DRAFT

DISCHARGE PERMIT

NPDES Discharge Permit Number:	**MD0021555**
State Discharge Permit Number:	**22-DP-0581**
Effective Date:	**mo/dd/yyyy**
Expiration Date:	**mo/dd/yyyy**
Modification Date:	**(Not applicable)**
Reapplication Due Date:	**Mm/dd/yyyy**

Pursuant to the provisions of Title 9 of the Environment Article, Annotated Code of Maryland, and regulations promulgated thereunder, and the provisions of the Clean Water Act, 33 U.S.C. Section 1251 et seq., and implementing regulations 40 CFR Parts 122, 123, 124 and 125, the Department of the Environment hereby establishes conditions and requirements pertinent to the wastewater treatment plant and collection system and authorizes:

Mayor and City Council of Baltimore
City Hall, 200 North Holliday Street, Suite 600
Baltimore, Maryland 21202

TO DISCHARGE FROM: Back River Wastewater Treatment Plant

LOCATED AT: 8201 Eastern Boulevard, Baltimore County
Baltimore, Maryland 21224

THROUGH OUTFALL: 001A – (WWTP Effluent) discharge to Back River
002A – (WWTP Effluent) discharge to Bear Creek through High Head Reservoir at the Trade Point Atlantic Property

TO: the Back River and Baltimore Harbor, respectively, designated as Use II (non-shellfish harvesting) waters protected for the support of estuarine and marine aquatic life and water contact recreation: in accordance with the following special and general conditions and a map incorporated herein and made a part hereof.

I. DEFINITIONS

A. "Ambient temperature" of the effluent receiving stream means the water temperature that is not impacted by a point source discharge, and it shall be measured in areas of the stream representative of typical or average conditions of the stream segment in question.

B. "Bypass" means the intentional diversion of pollutants from any portion of a treatment or collection facility.

C. "BOD_5 (Biochemical Oxygen Demand)" means the amount of oxygen consumed in a standard BOD_5 test without the use of a nitrification inhibitor at 20 degree centigrade on an unfiltered sample.

D. "Clean Water Act" means the Federal Water Pollution Control Act, as amended, 33 U.S.C. Section 1251 et seq.

E. "CFR" means the Code of Federal Regulations.

F. "COMAR" means the Code of Maryland Regulations.

G. "Department" means the Maryland Department of the Environment (MDE).

H. Discharge Limits

1. "Maximum (or Minimum) daily discharge" limitation means the highest (or lowest) allowable discharge of a pollutant measured during a calendar day (or any 24-hour period) that reasonably represents the calendar day for sampling purposes.

   a. For pollutants with limitations expressed in units of mass (e.g., Pounds/day) as a maximum daily average, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day.

   b. For pollutants with limitations expressed in other units of measurement (e.g., concentration) as a maximum (or minimum) daily average, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

2. "Maximum (or minimum) weekly average" limitation means the highest (or lowest) allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week. Each of the following 7-day periods is defined as a calendar week: Week 1 is Days 1 - 7 of the month; Week 2 is Days 8 - 14; Week 3 is Days 15 - 21; and Week 4 is Days 22 - 28. *For weekly average maximum*, if the "daily discharge" on days 29, 30 or 31 exceeds the "weekly average" discharge limitation, MDE may elect to evaluate the last 7 days of the month as Week 4 instead of Days 22 - 28. *For weekly average*

I. DEFINITIONS

minimum, if the "daily discharge" on days 29, 30 or 31 is lower than the "weekly average" discharge limitation, MDE may elect to evaluate the last 7 days of the month as Week 4 instead of Days 22 - 28.

3. "Maximum (or minimum) monthly average" limitation means the highest (or lowest*)* allowable monthly average concentration or waste load of a parameter over a calendar month. The monthly average is calculated as the sum of all daily discharges for a parameter sampled and/or measured in that calendar month divided by the number of days on which monitoring was performed.

4. "Maximum (or minimum)" limit means the highest (or lowest) allowable value measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling.

5. "Monthly loading rate (in pounds/month)" means the total load of a parameter calculated for that calendar month. It is calculated using this formula {(monthly average concentration in mg/L) x (Total monthly flow in Million Gallons) x 8.34}.

6. "Year-to-date cumulative load (pounds)" value means cumulative load of a pollutant in the effluent through each reporting month in a calendar year. It is calculated as a sum of the individual total monthly loads from January through the reporting month in a calendar year.

7. "Annual Maximum Loading Rate (in pounds/year)" limit means the maximum load allowed for a pollutant in the effluent to be discharged in a calendar year. The Year-to-date cumulative load (as defined above in Definition I.H.6) shall be used to determine the compliance status of this requirement.

8. "Monthly log mean (Monthly geometric mean)" limit means the highest allowable value calculated as the logarithmic or geometric mean of all samples taken in the calendar month. The geometric mean is the antilogarithm of the mean of the logarithms.

I. Discharge Monitoring

1. "Composite sample" means a combination of individual samples obtained at hourly or smaller intervals over a time period. Either the volume of each individual sample is proportional to discharge flow rates or the sampling interval (for constant volume samples) is proportional to the flow rates over the time period used to produce the composite.

