March 31, 2026, the following details were provided:

“1. Description of the Non-Compliance and its Cause
On 3/23/2026 at approximately 2230 through 0400 on 3/24/2026, a full internal bypass of the biologically aerated filter (BAF) system occurred. The estimated volume of the BAF bypass was 8.44 million gallons.

Based on our completed investigation, the root cause of this exceedance was determined to be the failure of the plant operations staff to return the plant to normal operations after a recent high flow event. 1t is standard practice at the plant to open the influent gates to offline and online reactors to handle excess flow to the plant during rainstorms. The influent gates to online reactors 2 and 6 were opened to 100% on 3/17/2026 to pass flows during a rain event. After the flow returned to normal, the gates were not moved back to their original position. Leaving the reactor gates fully open allowed influent flow to favor reactors 2 and 6 over reactors 3 and 5. The higher flows to reactors 2 and 6 exceeded their capacity for treatment and caused excessive BOD and solids to pass through the secondary process to the biological aerated filters (BAF). This caused excessively high head losses which eventually led to an automatic internal bypass of the BAF process.

2. Exact Period of Non-Compliance
The period of non-compliance began on 3/23/2026 at 2230 and ended on 3/24/2026 at 0400.
The facility returned to compliance on 3/24/2026 at 0400. The total duration of the event was 5.5 hours. The Buoy light was turned on and remained on for 24hrs after the bypass ended.

3. Steps Taken to Reduce and Eliminate Non-Compliance (Immediate Corrective Actions)
Upon discovery of the noncompliance, the facility took the following immediate action(s) to mitigate environmental impact and restore compliance:

A. Influent flow to the BAF was reduced so the cells could be backwashed and returned to service.
B. After the BAF bypass ended, the influent flow was monitored and controlled to prevent further BAF bypassing.

Routine plant process control monitoring was conducted to verify the corrective actions were successful and the site operations return to compliance with the permit. These are the results:

A. Testing conducted on 3/24/2026 on the 3/23/2026 effluent composite sample indicated elevated nutrient levels as follows: ammonia was 0.31 mg/l. TKN was 2.17 mg/l, Nox was 3.56 mg/l and total nitrogen was 5.73 mg/l.
B. Testing conducted on 3/25/2026 on the 3/24/2026 effluent composite sample indicated elevated nutrient levels as follows: ammonia was 4.86 mg/l. TKN was 7.74 mg/l, Nox was 2.05 mg/l and total nitrogen was 10.69 mg/l.

4. Steps Planned to Prevent Recurrence (Long-Term Preventive Actions)
To prevent this type of event from occurring in the future, the facility has implemented, or will implement, the following measures:

1) Operations will be reimplementing the Standard Operating Procedure for storm mode..
2) Operators will be required to verify the gate positions of all in-service and out-of-service tanks on each shift.

These preventive actions will be implemented immediately, along with refresher training of these procedures."

4. On March 27, 2026 at 8:54 pm, the Department was notified regarding discharge from the non-compliance entering into the Patapsco River. at the Patapsco Wastewater Treatment Plant (PWWTP). In the 5-day letter submitted on April 2, 2026, the following details were provided:

"1. Description of the Non-Compliance and its Cause
For the week of 3/15/2026 through 3/21/2026 the Patapsco Wastewater Treatment Plant (PWVVTP) violated its NPDES discharge permit by averaging plant effluent BOD concentrations of 47 mg/I. The permit limit for weekly BOD concentration is 45 mg/I. The secondary processes at the plant have experienced failures of the secondary clarifier drives for clarifiers 1 and 2. Clarifier 3 is out of service due to previous failures and is being repaired under SC944. Without clarifiers 1 and 2 this left one half of the plant with only one working secondary clarifier, #4. The lack of adequate clarification made managing solids in the secondary Process challenging and caused multiple bypasses of the downstream enhanced nutrient removal (ENR) processes. The ongoing bypasses and lack of adequate upstream settling caused the higher concentrations of BOD in tne plant effluent. Based on our completed investigation, the root cause of this exceedance was determined to be the unexpected failure of secondary clarifier drives 1 and 2.
2. Exact Period of Non-Compliance
The period of non-compliance began on 3/15/2026 at 2400 and ended on 3/21/2026 at 2400.
The plant staff worked with an onsite contractor to return one of the two failed secondary clarifiers to service.

3. Steps Taken to Reduce and Eliminate Non-Compliance (Immediate Corrective Actions)
When the ENR process is close to bypassing or bypasses due to secondary effluent solids loading, the plant will manage the influent flow and backwash the filter cells to keep them online as long as possible.

Routine lab monitoring shows that the plant effluent BOD concentration has started to drop and was:
40 mg/I on 3/22/2026
44 mg/I on 3/23/2026
33 mg/I on 3/24/2026

4. Steps Planned to Prevent Recurrence (Long-Term Preventive Actions)
To prevent this type of event from occurring in the future, the facility has implemented, or will implement, the following measures:

- Clarifier drives will be replaced as part of capital improvement projects."

5. On April 6, 2026 at 12:00 pm, the Department was notified regarding a partial internal bypass of the Enhanced Nutrient Removal (ENR) at the Patapsco Wastewater Treatment Plant (PWWTP). In the 5-day letter submitted on April 10, 2026, the following details were provided:

   "1. Description of the Non-Compliance and its Cause
   On 41612026 at approximately 12:00, a partial bypass of the Enhanced Nutrient Removal System (ENR) occurred. Head losses within the Biological Aerated Filter (BAF) system were elevated such that the system could not receive any additional flow, ana excess flow was diverted to the overflow weirs located at the Chlorine Contact Chambers (CCC). All flow was disinfected. The BAF filter began receiving the entirety of the facilities flow at 1445 on 4/6/2026 once head losses were lowered. The estimated volume of the non-compliant discharge was 4.9 million gallons.

