

**City of Baltimore**  
**Department of Public Works**

Consent Decree  
Quarterly Report

Reporting Period:  
February 15, 2024, to May 15, 2024

Wastewater Facilities Consent Decree  
Case No. 24-C-22-000386



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## 1.0 INTRODUCTION

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This Calendar Quarterly Report is submitted pursuant Paragraph 170 of the Consent Decree (Case No. 24-C-22-000386).

Since summer 2021, when the Baltimore City (the City) Department of Public Works (DPW) was notified by the Maryland Department of the Environment (MDE) of alleged permit violations at the Back River and Patapsco Wastewater Treatment Plants, DPW has implemented significant improvements at each plant resulting in the Back River plant meeting permit compliance with effluent limitations since June of 2022 (with the exception of a de minimis phosphorous excursion in April 2023 and a minor chlorine excursion in January 2024), and the Patapsco plant meeting its daily, weekly, and monthly effluent limitations since September 2022 and all effluent limits since January 2023 (with the exception two minor weekly excursions in April 2024, one of total suspended solids and one of biochemical oxygen demand).

Since 2022, DPW has made the following improvements:

- Created the Environmental Regulatory Compliance and Safety (ERCS) division – a team of multi-disciplined environmental compliance professionals who troubleshoot and execute timely compliance actions.
- Updated human resource hiring practices to improve hiring and recruiting new staff.
- Modernized and executed preventative maintenance programs, including the repair and rehabilitation of critical assets at both plants.
- Returned the solids processing operations at both plants to full service and removed the excess solids inventory.

The City continues to make improvements to operations at the Back River and Patapsco Wastewater Treatment Plants and has implemented or continued a number of corrective actions during the reporting period, which are summarized in this document and cumulatively in the attachment.

## 2.0 WORK TO BE PERFORMED – CURRENT QUARTER PROGRESS SUMMARY

A summary of Consent Decree (CD) work completed, or scheduled to be completed, during this reporting quarter is provided in the table below. Cumulative progress is included in Appendix 1.

Table 1: Progress Tracking Summary

CD Paragraph Reference - Treatment Plant <sup>1</sup>	Activity	CD Deadline	Actual Completion Date	Compliance Status
136-BR	Complete evaluation of sand filters.	4/30/2024	4/30/2024	Complete
136-BR	Submit a plan and schedule for implementation of sand filter improvements.	5/10/2024	5/10/2024	Complete
144-BR	City to submit a report that identifies what processes are currently automated and conduct a feasibility study for automation of additional processes, with a plan and schedule for future automation.	5/13/2024	5/13/2024	Complete
149-PAT	Issue RFP for repair or replacement of the grit facility.	4/30/2024	4/19/2024	Complete
150-PAT	Repair or refurbish Industrial Plant Influent Facility (IPI) screens and pumps, and replace or fully rehab 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
155-PAT	Complete evaluation of the need for secondary clarifier #3. Within 10 days of evaluation: request approval to discontinue or alter use of clarifier.	4/1/2024 And 5/1/2024	3/26/2023	Complete
167-PAT	City to submit a report that identifies what processes are currently automated and conduct a feasibility study for automation of additional processes, with a plan and schedule for future automation.	5/13/2024	5/13/2024	Complete

<b>CD Paragraph Reference - Treatment Plant <sup>1</sup></b>	<b>Activity</b>	<b>CD Deadline</b>	<b>Actual Completion Date</b>	<b>Compliance Status</b>
174-TEA	Baltimore City shall consult with the Plaintiffs and retain or engage a qualified, independent third-party engineer, to conduct an update to the comprehensive assessment of the Back River and Patapsco WWTPs prepared by Greeley and Hansen ("G&H") in June 2022, and to submit a report, signed and sealed by the licensed professional engineer, summarizing the findings simultaneously and directly to all Parties within 90 days of the Effective Date.	5/13/2024	5/13/2024	Complete

<sup>1</sup> BR = Back River WWTP; PAT = Patapsco WWTP; TEA = Third-Party Engineering Assessment