2. "Grab sample" means an individual sample collected over a period of time not exceeding 15 minutes.

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3. "Estimated flow" value means a calculated volume or discharge rate which is based on a technical evaluation of the sources contributing to the discharge including, but not limited to, pump capabilities, water meters, and batch discharge volumes.

4. "Measured flow" value means any method of liquid volume measurement, the accuracy of which has been previously demonstrated in engineering practice, or for which a relationship to absolute volume has been obtained.

5. "Recorded flow" means any method of providing a permanent, continuous record of flow including, but not limited to, circular and strip charts.

6. "Monthly average flow" means the total flow for a calendar month divided by the number of days in the same month.

J. "i-s (immersion stabilization)" means a calibrated device immersed in the effluent or stream, as applicable, until the temperature reading is stabilized.

K. "NetDMR" means a nationally available electronic reporting tool, initially designed by states and later adapted for national use by EPA, which can be used by NPDES-regulated facilities to submit discharge monitoring reports (DMRs) electronically to EPA through a secure Internet application over the National Environmental Information Exchange Network (NEIEN). EPA can then share this information with authorized states, tribes, and territories.

L. "NPDES (National Pollutant Discharge Elimination System)" means the national system for issuing permits as designated by the Clean Water Act.

M. "Nondetectable Level" for total residual chlorine means a residual concentration of less than 0.10 mg/L as determined using either the DPD titrimetric or chlorimetric method or an alternative method approved by the Department.

N. "Outfall" means the location where the effluent is discharged into the receiving waters.

O. "Overflow" means any loss of wastewater or discharge from a sanitary sewer system, combined sewer system or wastewater treatment plant bypass (as defined in I.B) which results in the direct or potential discharge of raw, partially treated wastewater into the waters of the State.

P. "Performance-based benchmark load" means a wastewater point source annual effluent load which is calculated at the end of each calendar year using the end of the calendar year annual cumulative flow for the facility, multiplied by the applicable assigned nitrogen, phosphorus or Total Suspended Solids (TSS) performance concentration converted to units of pounds per year, where a sewage treatment facility has an assigned performance consideration: (a) for total nitrogen, 3.0 mg/L or less; (b) for total phosphorus, 0.3 mg/L or less; or (c) for TSS, 30 mg/L or less.

I. DEFINITIONS

Q. "Performance-based Credit load" means a unit of load reduction below performance-based benchmark load of one pound of nitrogen, phosphorus, or sediment. The performance-based credit load shall be calculated and reported under the terms of the required wastewater discharge permit at the end of each calendar year as the load remaining after subtracting actual annual effluent nutrient or TSS load discharged from the performance-based benchmark load.

R. "Permittee" means an individual or organization holding the discharge permit issued by the Department.

S. "POTW" means a publicly owned treatment works.

T. "Monitoring Point" means the effluent sampling location in the outfall line(s) downstream from the last addition point or as otherwise specified.

U. "Sanitary Sewer Overflow (SSO)" means a discharge of untreated or partially treated sewage from a separate sewer system before the sanitary wastewater reaches the headworks of a wastewater treatment facility, pursuant to COMAR 26.08.10.01.

V. "Secondary Treatment" means the treatment of sewage to produce effluent equal to or better than the following quality, except as provided for in 40 CFR §133.103, or paragraphs (d), (e) or (f) of 40 CFR §133.5:

1. Five-day biochemical oxygen demand (BOD_5):

   a. 30 milligrams/liter—average for a 30-day period;

   b. 45 milligrams/liter—average for a 7-day period;

   c. The 30-day average percent removal shall not be less than 85 percent.

2. Total Suspended Solids (TSS):

   a. 30 milligrams/liter—average for a 30-day period,

   b. 45 milligrams/liter—average for a 7-day period;

   c. The 30-day average percent removal shall not be less than 85 percent.

3. Bacterial control: As required to meet water quality standards.

W. "Significant Industrial User (SIU)" is defined as any industrial user (IU) that:

1. is subject to national categorical standards; and

2. any other IU that:

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a. discharges an average of 25,000 gallons per day or more of process wastewater (excluding sanitary, non-contact cooling and boiler blowdown wastewater); or

b. contributes a process wastestream that makes up 5% or more of the average dry weather hydraulic or organic capacity of the POTW; or

c. is designated as such by the POTW on the basis that the IU has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement; or

d. is found by the POTW, the Department, or the Environmental Protection Agency (EPA) to have significant impact either individually or in combination with other contributing industries to the POTW, on the quality of the sludge, the POTW's effluent quality, or air emissions generated by the system.

X. "TKN (Total Kjeldahl Nitrogen)" means organic nitrogen plus ammonia nitrogen.

Y. "TSS (Total Suspended Solids)" means the residue retained on the filter by an analysis done in accordance with Standard Methods or other approved methods.