   Based on our completed investigation, the root cause of this exceedance was determined to be high solids in the secondary treatment process effluent. The secondary treatment process has had solids settling challenges during March of 2026 due to equipment failures for the chemical dosing system and the drive mechanism for Clarifier #2. While progress has been made in addressing these challenges, the ENR process is still recovering from the increased solids loading that entered the system.

   2. Exact Period of Non-Compliance
   The period of non-compliance began on 4/6/2026 at 1200. The buoy was on due to the partial bypass that occurred on 4/5/2026 and remained on 24 hours after the bypass stopped. The non-compliance ended, and the facility returned to compliance on 4/6/2026 at 1445. The total duration of the event was 2.75 hours.

   3. Steps Taken to Reduce and Eliminate Non-Compliance (Immediate Corrective Actions)
   Upon discovery of the noncompliance, the facility took the following immediate action(s) to mitigate environmental impact and restore compliance:

   A. Influent flow to the BAF was reduced to keep the facility in service.
   B. Operators manually triggered backwashes to recover the elevated head losses in the BAF facility..
   C. Operations Staff opened the effluent gate to the Out of Service Clarifier #3 tank to act as an equalization basin and lower the wet well level within the ENR pumping station.
   D. Sodium hypochlorite feed was started at the "multi-point" location to ensure all plant effluent flow was disinfected.

   Routine plant process control monitoring was conducted to verify the corrective actions were successful and the site operations return to compliance with the permit. These are the results:
   A. Testing conducted on 4/7/2026 on the 4/6/2026 effluent composite sample indicated nutrient levels as follows: Ammonia was 1.21 mg/l. TKN was 4.2 mg/l, Nox was 1.72 mg/l and total nitrogen was 5.92 mg/l.

   4. Steps Planned to Prevent Recurrence (Long-Term Preventive Actions)
   To prevent this type of event from occurring in the future, the facility has implemented, or will implement, the following measures:

   1) Maintenance is continuing to address the chemical feed pump issues. One ferric feed line to the secondary clarifiers on the 690-6 side has been replaced by contractors.
   2) Under capital improvement project SC987 new chemical pumps and new feed lines are included. Operations have requested acceleration of these pumps."

6. On April 6, 2026 at 2:00 pm, the Department was notified regarding a partial internal bypass of the Enhanced Nutrient Removal (ENR)at the Patapsco Wastewater Treatment Plant (PWWTP). In the 5-day letter submitted on April 10, 2026, the following details were provided:

   "1. Description of the Non-Compliance and its Cause

On 4/5/2026 at approximately 17:20, a partial bypass of the Enhanced Nutrient Removal System (ENR) occurred. Head losses within the Biological Aerated Filter (BAF) system were elevated such that the system could not receive any additional flow, and excess flow was diverted to the overflow weirs located at the Chlorine Contact Chambers (CCC). The BAF filter began receiving the entirety of the facilities flow at 2250 on 4/5/2026 once head losses were lowered. The estimated volume of the non-compliant discharge was 6.8 million gallons. All flow was disinfected.

Based on our completed investigation, the root cause of this exceedance was determined to be high solids in the secondary treatment process effluent. The secondary treatment process has had solids settling challenges during March of2026 due to equipment failures for the chemical dosing system and the drive mechanism for Clarifier #2. While progress has been made in addressing these challenges, the ENR process is still recovering from the increased solids loading that entered the system..

2. Exact Period of Non-Compliance
The period of non-compliance began on 4/5/2026 at 1720. The buoy was turned on at the time of the discovery and remained on 24 hours after the bypass stopped. The non-compliance ended, and the facility returned to compliance on 4/5/2026 at 2250. The total duration of the event was 5.5 hours.

3. Steps Taken to Reduce and Eliminate Non-Compliance (Immediate Corrective Actions)
Upon discovery of the noncompliance, the facility took the following immediate action(s) to mitigate environmental impact and restore compliance:

- Influent flow to the BAF was reduced to keep the facility in service.
- Operations Staff opened the effluent gate to the Out of Service Clarifier #2 tank to act as an equalization basin and lower the wet well level within the ENR pumping station.
- Sodium hypochlorite feed was started at the "multi-point" location to ensure all plant effluent flow was disinfected.

Routine plant process control monitoring was conducted to verify the corrective actions were successful and the site operations return to compliance with the permit. These are the results:

A. Testing conducted on 4/6/2026 on the 4/5/2026 effluent composite sample indicated nutrient levels as follows: Ammonia was 0.43 mg/l. TKN was 5.93 mg/l, Nox was 1.58 mg/l and total nitrogen was 7.52 mg/l.

4. Steps Planned to Prevent Recurrence (Long-Term Preventive Actions)
To prevent this type of event from occurring in the future, the facility has implemented, or will implement, the following measures:

- Maintenance is continuing to address the chemical feed pump issues. One ferric feed line to the secondary clarifiers on the 690-6 side has been replaced by contractors.
- Under capital improvement project SC987 new chemical pumps and new feed lines are included. Operations has requested acceleration of these pumps."

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7. On April 8, 2026 at 09:40, the Department was notified regarding a bypass of the Enhanced Nutrient Removal (ENR) at the Patapsco Wastewater Treatment Plant (PWWTP). In the 5-day letter submitted on April 13, 2026, the following details were provided:

"1. Description of the Non-Compliance and its Cause
On 4/72026 at approximately 1130, a bypass of the Enhance Nutrient Removal System (ENR) occurred. Head losses within the Biological Aerated Filter (BAF) system exceeded the system capacity to treat flow. The system automatically shut down the filters to prevent damage to the filter media, and flow that entered the facility bypassed over the BAF internal overflow weirs. The BAF filters recovered from high head losses and began treating the received flow at 1245 on 4/7/2026. The estimated volume of the bypass is 2.2 million gallons.

Based on our completed investigation, the root cause of this exceedance was determined to be high solids in the secondary treatment process effluent. The secondary treatment process has had solids settling challenges during March of2026 extending into April, due to equipment failures for the chemical dosing systems and the drive mechanism for Clarifier #2. Additionally, prior to the bypass, plant operations was attempting to dewater the out-of-service clarifier #3, which had been used as an equalization basin on 4/6/2026, by using a diesel pump to discharge into the influent channel of clarifiers 1-4. It is believed that the added solids and flow from the dewatering of Clarifier 3 was a contributing factor to the increase in head losses within the BAF.