### 3.0 STIPULATED PENALTIES

#### 3.1 CURRENT QUARTER

Table 2: Current Quarter Potential Stipulated Penalties Due to Project Delays

<b>Back River WWTP</b>				
<b>CD Paragraph Ref.</b>	<b>CD Deadline</b>	<b>Beginning of Quarter</b>	<b>Date of Completion</b>	<b>Potential Stipulated Penalty Amount</b>
133a	1/1/2024	2/15/2024	3/1/2024	\$37,500
141	12/31/2023	2/15/2024	N/A	\$493,500
<b>Total</b>				<b>\$531,000</b>
<b>Patapsco WWTP</b>				
None	N/A	N/A	N/A	N/A

#### 3.2 CUMULATIVE

Table 3: Cumulative Potential Stipulated Penalties Due to Project Delays

<b>Back River WWTP</b>				
<b>CD Paragraph Ref.</b>	<b>CD Deadline</b>	<b>Requested CD Deadline</b>	<b>Date of Time Extension Request Submittal</b>	<b>Potential Stipulated Penalty Amount</b>
133a	1/1/2024	3/31/2024	12/20/2023	\$105,000
141	12/31/2023	7/31/2024	12/20/2023	\$561,000
<b>Total</b>				<b>\$666,000</b>
<b>Patapsco WWTP</b>				
None	N/A	N/A	N/A	N/A

Table 3: Potential Stipulated Penalties Due to Excursion/Discharge

<b>Paragraph 189-192 Stipulated Penalties</b>			
<b>Back River WWTP</b>			
<b>Date</b>	<b>Excursion/Discharge</b>	<b>Penalty Waiver Requested</b>	<b>Amount</b>
12/1/2023	Flushing Water Spill		\$10,000
12/18/2023	SSO	2/5/2024	\$10,000
1/5/2024	Flushing Water Spill	2/5/2024	\$10,000
1/9/2024	SSO	2/5/2024	\$10,000
1/18/2024	Chlorine - 0.23-0.9 mg/l		\$100
1/22/2024	Flushing Water Spill	2/5/2024	\$10,000
2/2/2024	SSO		\$10,000
2/20/2024	Flushing Water/Ferric Chloride Spill		\$10,000
3/1/2024	PST 5 Pump Failure		\$10,000
3/15/2024	SSO/Discharge		\$10,000
3/26/2024	SSO		\$10,000
4/9/2024	SSO		\$10,000
4/14/2024	SSO		\$10,000
4/30/2024	SSO		\$10,000
<b>Total</b>			<b>\$130,100</b>
<b>Patapsco WWTP</b>			
12/18/2023	SSO	2/5/2024	\$10,000
1/9/2024	SSO	2/5/2024	\$10,000
1/9/2024	SSO	2/5/2024	\$10,000
4/16/2024	BOD weekly limit excursion		\$250
4/16/2024	TSS weekly limit excursion		\$250
<b>Total</b>			<b>\$30,500</b>
<b>Both Plants</b>			<b>\$160,600</b>

### 3.3 FORCE MAJEURE/MODIFICATION REQUESTS

#### Par. 133(a) – PST Repairs:

On December 20, 2023, the City submitted to MDE and Blue Water Baltimore (BWB) a time extension request to complete repairs of two primary settling tanks (PSTs) at the Back River Wastewater Treatment Plant, which have a Consent Decree deadline of January 1, 2024. The completion delay is due to project delays by Maryland Environmental Services, resulting PST activation/deactivation sequencing, and unforeseen additional repair work for RSPS A and miscellaneous damaged concrete. The requested deadline was March 31, 2024. On February 29, 2024, MDE sent a letter to the City advising it that it did not consider the unforeseen site conditions and contractor delays to be force majeure but invited the City to submit a request for modification. The City did so on March 11, 2024. As of March 1, 2024, Back River had eight PSTs in service and available to operate as designed.