Z. "Upset" means the exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

II. SPECIAL CONDITIONS

A. 1. Effluent Limitations, Outfall 001A (1) (2) (3)

The quality of the effluent discharged by the facility at a discharge point location (Outfall 001A) shall be limited at all times as shown below:

Maximum Effluent Limits, except as noted						
Effluent Characteristics	**Monthly Average Loading Rate**	**Weekly Average Loading Rate**	**Total Monthly Loading Rate**	**Annual Maximum Loading Rate lbs/year**	**Monthly Average Concentration**	**Weekly Average Concentration**
	lbs/day	***lbs/day***	***lbs/month***	***Except as noted***	***mg/L***	***mg/L***
BOD_5	11,000	16,000	N/A	N/A	10	15
BOD_5, Percent Removal (13)			85 % minimum monthly average			
TSS (4)	11,000	16,000	REPORT	3,959,228	10	15
TSS, Percent Removal (13)			85 % minimum monthly average			

Maximum Effluent Limits, except as noted				
Effluent Characteristics	**Monthly Average Loading Rate**	**Daily Maximum Loading Rate**	**Monthly Average Concentration**	**Daily Maximum Concentration**
	lbs/day	***lbs/day***	***mg/L***	***mg/L***
Total Ammonia Nitrogen as N		*Interim (see Special Condition II.P)*		
5/1 -10/31	1,518	13,119	1.4	12.1
11/1- 4/30	3,361	N/A	3.1	N/A
Total Ammonia Nitrogen as N		*Final (see Special Condition II.P)*		
5/1-10/31	759	4,987	0.7	4.6
11/1 - 4/30	2,602	N/A	2.4	N/A

Maximum Effluent Limits, except as noted						
Effluent Characteristics	**Monthly Average Loading Rate**	**Weekly Average Loading Rate**	**Total Monthly Loading Rate**	**Annual Maximum Loading Rate lbs/year**	**Monthly Average Concentration**	**Weekly Average Concentration**
	lbs/day	***lbs/day***	***lbs/month***	***Except as noted***	***mg/L***	***mg/L***
Total Phosphorus-P (4)(8)(9)(10)						
5/1 – 10/31	N/A	N/A	REPORT	6,652 lbs/month	REPORT	N/A
All Year	220	330	REPORT	79,277	0.2	0.3
Total Nitrogen-N (4)(8)(9)(10)						
5/1 -10/31	N/A	N/A	REPORT	99,782 lbs/month	REPORT	N/A
All Year	N/A	N/A	REPORT	1,582,055	REPORT	N/A

(Limits continue on the next page)

II. SPECIAL CONDITIONS

A.1. Effluent Limitations, Outfall 001A (*continued)*

Maximum Effluent Limits, except as noted			
Effluent Characteristics	**Total Quarterly Loading Rate**	**Annual Maximum Loading Rate**	**Quarterly Average Concentration**
	grams/quarter	***grams/year***	***pg/L***
Total Polychlorinated Biphenyls (tPCBs) (5)(7)	REPORT	See footnote 5	REPORT

Maximum Effluent Limits, except as noted		
Effluent Characteristics	**Maximum**	**Minimum**
Enterococci (14)	35 MPN/ 100 ml monthly Geometric Mean (GM) Value	N/A
E. Coli (14)	126 MPN/ 100 ml monthly Geometric Mean (GM) Value	N/A
Total Residual Chlorine (11)	0.013 mg/L	N/A
pH	8.5	6.5
Dissolved Oxygen		
All Year	N/A	5.0 mg/L at anytime
2/1 – 5/31	N/A	6.0 mg/L weekly average

Maximum Effluent Limits, except as noted		
Effluent Characteristics	**Maximum**	**Minimum**
Whole Effluent Toxicity		
Acute WET (12)	Less than 1.00 TU_a (acute toxic unit)	N/A
Chronic WET (12)	Less than 1.02 TU_c (chronic toxic unit)	N/A

An annual average flow of **130.00** million gallons per day (mgd) was used in waste allocation calculations (expressed as waste loading rate limit). This unit shall be used when reporting on the Discharge Monitoring Report (DMR) as required by General Condition III.A.2.

II. SPECIAL CONDITIONS

A. 2. Effluent Limitations, Outfall 002A (1) (2) (3)

The quality of the effluent discharged by the facility at a discharge point location (Outfall 002A) at Back River WWTP shall be limited at all times as shown below. The effluent monitored at Outfall 002A shall be discharged at Bear Creek through High Head Reservoir at Trade Point Atlantic (TPA). The effluent produced by the industrial activities at TPA is discharged at the same location to Bear Creek and is regulated by another NPDES permit (MD00021201).

Maximum Effluent Limits, except as noted						
Effluent Characteristics	**Monthly Average Loading Rate**	**Weekly Average Loading Rate**	**Total Monthly Loading Rate**	**Annual Maximum Loading Rate lbs/year**	**Monthly Average Concentration**	**Weekly Average Concentration**
	lbs/day	***lbs/day***	***lbs/month***	***Except as noted***	***mg/L***	***mg/L***
BOD_5						
(5/1-10/31)	8,340	12,520	N/A	N/A	20	30
(11/1-4/30)	12,520	18,770	N/A	N/A	30	45
BOD_5, Percent Removal (13)			85 % minimum monthly average			
TSS (4)	12,520	18,770	REPORT	4,589,026	30	45
TSS, Percent Removal (13)			85 % minimum monthly average			