2. Exact Period of Non-Compliance
The period of non-compliance began on 4/7/2026 at 11:30. The non-compliance ended, and the facility returned to compliance on 4/7/2026 at 1245. The total duration of the event was 1.25 hours. The buoy was on due to a partial bypass that occurred on 04/06/2026. It remained on 24 hours after this bypass stopped.

3. Steps Taken to Reduce and Eliminate Non-Compliance (Immediate Corrective Actions)
Upon discovery of the noncompliance, the facility took the following immediate action(s) to mitigate environmental impact and restore compliance:

A. Ceased the dewatering operation for Clarifier #3.
B. Influent flow to the BAF was reduced to decrease the solids loading entering the filters.
C. Operators manually triggered backwashes to recover the elevated head losses in the BAF facility.
- Operations Staff opened the effluent gate to the Out of Service Clarifier #3 tank to act as an equalization basin and lower the wet well level within the ENR pumping station.
- Sodium hypochlorite feed was started at the "multi-point" location to ensure all plant effluent flow was disinfected.

4. Steps Planned to Prevent Recurrence (Long-Term Preventive Actions)
To prevent this type of event from occurring in the future, the facility has implemented, or will implement, the following measures:

1) Maintenance will continue to work on chemical feed pumps and feed lines.

Operations has requested acceleration of new chemical feed pumps and use of new chemical feed lines installed under capital project SC987."

8. On April 8, 2026 at 17:00, the Department was notified regarding permit limit violation of BOD concentration for the month of March 2026 at the Patapsco Wastewater Treatment Plant (PWWTP). In the 5-day letter submitted on April 10, 2026, the following details were provided:

"1. Description of the Non-Compliance and its Cause
For the month of March 2026, the Patapsco Wastewater Treatment Plant (PWWTP) violated its NPDES discharge permit by averaging plant effluent BOD concentrations of 37 mg/I. The permit limit for monthly BOD concentration is 30 mg/I. The secondary processes at the plant have experienced failures of the secondary clarifier drives for clarifiers I and 2. Clarifier 3 is out of service due to previous failures and is being repaired under SC944. Without clarifiers I and 2 this left one half of the plant with only one working secondary clarifier, 4. The lack of adequate clarification made managing solids in the secondary process challenging and caused multiple bypasses of the downstream enhanced nutrient removal (ENR) processes. The ongoing bypasses and lack of adequate upstream settling caused the higher concentrations of BOD in the plant effluent.

Based on our completed investigation, the root cause of this exceedance was determined to be the unexpected failure of secondary clarifier drives I and 2..

2. Exact Period of Non-Compliance
The period of non-compliance began on 3 1/2026 and ended on 3 31 2026.
The plant staff worked with an onsite contractor to return one of the two failed secondary clarifiers to service..

3. Steps Taken to Reduce and Eliminate Non-Compliance (Immediate Corrective Actions)

A. When the ENR process is close to bypassing or bypasses due to secondary effluent solids loading, the plant will manage the influent flow and backwash the filter cells to keep them on line as long as possible.
B. The secondary clarifier 1 has been repaired and the clarifier has been returned to1normal operation..

Routine lab monitoring shows that the plant effluent BOD concentration had dropped to 9 mg/I on 3 31/2026. BOD results are not yet available for April.

4. Steps Planned to Prevent Recurrence (Long-Term Preventive Actions)
To prevent this type of event from occurring in the future, the facility has implemented, or will implement, the following measures:

1) Clarifier drives will be replaced as part of the capital improvement project."

9. On April 10, 2026 at 11:15, the Department was notified regarding a partial bypass of the Enhanced Nutrient Removal (ENR) at the Patapsco Wastewater Treatment Plant (PWWTP). In the 5-day letter submitted on April 15, 2026, the following details were provided:

"1. Description of the Non-Compliance and its Cause
On 4/9/2026 at approximately 1200, a partial bypass of the Enhance Nutrient Removal System (ENR) occurred. Head losses within the Biological Aerated Filter (BAF) system were elevated such that the system could not receive any additional flow, and excess flow was diverted to the overflow weirs located at the Chlorine Contact Chambers (CCC). The BAF filter began receiving the entirety of the facilities flow at 1945 on 4/9/2026 once head losses were lowered. The estimated volume of the non-compliant discharge was 6.8 million gallons.

Based on our completed investigation, the root cause of this exceedance was determined to be high solids in the secondary treatment process effluent. The secondary treatment process has had solids settling challenges during March of 2026 extending into April due to equipment failures for the chemical dosing system and the drive mechanism for Clarifier #2. While progress has been made in addressing these challenges, the ENR process is still recovering from the increased solids loading that entered the system.
2. Exact Period of Non-Compliance
The period of non-compliance began on 4/9/2026 at 1200. The buoy was turned on and remained on 24 hours after the bypass stopped. The non-compliance ended, and the facility returned to compliance on 4/9/2026 at 1945. The total duration of the event was 7.75 hours.

3. Steps Taken to Reduce and Eliminate Non-Compliance (Immediate Corrective Actions)
Upon discovery of the noncompliance, the facility took the following immediate action(s) to mitigate environmental impact and restore compliance:

- Influent flow to the BAF was reduced to keep the facility in service.
- Operators manually triggered backwashes to recover the elevated head losses in the BAF facility..
- Sodium hypochlorite feed was started at the "multi-point" location to ensure all plant effluent flow was disinfected.

Routine plant process control monitoring was conducted to verify the corrective actions were successful and the site operations return to compliance with the permit. These are the results:

A. Testing conducted on 4/10/2026 on the 4/9/2026 effluent composite sample indicated nutrient levels as follows: Ammonia was 1.72 mg/l. TKN was 5.96 mg/l, Nox was 1.66 mg/l and total nitrogen was 7.61 mg/l.
4. Steps Planned to Prevent Recurrence (Long-Term Preventive Actions)

To prevent this type of event from occurring in the future, the facility has implemented, or will implement, the following measures:

- Maintenance is continuing to address the chemical feed pump issues.
- Under capital improvement project SC987 new chemical pumps and new feed lines are included. Operations has requested acceleration of these pumps."