Par. 141 – Centrifuge 4 Repair:

On December 20, 2023, and February 14, 2024, the City submitted to MDE and BWB time extension requests to complete installation of Centrifuge 4 at Back River Wastewater Treatment Plant. The delay is due to more extensive repair work than originally anticipated for Centrifuge 4. Additionally, the centrifuge was returned to the plant, and some of the parts were still not in a condition to be installed and will require additional refurbishment and repair. On February 29, 2024, MDE sent a letter to the City advising it that it did not consider the contractor and supply chain delays to be force majeure but invited the City to submit a request for modification. The City did so on March 8, 2024. On March 11, 2024, the City submitted an additional extension/modification request since the neither City nor their third-party vendor received the necessary parts from the centrifuge manufacturer. Accordingly, the City has extended its modification request until July 31, 2024.



## 4.0 PROJECT EXPENDITURES FOR QUARTER

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The quarterly report includes all funds expended to comply with the CD and prior to entering the CD and funds encumbered to meet future CD deadlines. As projects progress, the City will provide more granular information on project expenditures.

### 4.1 CURRENT EXPENDITURES

Expenditures this quarter include:

Paragraphs 143 & 166: Support with O&M, SOP, Safety, - \$500k

Paragraphs 133(a) & (b): \$ 1.7M

Paragraph 139: \$2.6M

Paragraph 141: \$250k

Paragraph 142: \$3.5M

Paragraph 144, 167 & 174: \$100k

Salary Increases (pursuant to staffing plan): \$5.6 million

### 4.2 CUMULATIVE EXPENDITURES

Cumulative investments include:

Back River WWTP = \$140M

Patapsco WWTP = \$51.4M<sup>1</sup>

Paragraph 174: \$175k

Other expenditures the City has incurred in support of both WWTPs include:

Maryland Environmental Service = \$7M

Staff Augmentation = \$31.4M

Salary Increases (pursuant to staffing plan): \$5.6 million (over the last quarter)

Maintenance support over 5 years = \$50M

Program Management Team to support compliance = \$9.1M

Plant Operations Efforts = \$13.1M

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<sup>1</sup> A previous version of this report identified Patapsco's cumulative expenses as \$408.5 million – this was a typographical error. At that time the correct number was \$48.5 million

## **5.0 ACCOUNTING OF MAINTENANCE INADEQUACIES**

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DPW completes daily maintenance work at both the Back River and Patapsco wastewater treatment plants. Over the course of the past quarter, Patapsco has performed routine maintenance on several of its Primary Settling Tanks, due to excessive high flows coming to the plant during the frequent rain events that have occurred in 2024. Pursuant to Paragraph 131 of the CD, all maintenance is done in a way that does “not render the equipment inoperable or unavailable for use for the purposes of this Consent Decree so long as compliance with effluent limitations can be maintained and the equipment is returned to operational service promptly.”

## 6.0 STAFFING

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The City submitted a Staffing Report and Plan on December 22, 2023, in compliance with paragraphs 142 and 165. A summary of recommendations and steps taken by the City to implement those recommendations was included in the Staffing Report.

The tables below summarize the City's current staffing levels.

Table 4: Number of Existing and Recommended FTE Staff at BRWWTP

<b>Staff Description</b>	<b>Operations†</b>	<b>Maintenance</b>	<b>Safety‡</b>
Total Current Staff	127	103	1
Vacancies	26	21	0
Recommended Staffing Level	126	103	1

†Operations staff are responsible for process testing.

‡Safety Representatives are also Operators.

Table 5: Number of Existing and Recommended FTE Staff at PWWTP

<b>Staff Description</b>	<b>Operations†</b>	<b>Maintenance</b>	<b>Safety‡</b>
Total Current Staff	83	66	1
Vacancies	11	12	0
Recommended Staffing Level	83	66	1

†Operations staff are responsible for process testing.

‡Safety Representatives are also Operators.

# **Attachment 1**

## **Overall Progress Summary**

Overall progress is summarized in the table below.