Maximum Effluent Limits, except as noted				
Effluent Characteristics	**Monthly Average Loading Rate**	**Daily Maximum Loading Rate**	**Monthly Average Concentration**	**Daily Maximum Concentration**
	lbs/day	***lbs/day***	***mg/L***	***mg/L***
Total Ammonia Nitrogen as N		*Interim (see Special Condition II.P)*		
5/1 -10/31	584	5,046	1.4	12.1
11/1- 4/30	1,293	N/A	3.1	N/A
Total Ammonia Nitrogen as N		*Final (see Special Condition II.P)*		
5/1-10/31	292	1,918	0.7	4.6
11/1 - 4/30	1,001	N/A	2.4	N/A

(Limits continue on the next page)

II. SPECIAL CONDITIONS

A. 2. Effluent Limitations, Outfall 002A (*continued)*

Maximum Effluent Limits, except as noted						
Effluent Characteristics	**Monthly Average Loading Rate**	**Weekly Average Loading Rate**	**Total Monthly Loading Rate**	**Annual Maximum Loading Rate lbs/year**	**Monthly Average Concentration**	**Weekly Average Concentration**
	lbs/day	***lbs/day***	***lbs/month***	***Except as noted***	***mg/L***	***mg/L***
Total Phosphorus-P (4)(8)(9)(10)						
5/1 – 10/31	N/A	N/A	REPORT	15,230 lbs/period	REPORT	N/A
All Year	83	125	REPORT	30,459	0.2	0.3
Total Nitrogen-N (4)(8)(9)(10)						
5/1 -10/31	1,668	2,500	REPORT	304,590 lbs/period	REPORT	N/A
All Year	N/A	N/A	REPORT	609,185	REPORT	N/A

Maximum Effluent Limits, except as noted			
Effluent Characteristics	**Total Quarterly Loading Rate**	**Annual Maximum Loading Rate**	**Quarterly Average Concentration**
	grams/qtr	***grams/year***	***pg/L***
Total Polychlorinated Biphenyls (tPCBs) (6)(7)	REPORT	See footnote 6	REPORT

Maximum Effluent Limits, except as noted		
Effluent Characteristics	**Maximum**	**Minimum**
Enterococci (14)	35 MPN/ 100 ml monthly Geometric Mean (GM) Value	N/A
E. Coli (14)	126 MPN/ 100 ml monthly Geometric Mean (GM) Value	N/A
Total Residual Chlorine (11)	N/A (See footnote 11)	N/A
pH	8.5	6.5
Dissolved Oxygen		
All Year	N/A	5.0 mg/L at anytime
2/1 – 5/31	N/A	6.0 mg/L weekly average

An annual average flow of **50.00** million gallons per day (mgd) was used in waste allocation calculations (expressed as waste loading rate limit). This unit shall be used when reporting on the Discharge Monitoring Report (DMR) as required by General Condition III.A.2.

II. SPECIAL CONDITIONS

A. 3. Effluent Limitations, Monitoring Point 102A [(1) (2) (3)]

The quality of the effluent discharged by the facility via a Monitoring Point 102A located after the Sand Filter Distribution Box and before the Diversion chambers shall be limited at all times as shown below:

Maximum Effluent Limits			
Effluent Characteristics	**Total Monthly Loading Rate** ***lbs/month***	**Annual Maximum Loading Rate** ***lbs/year***	**Average Concentration** ***mg/L***
Total Phosphorus-P [(4)(8)(9)(10)]	REPORT	109,600	REPORT
Total Nitrogen-N [(4)(8)(9)(10)]	REPORT	2,192,800	REPORT
Total Suspended Solids (TSS) [(4)]	REPORT	8,548,254	REPORT

An annual average flow of **180.00** million gallons per day (mgd) was used in waste allocation calculations (expressed as waste loading rate limit). This unit shall be used when reporting on the Discharge Monitoring Report (DMR) as required by General Condition III.A.2. Notification is to be provided to the Department at least 180 days when the flow at Monitoring Point 102A is expected to exceed 180.00 mgd.

II. SPECIAL CONDITIONS

***Footnotes for Effluent Limitations in Special Conditions II.A.1, II.A.2, and II.A.3*:**

(1) When this permit is renewed, the new limitations may not be equal to the above limitations.

(2) There shall be no discharge of floating solids or visible foam other than trace amounts.

(3) The permit may also be reopened in accordance with the requirements of MDE's Watershed Permitting Plan under which all discharge permits in a watershed are issued the same year.

(4) The Back River (basin number 02130901) is on the 303(d) list of impaired waters for PCBs in both sediment (1998) and fish tissue (2008), Sediments (1996), Chlordane (1996), Nitrogen and Phosphorus (1996), Chlorides (2012), and Sulfates (2012).

The Back River TMDL approved by EPA on July 15, 2004, allocated the following nutrient loads to the Back River WWTP for a flow of 130.00 MGD at Outfall 001A discharging to Back River:

1. Total Nitrogen: 99,782 lbs/month (5/1 – 10/31) and 1,582,055 lbs/year (Annual Average)
2. Total Phosphorus: 6,652 lbs/month (5/1-10/31) and 79,277 lbs/year

The Baltimore Harbor TMDL approved by EPA on December 17, 2007, with a latest revision date of December 22, 2022, allocated the following nutrient loads to the Back River WWTP for a flow of 50.00 MGD at Outfall 002A discharging to Baltimore Harbor through Bear Creek.