10. On April 30, 2026 at 13:25, the Department was notified regarding a partial bypass of the Enhanced Nutrient Removal (ENR) at the Patapsco Wastewater Treatment Plant (PWWTP). In the 5-day letter submitted on May 5, 2026, the following details were provided:

"1. Description of the Non-Compliance and its Cause
On 4/29/2026 at approximately 2245, a partial bypass of the Enhance Nutrient Removal System (ENR) occurred. Head losses within the Biological Aerated Filter (BAF) system were elevated such that the system could not receive any additional flow, and excess flow was diverted to the overflow weirs located at the Chlorine Contact Chambers (CCC). The BAF filter began receiving the entirety of the facilities flow at 0240 on 4/30/2026 once head losses were lowered. The estimated volume of the non-compliant discharge was 6.68 million gallons.

Based on our completed investigation, the root cause of this exceedance was determined to be high solids in the secondary treatment process effluent. The secondary treatment process has had solids settling challenges since March of 2026 due to equipment failures for the chemical dosing system and the drive mechanism for Clarifier #2. While progress has been made in addressing these challenges, the ENR process is still recovering from the increased solids loading that entered the system.

2. Exact Period of Non-Compliance
The period of non-compliance began on 4/29/2026 at 2245 and ended at 0240 on 4/30/2026. The total duration of the event was 3 hours and 55 minutes. The buoy was turned on at the time of discovery and remained on 24hrs after the bypass stopped.

3. Steps Taken to Reduce and Eliminate Non-Compliance (Immediate Corrective Actions)
Upon discovery of the noncompliance, the facility took the following immediate action(s) to mitigate environmental impact and restore compliance:

- Influent flow to the BAF was reduced to keep the facility in service.
- Operators manually triggered backwashes to recover the elevated head losses in the BAF facility..
- Sodium hypochlorite feed was started at the "multi-point" location to ensure all plant effluent flow was disinfected.

4. Routine plant process control monitoring was conducted to verify the corrective actions were successful and that the BAF was able to return to treating the full volume of the plant flow. These are the results:

B. Testing conducted on 4/30/2026 on the 4/29/2026 effluent composite sample indicated nutrient levels as follows:
   - Ammonia was 3.83 mg/l.
   - TKN was 5.8 mg/l,
   - NOx was 0.69 mg/l
   - Total nitrogen was 6.46 mg/l.

5. Steps Planned to Prevent Recurrence (Long-Term Preventive Actions)
To prevent this type of event from occurring in the future, the facility has implemented, or will implement, the following measures:

- Operations continues to work with contractors with capital project SC987 for the request to accelerate the use of new chemical feed lines and new chemical feed pumps.

11. On May 5, 2026 at 13:20, the Department was notified regarding a partial bypass of the Enhanced Nutrient Removal (ENR) at the Patapsco Wastewater Treatment Plant (PWWTP). In the 5-day letter submitted on May 8, 2026, the following details were provided:

"1. Description of the Non-Compliance and its Cause
On 5/5/2026 at approximately 0000, a partial bypass of the Enhanced Nutrient Removal System (ENR) occurred. Head losses within the Biological Aerated Filter (BAF) system were elevated such that the system could not receive any additional flow, and excess flow was diverted to the overflow weirs located at the Chlorine Contact Chambers (CCC). The BAF filter began receiving the entirety of the facility's flow at 0200 on 5/5/2026 once head losses were lowered. The estimated volume of the non-compliant discharge was 210,000 gallons.

Based on our completed investigation, the root cause of this exceedance was determined to be high solids in the secondary treatment process effluent. The secondary treatment process has had solids settling challenges since March of 2026 due to equipment failures for the chemical dosing system and the drive mechanism for Clarifier #2. While we are working through these challenges and progress has been made, the ENR process is still recovering from the increased solids loading that entered the system.

2. Exact Period of Non-Compliance
The period of non-compliance began on 5/5/2026 at 0000 and the facility returned to compliance at 0200 on 5/5/2026. The total duration of the event was 2 hours. The buoy was turned on at 0000 on 5/5/2026, at time of discovery, and remained on for 24 hours after the bypass stopped.

3. Steps Taken to Reduce and Eliminate Non-Compliance (Immediate Corrective Actions)
Upon discovery of the noncompliance, the facility took the following immediate action(s) to mitigate environmental impact and restore compliance:

- Influent flow to the BAF was reduced to keep the facility in service.
- Operators manually triggered backwashes to recover the elevated head losses in the BAF facility..
- Sodium hypochlorite feed was started at the "multi-point" location to ensure all plant effluent flow was disinfected.

Routine plant process control monitoring was conducted to verify the corrective actions were successful and that the BAF was able to return to treating the full volume of the plant flow. These are the results:

C. Testing conducted on 5/6/2026 on the 5/5/2026 effluent composite sample indicated nutrient levels as follows:
   - Ammonia was 3.89 mg/l.
   - TKN was 4.7 mg/l,
   - NOx was 0.82 mg/l
   - Total nitrogen was 5.52 mg/l.

5. Steps Planned to Prevent Recurrence (Long-Term Preventive Actions)
To prevent this type of event from occurring in the future, the facility has implemented, or will implement, the following measures:

- Operations will continue to work with contractors with capital project SC987 to fulfill the request to accelerate the use of new chemical feed lines and new chemical feed pumps.
- Operational changes are being made in the aeration system to try to address settling issues in the secondary clarifiers."