Overall Progress Tracking Summary

<b>Consent Decree Paragraph Reference – Treatment Plant <sup>1</sup></b>	<b>Activity</b>	<b>Consent Decree Deadline</b>	<b>Actual Completion Date</b>	<b>Compliance Status</b>
132-BR	Replace H <sub>2</sub> S sensors	12/15/2023	5/16/2023	Complete
133(a)-BR	Clean and complete repairs on at least 8 PSTs to ensure they are fully functional and capable to operate as designed	1/1/2024	FM Letter Sent: 12/20/2023 Modification Letter Sent: 3/11/2024 Completed: 3/1/2024	Complete
133(b)-BR	Clean and complete repairs to all 11 PSTs to ensure they are fully functional and available for use	12/31/2025		81% Complete
134-BR	Baltimore City to have and maintain an adequate supply of Dissolved Oxygen (“D.O”) probes	12/1/2023	11/7/2023	Complete
135-BR	Baltimore City shall maintain Activated Sludge Plants No. 2 & 3 as well as their associated clarifiers.	Ongoing		Compliant
135(a)-BR	Submit for review and Department approval the standard operating procedure (SOP) for removal of vegetative growth in the final clarifiers.	1/15/2024	12/15/2023	Complete
135(b)-BR	Implement vegetative growth plan	Upon approval of 135(a)-BR		Awaiting Approval

<b>Consent Decree Paragraph Reference – Treatment Plant <sup>1</sup></b>	<b>Activity</b>	<b>Consent Decree Deadline</b>	<b>Actual Completion Date</b>	<b>Compliance Status</b>
135(c)-BR	Maintain average sludge blanket depth of 2 to 4 feet in final clarifiers	Ongoing		Compliant
135(d)-BR	Maintain manual operations until Activated Sludge PLCs are updated and set up for automatic operation	Ongoing		Compliant
136-BR	Complete evaluation of sand filters. Within 10 days of sand filter evaluation, request approval for change of use of the approved sand filter, OR submit plan and schedule for implementation of sand filter improvements (Sand Filter Improvement Plan). Immediately upon approval City shall implement the approved Sand Filter Improvement Plan	4/30/2024 and 5/10/2024	4/11/2024 And 5/2/2024	Complete
137-BR	Repair all Gravity Belt Thickeners (GBTs) to operate as designed	6/30/2024		63% Complete
138-BR	Repair and install one of the three non-operational Dissolved Air Flotation (DAF) systems and thickened sludge pumps	12/31/2023	12/5/2023	Complete
139-BR	Issue notice to proceed with contract for rehab of the egg-shaped digesters. Complete rehabilitation of egg-shaped digesters.	8/16/2023 (NTP) 9/16/2027 (Rehabilitation)		Issued 10% Complete
140-BR	Create and submit a Centrifuge Maintenance Plan to the Plaintiffs for review and the Department's approval.	12/15/2023	12/15/2023	Complete

Consent Decree Paragraph Reference – Treatment Plant <sup>1</sup>	Activity	Consent Decree Deadline	Actual Completion Date	Compliance Status
141-BR	Complete repairs and installation of Centrifuge #4 to operate as designed.	12/31/2023	FM Letter Sent: 12/20/2023 and 2/14/2024 Modification Letter Sent: 3/11/2024 Requested extension: 7/31/2024	55% Complete
142-BR	Submit Staffing Plan	12/31/2023	12/22/2023	Complete
143-BR	City to have, maintain, and make available to the Department the formal written operation and maintenance procedures (Back River WWTP SOP)	6/30/2024		69% Complete
144-BR	City to submit a report that identifies what processes are currently automated and conduct a feasibility study for automation of additional processes, with a plan and schedule for future automation.	5/13/2024	5/13/2024	Complete
145-BR	Baltimore City shall have, maintain, and update a Computerized Maintenance Management System (CMMS) as a functional work order system to ensure that the plant and its equipment operate as designed.	Ongoing		Compliant