(1) Total Nitrogen: 304,590 lbs/period (5/1 – 10/31) and 609,185 lbs/year (Annual Average)
(2) Total Phosphorus: 15,230 lbs/period (5/1-10/31) and 30,459 lbs/year (Annual Average)

The facility shall meet the following annual load limits allocated per the Maryland Phase II Watershed Implementation Plan (WIP) Appendix F (Final Target Loads for Significant Facilities) for a combined 180.00 mgd from Outfall 001A and Outfall 002A:

1. Total Nitrogen: 2,192,800 lbs/yr
2. Total Phosphorus: 109,600 lbs/yr
3. Total Suspended Solids: 8,548,254 lbs/yr

Total Nitrogen is the sum of ammonia-N, organic-N and (nitrite + nitrate)-N based on samples collected on the same day.

This permit is in conformance with the "Chesapeake Bay TMDL for Nitrogen, Phosphorus and Sediment" established on December 29, 2010.

When TMDLs for other remaining parameters are completed, limits may be imposed, after the public participation process, to incorporate any TMDL requirements.

(5) The TMDL for PCBs for Back River approved by the EPA on 10/1/2012, allocated an annual waste load (WLA) of 48.5 grams/year (0.107 pounds/year) for tPCBs at Outfall 001A (based on a design flow of 130.00 mgd and the water column TMDL endpoint tPCBs concentration of 0.27 nanograms per liter (ng/L)).

(6) The TMDL for the Baltimore Harbor approved by the EPA on 10/1/2012, allocated an annual waste load of 18.66 g/year (0.0411 pound/year) for tPCBs at the Back River WWTP Outfall 002A (based on a design flow of 50.00 mgd and the water column TMDL endpoint tPCBs concentration of 0.27 nanograms per liter (ng/L)).

(7) The above stated (footnotes 5 and 6) WLAs of tPCBs included in the TMDLs for Back River and Baltimore Harbor do not impose effluent limits for tPCBs in the discharge permit at this time. Refer to Special Condition II.Q.1 and II.Q.2 for further details on tPCBs.

(8) The permittee shall operate the ENR facility in a manner that optimizes the nutrient removal capability of the facility as stipulated in the Grant Agreement for ENR upgrade.

The first exceedance of the permit limit shall be counted and reported as daily exceedances beginning from the first exceedance, determined to the nearest day, through December 31. In addition, after any such exceedance, the permittee shall demonstrate to the Department's satisfaction that the facility is optimizing its nutrient removal

II. SPECIAL CONDITIONS

***Footnotes for Effluent Limitations in Special Conditions II.A.1, II.A.2, and II.A.3 (continued)*:**

capability, and neither the arrival of the next calendar year nor the issuance of a permit renewal during a period of noncompliance shall obviate continuance of any noncompliance status related to treatment optimization requirements.

(9) At the end of each calendar year, the permittee shall comply with the *concentration-based* limitations for the Annual Maximum Loading Rate defined below or the *Tributary Strategy-based* loading rate limitation listed above in the effluent limitations table, whichever is lower:

(a) TN Limitation (lbs/year): 4.0 mg/L x annual total flow (calendar year based in million gallons per year) x 8.34. To the extent that the permittee alleges that temperature levels of 12 degrees C or lower have diminished the treatment system's capability of complying with this *concentration-based* loading rate limitation for Total Nitrogen, the permittee shall provide notification beginning with the calendar year report under the "Upset" provision in Section III.B.6 of this permit. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

(b) TP Limitation (lbs/year): 0.20 mg/L x annual total flow (calendar year based in million gallons per year) x 8.34.

The details and results of all required annual calculations shall be submitted to the Department with the Discharge Monitoring Report for December. See Special Condition II.K for further details.

The *concentration-based* loading requirements may be revised if the limits are determined to be impracticable based on actual performance and the Department re-opens the permit as a major modification (which requires public participation) to impose (an) alternate effluent limitation(s) or revised schedule.

(10) The permittee may request that the permit be reopened and modified to include nutrient trading consistent with all applicable regulations and requirements in effect at that time.

(11) Total Residual Chlorine (TRC) limitation of 0.013 mg/L as instantaneous maximum shall be applicable at Outfall 001A. The effluent directly discharged from the Back River WWTP through Outfall 001A into the Back River shall be dechlorinated to reduce effluent total residual chlorine concentration to the nondetectable level (See Definition I.M). Also refer to footnote 19 for further information regarding compliance with the above stated TRC limit. This requirement for a TRC limit does not apply to the effluent sent to Trade Point Atlantic (TPA) through Outfall 002A and regulated by a separate NPDES surface discharge permit (MD0001201) issued to TPA.

(12) TU_a is defined as 100 divided by the LC_{50} value resulting from the first 48 hours of a valid acute or chronic toxicity test. Compliance with the LC_{50} requirements shall be determined through testing performed in accordance with Special Condition II.D. TU_c is defined as 100 divided by the IC_{25} value resulting from a valid chronic toxicity test. Compliance with the IC_{25} requirements shall be determined through testing performed in accordance with Special Condition II.D.