12. On May 7, 2026 at 15:05, the Department was notified regarding a control system breaker in Remote Input/Output Panel 5 (RIOS) in the Biological Aerated Filter building (BAF) at the Patapsco Wastewater Treatment Plant (PWWTP). In the 5-day letter submitted on May 12, 2026, the following details were provided:

"1. Description of the Non-Compliance and its Cause
On 5/6/2026 at approximately 0840, a control system breaker in Remote Input/Output Panel 5 (RIOS) in the Biological Aerated Filter building (BAF) tripped and took the analog card that it powered offline. This card relayed the field signals for mu dwell levels, effluent channel levels, Chemscan readouts, and a few other minor points to the BAF control system to automatically control system backwashing and air flow. Without this card available, the individual BAF filter cells could not be backwashed. The plant's maintenance group and onsite contractors worked throughout the day. They were unable to repair the issue; in turn the field signals could not be restored back to the control system. Without the ability to backwash, the BAF was taken offline on 5/6/2026 at 1900 hrs. The maintenance staff and an assisting contractor returned the next morning and resumed troubleshooting the issues with the breaker. The breaker was repaired and tested by 1130 on 5/7/2026. Due to ongoing issues with poor quality influent flow and the lack of backwashing on 5/6/2026 the plant staff elected to continue partially bypassing the BAF and utilize one influent pump at minimum speed to backwash all 22 cells before bringing the system back online with full flow. Operators continuously backwashed the cells overnight on the 7th and the BAF was brought back online on 5/8/2026 at approximately 0945. The estimated volume of the non-compliant discharge was 78.03 million gallons.

Based on our completed investigation, the root cause of this exceedance was determined to be the failure of the breaker in the RIOS panel in the BAF. Without the field device inputs, the system could not be backwashed to keep it in service.

2. Exact Period of Non-Compliance
The period of non-compliance began on 5/6/2026 at 1900 and the non-compliance ended and the facility returned to compliance on 5/8/2026 at 0945. The total duration of the event was 36 hours, 45 minutes. The buoy was turned on when the bypass started and remained on 24 hours after the bypass ended.

3. Steps Taken to Reduce and Eliminate Non-Compliance (Immediate Corrective Actions)
Upon discovery of the noncompliance, the facility took the following immediate action(s) to mitigate environmental impact and restore compliance:

A. The control system problem issues were investigated and then resolved.
B. Operators manually triggered backwashes to make up for downtime while the issue was addressed.
C. Sodium hypochlorite feed was started at the "multi-point" location to ensure all plant effluent flow was disinfected.

Routine plant process control monitoring was conducted to verify the corrective actions were successful and that the BAF was able to return to treating the full volume of the plant flow. The nutrient results for the effluent composite samples are as follows:

A. 5/7/2026 results:
- Ammonia (23.3) mg/I
- TKN (27.5) mg/I
- NOx (0.25) mg/I
- Total nitrogen (27.75) mg/I.

B. 5/8/2026 results:
- Ammonia (12.5) mg/I
- TKN (13.7) mg/I
- NOx (0.44) mg/I
- Total Nitrogen {14.14) mg/I

C. 5/9/2026 results:
- Ammonia (3.46) mg/I
- TKN (5.75) mg/I
- NOx (0.95) mg/1
- Total Nitrogen (6.7) mg/I.

4. Steps Planned to Prevent Recurrence (Long-Term Preventive Actions)

To prevent this type of event from occurring in the future, the facility has implemented, or will implement, the following measures:

While a breaker failure or an electrical short in a wire is impossible to eliminate, the maintenance and stores departments are reviewing spare parts inventories and adjusting what and how many of these parts are on-site. Additionally, we plan to interview systems integrators that can be called in to troubleshoot control system issues."

13. On May 24, 2026 at 10:00, the Department was notified regarding a a partial bypass of the Patapsco Wastewater Treatment Plant (PWWTP) Enhanced Nutrient Removal System (ENR) at the Patapsco Wastewater Treatment Plant (PWWTP). In the 5-day letter submitted on May 29, 2026, the following details were provided:

"1. Description of the Non-Compliance and its Cause
On 5/23/2026 at approximately 0500, a partial bypass of the Patapsco Wastewater Treatment Plant (PWWTP) Enhanced Nutrient Removal System (ENR) occurred.

Based on our completed investigation, the root cause of this exceedance was determined to be a significant increase in plant influent flow due to rain. Beginning on 5/22/2026 the Baltimore region received over 1 inch of rain in a 48-hour period. Corresponding with the rain, PWWTP saw a significant increase in influent flow - approximately 120 MGD at the time that the bypass began. When the flow increased, the head losses within the Biological Aerated Filters (BAF) facility began rising. To prevent the BAF filters from blinding and to treat as much flow as possible, operators limited the Tertiary Pumping Station (TPS) to pumping approximately 75 MGD of flow to the ENR system. All excess flow was diverted to the plant disinfection system. The excess flow was treated prior to being discharged to the Patapsco River. The bypass concluded at 0400 on 5/24/2026. During the period of non-compliance, the PWWTP ENR system treated 72.31 million gallons of flow while 18.23 million gallons of flow bypassed the BAF and diverted to the disinfection system. Approximately 20% of the flow was bypassed.

2. Exact Period of Non-Compliance
The period of non-compliance began on 5/23/2026 at 0500. The non-compliance ended, and the facility returned to compliance on 5/24/2026 at 0400. The total duration of the event was 23 hours. The buoy light was lit when the bypass started and remained on 24 hours after the bypass ended.

3. Steps Taken to Reduce and Eliminate Non-Compliance (Immediate Corrective Actions)

A. Influent flow to the BAF was reduced to keep the facility in service..
B. Operators manually triggered backwashes to recover the elevated head losses in the BAF facility..
C. Sodium hypochlorite feed was started at the "multi-point" location to ensure all plant effluent flow was disinfected.