Consent Decree Paragraph Reference – Treatment Plant <sup>1</sup>	Activity	Consent Decree Deadline	Actual Completion Date	Compliance Status
146-BR	Complete a condition assessment and inventory of existing assets in order to develop an asset management program. Complete development and begin implementation of asset management program within 90 days of assessment and inventory.	11/15/2024 (Assessment) 2/13/2025 (Commence Implementation)		75% Complete Not Yet Started
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, with includes provision for odour control and proper ventilation. Workers entering the grit facility to comply with Grit Facility SOPs	4/30/2024 (Issue RFP) 12/31/2027	4/19/2024	RFP Completed
150-PAT	Repair or refurbish Industrial Plant Influent Facility (IPI) screens and pumps, and replace or fully rehab 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



Consent Decree Paragraph Reference – Treatment Plant <sup>1</sup>	Activity	Consent Decree Deadline	Actual Completion Date	Compliance Status
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-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
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.	1/14/2024	11/25/2023	Complete
158-PAT	Automate timed scum log operation of the Chlorine Contact Tank (CCT)	1/31/2025		95% Complete

<b>Consent Decree Paragraph Reference – Treatment Plant <sup>1</sup></b>	<b>Activity</b>	<b>Consent Decree Deadline</b>	<b>Actual Completion Date</b>	<b>Compliance Status</b>
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.	Ongoing		Compliant
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
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
165-PAT	Submit 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		60% 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		Complete

Consent Decree Paragraph Reference – Treatment Plant <sup>1</sup>	Activity	Consent Decree Deadline	Actual Completion Date	Compliance Status
168-PAT	Have, maintain, and update a Computerized Maintenance Management System (CMMS) as a 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)		40% Complete Not Yet Started
170-TPN	Every February 15, May 15, August 15, and November 15 during the pendency of the CD, Baltimore City shall submit to the Plaintiffs and post on its website quarterly progress reports detailing for the preceding calendar quarter, at a minimum, the implementation of any corrective actions and work performed under the CD, progress tracking on projects, required completion dates and actual completion dates, financial expenditures on each project, and all stipulated penalties that accrued during the quarter.	Annually 2/15 5/15 8/15 11/15	Ongoing	Compliant
171-TPN	Hold one virtual and one in-person meeting per year for each facility until completion of the CD	11/15/2024		Pending
172-BR	Install a sign at the pier adjacent to outfall 001 that notifies the public of the presence of the submerged treatment effluent pipe	12/15/2023	12/11/2023	Complete

<b>Consent Decree Paragraph Reference – Treatment Plant <sup>1</sup></b>	<b>Activity</b>	<b>Consent Decree Deadline</b>	<b>Actual Completion Date</b>	<b>Compliance Status</b>
172-PAT	Apply for and diligently pursue all permits, licenses, or other authorizations necessary for the installation of a sign at the location of the submerged outfall pipe that notifies the public of the presence of the submerged wastewater treatment effluent pipe	2/13/2024	2/13/2024	Complete
173-BR	Simultaneously with the installation of the signs required under Paragraph 172, Baltimore City shall install a red light next to, or on top of each sign that indicates when the plant experiences any by-pass as defined by the Discharge Permits	12/15/2023	12/11/2023	Complete
173-PAT	Simultaneously with the installation of the signs required under Paragraph 172, Baltimore City shall install a red light next to, or on top of each sign that indicates when the plant experiences any by-pass as defined by the Discharge Permits	Dependent upon permit approval.		Not Yet Started Sign and Light Ready on hand
174-TEA	Baltimore City shall consult with the Plaintiffs and retain or engage a qualified, independent third-party engineer, to conduct an update to the comprehensive assessment of the Back River and Patapsco WWTPs prepared by Greeley and Hansen (“G&H”) in June 2022, and to submit a report, signed and sealed by the licensed professional engineer, summarizing the findings simultaneously and directly to all Parties within 90 days of the Effective Date.	2/13/2024	2/13/2024	80%
175-FCR	Final confirmation report after all Work to Be Performed is complete	6/22/2027		32%

<sup>1</sup> BR = Back River WWTP, PAT = Patapsco WWTP, FM = Force Majeure, TEA= Third-Party Engineering Assessment, TPN= Transparency and Public Notification, FCR= Final Confirmation Report