(13) In accordance with 40CFR §133.102, the 30-day average percent removal for BOD_5 and TSS shall not be less than 85 (eighty-five) percent as the minimum level of effluent quality attainable by the secondary treatment. Refer to footnotes 33 and 34 for further details for calculations and reporting requirements toward compliance to the BOD_5 and TSS percent removal effluent limitations (See Definition I.V).

(14) Unless the permittee notifies the Department, parallel testing for E. coli and Enterococci is granted for the first twelve (12) months after the effective date of the permit, following which only the Enterococci monitoring shall remain in effect. If the permittee decides to discontinue parallel testing sooner than the 12-month period, and switch to Enterococci monitoring only, a written notification shall be provided to the Department at least sixty (60) days in advance. Upon notification, the monitoring for E. coli shall no longer be in effect as of the date included in the written notice to the Department.

II. SPECIAL CONDITIONS

B. 1. Minimum Monitoring Requirements:

a. For Effluent Discharged at Outfall 001A:

The effluent characteristics in Table B.1.a shall be monitored at Sampling Point 102A, situated after the Sand Filter Distribution Box and before the Diversion chambers. All samples taken at Monitoring Point 102A must represent the effluent quality discharged at Outfall 001A.

Sampling for Total Residual Chlorine, Enterococci, E. coli, and Flow shall be conducted separately at a sampling point with coordinates Longitude: **76° 28' 58.0" W** and Latitude: **39° 17' 36.0" N** (situated after the Diversion chambers), ensuring representative effluent quality at Outfall 001A.

Except for the parameters noted above, the concentrations of all other effluent parameters listed below will be monitored at Monitoring Point 102A and reported as the concentration (*mg/L*) for Outfall 001A. A table summarizing the monitoring locations for each effluent parameter is provided on Page 67 of the SRFS.

Effluent Characteristics	Monitoring Period	Measurement Frequency	Sample Type
BOD_5 (15)(33)(34)	All Year	One per day	24-hour composite *
Total Suspended Solids (15)(18)(33)(34)	All Year	One per day	24-hour composite *
BOD_5, Percent Removal (15)(33)(34)	All Year	One per Quarter	Calculated
TSS, Percent Removal (15)(33)(34)	All Year	One per Quarter	Calculated
TKN (15)(16)(17)	All Year	One per day	24-hour composite *
Total Ammonia Nitrogen as N (15)(17)	All Year	One per day	24-hour composite *
Total Nitrogen as N (15)(17)(18)	All Year	One per day	Calculated
(Nitrite + Nitrate) as N (15)(16)(17)	All Year	One per day	24-hour composite *
Organic Nitrogen as N (15)(16)(17)	All Year	One per day	Calculated
Orthophosphate as P (15)(16)(28)	All Year	Two per week	24-hour composite *
Total Phosphorus as P (15)(18)	All Year	One per day	24-hour composite *
tPCBs (15)(21)	All Year	One per Quarter	24-hour composite *
Total Residual Chlorine (15)(19)(20)	All Year	Three per day (One per shift)	Grab
Enterococci (15)(32)	All Year	One per day	Grab
E. coli (15)(32)	All Year	One per day	Grab
Dissolved Oxygen (15)(20)	All Year	Three per day (One per shift)	Grab
pH (15)(20)	All Year	Three per day (One per shift)	Grab
Flow (15)(23)(25)	All Year	Continuous	Recorded
Total Flow (15)(26)	All Year	Monthly	Calculated

II. SPECIAL CONDITIONS

B. 1. a. Minimum Monitoring Requirements, Outfall 001A *(continued)*:

Effluent Characteristics	Monitoring Period	Measurement Frequency	Sample Type
Acute and Chronic WET (15)(29)(30)	All Year	One per Quarter	24-hour composite *
Total Cyanide (15)(31)(32)	All Year	One per Quarter	Grab **
1,2-Diphenylhydrazine (15)(31)(32)	All Year	One per Quarter	24-hour composite *
Benzidine (15)(31)(32)	All Year	One per Quarter	24-hour composite *
Hexachlorobenzene (15)(31)(32)	All Year	One per Quarter	24-hour composite *
Benzo(a)Anthracene (1,2-Benzanthracene) (15)(31)(32)	All Year	One per Quarter	24-hour composite *
Benzo(k)Fluoranthene (11,12-benzofluoranthene) (15)(31)(32)	All Year	One per Quarter	24-hour composite *
3,3' Dichlorobenzidine (15)(31)(32)	All Year	One per Quarter	24-hour composite *
3,4-Benzofluoranthene (15)(31)(32)	All Year	One per Quarter	24-hour composite *
Chrysene (15)(31)(32)	All Year	One per Quarter	24-hour composite *
Dibenzo(a,h)Anthracene (1,2,5,6-Dibenzanthracene) (15)(31)(32)	All Year	One per Quarter	24-hour composite *
4-4' DDD (15)(31)(32)	All Year	One per Quarter	24-hour composite *
4-4' DDE (15)(31)(32)	All Year	One per Quarter	24-hour composite *
4-4' DDT (15)(31)(32)	All Year	One per Quarter	24-hour composite *
Butylbenzyl Phthalate (15)(31)(32)	All Year	One per Quarter	24-hour composite *
Chlordane (15)(31)(32)	All Year	One per Quarter	24-hour composite *
Indeno(1,2,3-cd)Pyrene (15)(31)(32)	All Year	One per Quarter	24-hour composite *
Dieldrin (15)(31)(32)	All Year	One per Quarter	24-hour composite *
Heptachlor (15)(31)(32)	All Year	One per Quarter	24-hour composite *
Heptachlor Epoxide (15)(31)(32)	All Year	One per Quarter	24-hour composite *
Toxaphene (15)(31)(32)	All Year	One per Quarter	24-hour composite *
Aldrin (15)(31)(32)	All Year	One per Quarter	24-hour composite *
Endrin (15)(31)(32)	All Year	One per Quarter	24-hour composite *
Copper (15)(31)(32)	All Year	One per Quarter	24-hour composite *
Cyanide Free (15)(31)(32)	All Year	One per Quarter	Grab **