Routine plant process control monitoring was conducted to verify the corrective actions were successful and that the BAF was able to return to treating the full volume of the plant flow. Effluent composite sample results are as follows:

A. 5/23/2026 results:
- NH3 (4.18) mg/I
- TKN (6.03) mg/I
- NOx (1.53) mg/I
- Total nitrogen (7.56) mg/I.

B. 5/24/2026 results:
- NH3 (4.93) mg/I
- TKN (6.14) mg/I
- NOx (0.88) mg/I
- Total Nitrogen {7.02) mg/I

C. 5/25/2026 results:
- NH3 (1.76) mg/I
- TKN (2.97) mg/I
- NOx (0.85) mg/1
- Total Nitrogen (3.82) mg/I.

4. Steps Planned to Prevent Recurrence (Long-Term Preventive Actions)
To prevent this type of event from occurring in the future, the facility has implemented, or will implement, the following measures:

- Operations will continue to improve standard operating procedures for high flow events.
- A contract is in place to replace chemical feed pumps and lines to aid secondary solids settling."

14. On June 9, 2026 at 14:40, the Department was notified regarding a plant-wide power failure at the Patapsco Wastewater Treatment Plant (PWWTP). In the 5-day letter submitted on June 15, 2026, the following details were provided:

"1. Description of the Non-Compliance and its Cause
On 6/9/2026, at approximately 1300, there was a plant-wide power failure at Patapsco Wastewater Treatment Plant. During the power outage, the plant had emergency power to the fme screen facility at the head of the plant and to the disinfection facility just prior to discharge. With no power to the Tertiary Pumping Station (TPS} to run the pumps that lift flow into the Enhanced Nutrient Removal (ENA) processes, the plant flow filled the wet well and automatically bypassed to the Chlorine Contact Basins (CCB) by 1400. Plant operations staff switched sodium hypochlorite feed to the "multipoint" location at the start of the bypass to maintain disinfection throughout the event. Power was restored to the plant at approximately 2100 on 6/9/2026. The direct bypass from the TPS wet well to the CCB ended at 2130 as the TPS pumps started pumping flow into the BAF. The estimated bypass volume of all flow from the TPS wet well from 1300 to 2130 to the CCB is 14.7 million gallons. At this point, the influent flow to the BAF was internally bypassed to the downstream Denitrifying Filters (DNF) for filtration prior to disinfection while numerous control issues within the BAF were sorted out. At 0720 on 6/10/2026, the BAF's internal bypass was stopped and the BAF began receiving and treating a portion of the influent process flow. The BAF was limited to an influent flow of 35 MGD due to electrical issues with two of the other TPS pumps. As the TPS wet well was already at the bypass point, a partial bypass to the CCB began again while the other pumps were repaired. With two of the TPS pumps repaired and placed back online, the partial bypass stopped at 1415 on 6/10/2026. The estimated bypass volume of the combined partial ENR bypasses from 6/9/2026 at 2130 to 6/10/2026 at 1415 is 9.6 million gallons. The total estimated bypass volume (partial ENR bypass and full ENR bypass combined) for the event is 24.3 million gallons. The duration of the event where the ENA processes were partially or entirely bypassed was approximately 24 hours, 15 minutes from 1400 on 6/9/2026 to 1415 on 6/10/2026.

Based on our completed investigation, the root cause of this bypass was the loss of electrical power to the plant.
2. Exact Period of Non-Compliance
The duration of the event where the ENA processes were partially or entirely bypassed was approximately 24 hours, 15 minutes from 1400 on 6/9/2026 to 1415 on 6/10/2026. The buoy was lit and remained on for 24 hours after the bypass stopped.

3. Steps Taken to Reduce and Eliminate Non-Compliance (Immediate Corrective Actions)
When the power failure occurred, the facility took the following immediate action(s) to mitigate environmental impact and restore normal operations:

A. The onsite generators for the fine screen and disinfection facility were started and monitored for the duration.
B. Backup generators were procured and brought to the site as a contingency.
C. Sodium hypochlorite feed was started at the "multi-point" location to ensure all plant effluent flow was disinfected.

D. Upstream secondary clarifier 3 was filled with ENR influent flow to reduce the overall bypass volume.
E. Plant management, maintenance, and operations staff were held over past their shift end to assist with the power restoration and recovery.

Routine plant process control monitoring was conducted to assess the impact of the bypass and to guide steps to restoring plant processes.

A. 6/9/26 process control testing indicates plant effluent values of:
   - Total Nitrogen-(10.9 mg/I)
   - NH3- (7.36 mg/I)
   - TP- (1.22 mg/I.)
B. 6/10/26 process control testing indicates plant effluent values of:
   - Total Nitrogen-(21.4 mg/I)
   - NH3- (7.36 mg/I)
   - TP- (1.22 mg/I.)
C. 6/11/2026 process control testing indicates plant effluent values of:
   - Total Nitrogen-(9.68 mg/I)
   - NH3- (4.92 mg/I)
   - TP- (1.09 mg/I.)

4. Steps Planned to Prevent Recurrence (Long-Term Preventive Actions)
To prevent this type of event from occurring in the future, the facility has implemented, or will implement, the following measures:

A capital project (SC926) is under construction to upgrade the plant's electrical system and bring in a third electrical feed into the plant.
These preventive actions are expected to be fully implemented by the project completion date of 10/30/2026. However, this may be delayed due to the damage caused during the accident."

15. On June 10, 2026 at 19:09, the Department was notified regarding the non-compliance notification requirements of BOD samples on 6/5/2026 through 6/9/2026 and an Enterococci sample also on 6/9/2026.at the Patapsco Wastewater Treatment Plant (PWWTP). In the 5-day letter submitted on June 15, 2026, the following details were provided:

"1. Description of the Non-Compliance and its Cause
Patapsco operators collected five daily BOD samples on 6/5 through 6/9 and an Enterococci sample also on 6/9. On 6/9 at 13:03 there was a plantwide power failure that affected Patapsco Lab, cutting off power to the BOD Room and to the incubator in the Microbiology Lab. The power stayed off until approximately 21 :00. That disrupted the BOD permit analyses, since the EPA Method requires the samples to have an ambient temperature of 20°C for five consecutive days. Likewise, the Enterococci permit analysis was disrupted because the EPA Method requires the sample to incubate at a temperature of 41 °C for 24-28 consecutive hours. Patapsco will complete the BOD analyses; but the results will be excluded from the weekly and monthly averages in the June 2026 DMR. Likewise, the Enterococci result of 77.6 MPN/1 O0mls will be excluded from June's geometric mean.