* The permittee shall conduct the flow-proportional composite monitoring at all times, unless receiving approval from the Department for the time-proportional composite monitoring. The time-proportional composite sampling may be approved when the permittee demonstrates the wastewater flow of the sampled stream is constant (i.e., the flow rates measured do not vary more than ±10 percent of the average flow rate over the sampling period).

** See Special Condition II.G.4.

II. SPECIAL CONDITIONS

B. 1. Minimum Monitoring Requirements

b. For Effluent Discharged at Outfall 002A:

The effluent characteristics in Table B.1.b shall be monitored at Sampling Point 102A, positioned after the Sand Filter Distribution Box and before the Diversion chambers. All samples taken at Monitoring Point 102A must represent the effluent quality discharged at Outfall 002A (located at the Back River WWTP). The effluent produced by the industrial activities at Trade Point Atlantic is discharged at the same location to Bear Creek and is regulated by a separate NPDES permit (MD0001201).

Sampling for Enterococci, E. coli, and Flow shall be conducted separately at a sampling point with coordinates Longitude: **76° 28' 58.0" W** and Latitude: **39° 17' 34.0" N** (situated after the Diversion chambers), ensuring representative effluent quality at Outfall 002A.

Except for the parameters noted above, the concentrations of all other effluent parameters listed below will be monitored at Monitoring Point 102A and reported as the concentration (*mg/L*) for Outfall 002A. A table summarizing the monitoring location for each effluent parameter is provided on Page 67 of the SRFS.

Effluent Characteristics	Monitoring Period	Measurement Frequency	Sample Type
BOD_5 (15)((33)(34)	All Year	One per day	24-hour composite *
Total Suspended Solids (15)(18)(33)(34)	All Year	One per day	24-hour composite *
BOD_5, Percent Removal (15)(33)(34)	All Year	One per Quarter	Calculated
TSS, Percent Removal (15)(33)(34)	All Year	One per Quarter	Calculated
TKN (15)(16)(17)	All Year	One per day	24-hour composite *
Total Ammonia Nitrogen as N (15)(17)	All Year	One per day	24-hour composite *
Total Nitrogen as N (15)(17)(18)	All Year	One per day	Calculated
(Nitrite + Nitrate) as N (15)(16)(17)	All Year	One per day	24-hour composite *
Organic Nitrogen as N (15)(16)(17)	All Year	One per day	Calculated
Orthophosphate as P (15)(16)(28)	All Year	Two per week	24-hour composite *
Total Phosphorus as P (15)(18)	All Year	One per day	24-hour composite *
tPCBs (15)(21)	All Year	One per Quarter	24-hour composite *
Enterococci (15)(32)	All Year	One per day	Grab
E. coli (15)(32)	All Year	One per day	Grab
Dissolved Oxygen (15)(20)	All Year	Three per day (One per shift)	Grab
pH (15)(20)	All Year	Three per day (One per shift)	Grab
Flow (15)(24)	All Year	Calculated	Calculated
Total Flow (15)(27)	All Year	Monthly	Calculated

* The permittee shall conduct the flow-proportional composite monitoring at all times, unless receiving approval from the Department for the time-proportional composite monitoring. The time-proportional composite sampling may be approved when the permittee demonstrates the wastewater flow of the sampled stream is constant (i.e., the flow rates measured do not vary more than ±10 percent of the average flow rate over the sampling period).

II. SPECIAL CONDITIONS

B. 1. Minimum Monitoring Requirements

c. For Effluent Monitoring at Monitoring Point 102A:

Unless otherwise specified, the concentrations of the effluent parameters listed in Tables B.1.a and B.1.b above will be observed at Monitoring Point 102A and reported as the concentration (*mg/L*) at Outfall 001A and Outfall 002A.

The effluent characteristics listed below in Table B.1.c shall be monitored and reported at Monitoring Point 102A, positioned after the Sand Filter Distribution Box and before the Diversion chambers. A table summarizing the monitoring locations for each effluent parameter is provided on Page 67 of the SRFS.