2. Exact Period of Non-Compliance
For BOD, the period of non-compliance began on sample dates 6/5/2026 and extended to sample date 6/9/2026. The total duration of the event was five days. For Enterococci, only the sample collected on 6/9/2026 was affected. The June 9 power failure that caused the noncompliance began at 13:03 and lasted until about 21 :00.

3. Steps Taken to Reduce and Eliminate Non-Compliance (Immediate Corrective Actions)
Upon discovery of the power failure, DPW management worked with the Baltimore City Fire Department and State OSHA staff to safely restore power while attending to persons injured by the event.

The lab results for the effluent samples are as follows:

A. 6/5/2026 results:
- BOD 8 mg/I

B. 6/6/2026 results:
- BOD 9 mg/I

C. 6/7/2026 results:
- BOD (pending) mg/I

D. 6/8/2026 results:
- BOD (pending) mg/I

E. 6/9/2026 results:
- BOD (pending) mg/I
- Enterococci - 77 .6 MPN/100mls

4. Steps Planned to Prevent Recurrence (Long-Term Preventive Actions)
To prevent this type of event from occurring in the future, the facility has implemented, or will implement, the following measures:

1) The Lab will develop a Loss of Power SOP which will include an evaluation of potential solutions to power loss. These include sending alternate samples to another lab, transporting current samples to another lab, backup power generators for specific equipment."

16. On June 12, 2026 at 13:53, the Department was notified regarding a lab error on Cyanides, amenable to chlorination at the Patapsco Wastewater Treatment Plant (PWWTP). In the 5-day letter submitted on June 17, 2026, the following details were provided:

"1. Description of the Non-Compliance and its Cause
Patapsco operators collected four permit grab samples for cyanides, amenable to chlorination on May 14, 2026. On June 12, 2026, Patapsco staff received a lab report from contract lab ALS Environmental that showed all results for these tests are invalid. Samples #1, #3 and #4 were tested with a Minimum Reporting Limit (MRL) of 5.00 parts per billion (ppb). MOE Protocol for Toxicity Samples will not accept an MRL above 2 ppb for this test. The nondetectable (ND) results for these three tests are therefore invalid. The original test for Sample #2 showed that the result for amenable cyanide of 2.38 ppb was higher than the ND result for total cyanides. ALS staff recognized this result was therefore invalid and two reruns for this sample were completed for confirmation of results. However, both reruns were mistakenly run on June 4. Their results of 2.81 and 2.65 ppb are invalid since both reruns exceeded the 14-day holding time.

2. Exact Period of Non-Compliance
Because Patapsco lacks a single valid amenable cyanides result for the May 2026 Discharge Monitoring Report (DMR), the period of non-compliance spans May 1-31, 2026.

Patapsco will report the average of all the invalid results on the Monthly Operating Report; but will exclude it from the DMR.

3. Steps Taken to Reduce and Eliminate Non-Compliance (Immediate Corrective Actions)
ALS issued the attached memo to explain their lab errors. ALS blames the flaws in their new software and promises these will be corrected. ALS also apologizes for not contacting Patapsco staff in time for Patapsco to collect new samples during May. Patapsco staff noted ALS's memo does not include an explanation for why the lab used an MRL higher than 2 ppb. Patapsco staff are awaiting a revised memo from ALS for this explanation.
We have filed Unsatisfactory Vendor Reports with our legal counsel and are reaching out to the vendor to correct the problems going forward."

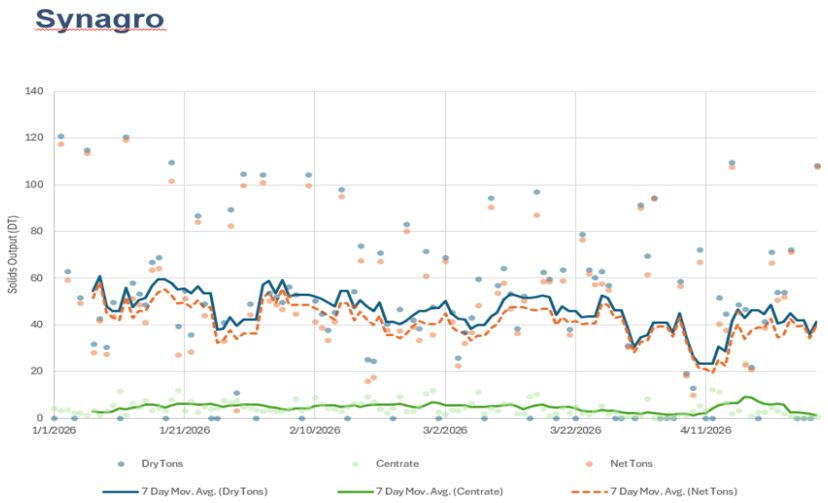
Inspection Date: June 18, 2026
Site Name: Patapsco WWTP
Facility Address: 3501 Asiatic Ave, Curtis Bay, MD 21226

Total Nitrogen (TN) and Total Phosphorus (TP):

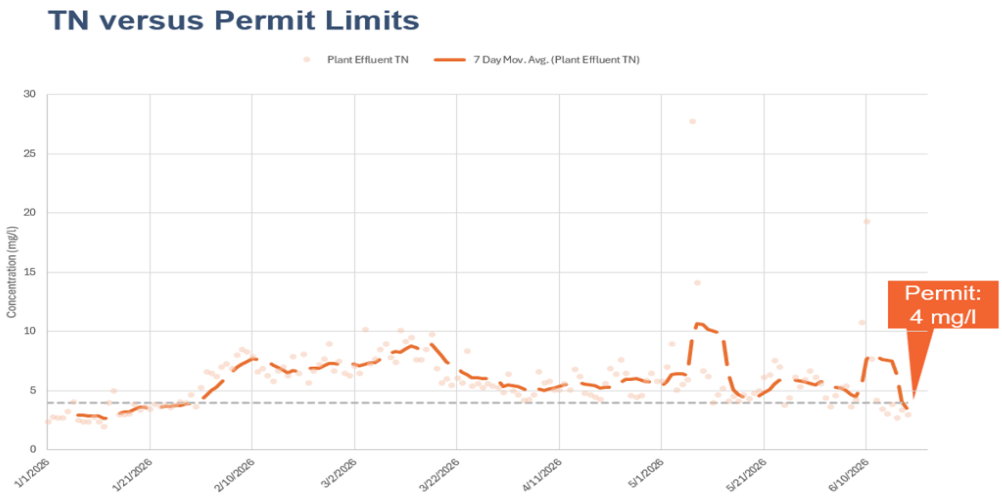
As part of the inspection, the facility's nutrient removal performance was evaluated to assess compliance with annual permit limits.

For Total Nitrogen (TN), the facility's year-to-date annual average effluent concentration from January 1 through June 18, 2026 is 5.88 mg/L. This is currently tracking above the permit limit of 4.0 mg/L. Based on this trajectory, the Patapsco Wastewater Treatment Plant (WWTP) is at risk of failing to meet both its seasonal and annual limits for Total Nitrogen. Conversely, performance for Total Phosphorus (TP) remains compliant. The year-to-date annual average concentration for the same period (January 1 through June 18, 2026) was 0.27 mg/L, which remains below the permit limit of 0.3 mg/L.

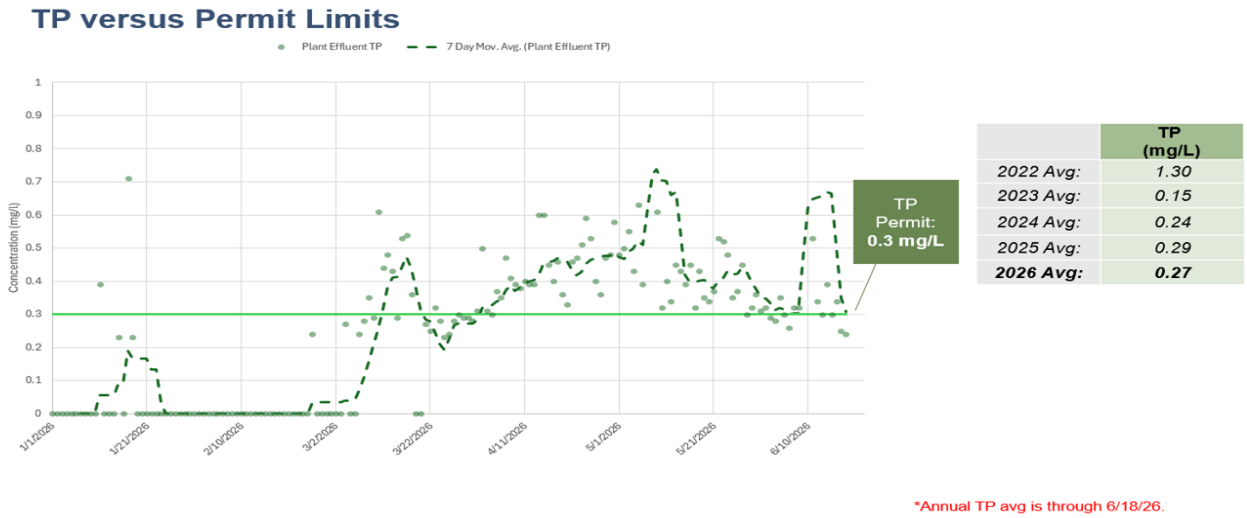
The graphs below illustrate the specific Total Nitrogen (TN) and Total Phosphorus (TP) trending levels for the Patapsco WWTP as of June 18, 2026.



	Dry Tons (tpd)	Centrate (tpd)	Net Tons (tpd)
Jan-26	51.36	4.9	46.5
Feb-26	48.88	5.4	43.5
Mar-26	50.18	5.1	45.1
Apr-26	41.04	3.8	37.7
2026 YTD	**45.88**	**4.43**	**41.2**



	TN (mg/L)
Jan-26	3.41
Feb-26	7.08
Mar-26	8.14
2022 Avg:	*15*
2023 Avg:	*2.9*
2024 Avg:	*3.3*
2025 Avg:	*3.96*
2026 Avg:	***5.88***



	TP (mg/L)
2022 Avg:	1.30
2023 Avg:	0.15
2024 Avg:	0.24
2025 Avg:	0.29
2026 Avg:	**0.27**

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With respect to the above MDE authorization the following violations of Environment Article 9 by the Patapsco WWTP were observed on this date, with corrections (in bold text) needed immediately:

1) VIOLATION: In the DMRs reviewed and in the non-compliance reports provided, the facility has failed to meet final effluent limitations for Outfall 001A. NPDES permit Special Conditions, II.A.1, "Effluent Limitations, Outfall 001A," establishes maximum and minimum effluent limits for effluent water quality discharged from Outfall 001A. **Investigate the failure to meet final effluent requirements and make the necessary changes to bring the facility's final effluent into compliance.**

As of November 2023, Baltimore City and the Maryland Department of the Environment have signed a Consent Decree – Case No. 24-C-22-00386 which establishes specific goals and objectives related to the operations and maintenance of the Patapsco WWTP.

Regular inspections will continue.

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Inspector: _____ 06/18/2026

Mohammed Umoru /Date
mohammed.umoru@maryland.gov
410-537-3506

Received by: Robert Hindt
Robert Hindt (Jun 26, 2026 16:38:48 EDT)
Signature/Date

Robert Hindt
Print Name

Patapsco_06.18.26_ComplianceEvaluationReport

Final Audit Report 2026-06-26

Created:	2026-06-26
By:	Mohammed Umoru (mohammed.umoru@maryland.gov)
Status:	Signed
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"Patapsco_06.18.26_ComplianceEvaluationReport" History

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