Effluent Characteristics	Monitoring Period	Measurement Frequency	Sample Type
Total Suspended Solids (15)(18)(33)(34)	All Year	Monthly	24-hour composite *
Total Nitrogen as N (15)(17)(18)	All Year	Monthly	Calculated
Total Phosphorus as P (15)(18)	All Year	Monthly	24-hour composite *
Flow (15)(23)(25)	All Year	Continuous	Recorded
Total Flow (15)(26)	All Year	Monthly	Calculated

* The permittee shall conduct the flow-proportional composite monitoring at all times, unless receiving approval from the Department for the time-proportional composite monitoring. The time-proportional composite sampling may be approved when the permittee demonstrates the wastewater flow of the sampled stream is constant (i.e., the flow rates measured do not vary more than ±10 percent of the average flow rate over the sampling period).

II. SPECIAL CONDITIONS

B. 1. Minimum Monitoring Requirements

d. For Raw Wastewater Influent at Monitoring Point 101A:

The quality of the wastewater influent entering the Back River WWTP shall be monitored at the Influent Chamber (Longitude: **76° 28' 41.60" W** and Latitude: **39° 17' 39.22" N**) all year round as shown below:

Wastewater Influent Characteristics	Monitoring Period	Measurement Frequency**	Sample Type
BOD_5 (15)(33)(34)	All Year	One per Quarter	24-hour composite*
Total Suspended Solids (15)(33)(34)	All Year	One per Quarter	24-hour composite*

* The permittee shall conduct the flow-proportional composite monitoring at all times, unless receiving approval from the Department for the time-proportional composite monitoring. The time -proportional composite sampling may be approved when the permittee demonstrates the wastewater flow of the sampled stream is constant (i.e., the flow rates measured do not vary more than ±10 percent of the average flow rate over the sampling period).

** The monitoring frequency to determine BOD_5/TSS removal efficiency (in percentage) will be on a quarterly basis. The permittee shall select a calendar month and a minimum of one day (in that calendar month) in each calendar quarter to collect samples from the influent and effluent (at Monitoring Point 102A) to calculate the removal efficiency. The calendar quarter shall end in March, June, September, and December. The permittee may take additional samples of BOD_5 and TSS in the influent on different days within the selected calendar month. All the sampling results for this requirement shall be reported in the Monthly Operating Report (MOR) for the same calendar month.

For the compliance determination of the percent removal requirement, the individual results of BOD_5/TSS in the influent and effluent (at Monitoring Point 102) collected on the same day must be incorporated to calculate the monthly average concentrations of the specific parameter in the influent and effluent. (***Example: If the influent samples are collected for multiple days in a calendar month, the effluent sampling results from the same corresponding days must be used to calculate the monthly average concentrations and to report the percent (%) removed as a minimum monthly average for the same calendar month and reported in the Discharge Monitoring Report (DMR) as well to fulfill the quarterly monitoring requirement.***)

These monthly average concentrations shall be applied to calculate the percent removal efficiency using the formula listed in footnote 34, and the results of the percent removal shall be reported on the DMR for the ending month of the calendar quarter. The permittee shall also prepare and submit a report as a copy of record (COR) along with the ending month's NetDMR for each calendar quarter. The COR shall provide details, including but not limited to, name of facility, sampling time (day(s), month, and year), individual results as well as monthly average concentrations of influent and effluent, laboratory sheets and pertinent information for analytes, and results of the percent removal calculation results.

II. SPECIAL CONDITIONS

B. 1. Minimum Monitoring Requirements

e. Nutrient and Sediment Performance-based Credit Reporting Schedule at Monitoring Point 102A:

Under COMAR 26.08.11, Maryland Water Quality Trading Program, the permittee is authorized to generate nutrient and sediment credits for trading to industrial and municipal stormwater permit holders. For each calendar month, the permittee shall calculate and report on the monthly DMR the effluent related nutrient (Total Nitrogen and Total Phosphorus) and sediment (TSS) performance-based benchmark loads (Definition I.P) and performance-based credits (Definition I.Q) as listed below.

If the permittee seeks to trade the reported credit, the permittee shall also submit information related to the generation of annual performance-based credit on the "***Credit Verification and Registration Form for Wastewater Point Source***" provided by the Department. The completed form shall be sent to the Department's Water and Science Administration Trading Administrator by the end of each January to report credits generated during the prior calendar year.

The Permittee shall report the below listed ***performance-based benchmark load*** and ***performance-based credit load*** on the monthly DMR using the discharge designation "***TRAD-E***".

Effluent Characteristics	Monitoring Period	Measurement Frequency	Sample Type
TSS [15][35][36] **(Performance-based Benchmark Load)**	All Year	One per month	Calculated
TSS [15][35][36] **(Performance-based Credit)**	All Year	One per month	Calculated
Total Nitrogen as N [15][35][36] **(Performance-based Benchmark Load)**	All Year	One per month	Calculated
Total Nitrogen as N [15][35][36] **(Performance-based Credit)**	All Year	One per month	Calculated
Total Phosphorus as P [15][35][36] **(Performance-based Benchmark Load)**	All Year	One per month	Calculated
Total Phosphorus as P [15][35][36] **(Performance-based Credit)**	All Year	One per month	Calculated
Flow Year-to-date (YTD) Total [15][35][37]	All Year	One per month	Calculated

II. SPECIAL CONDITIONS

***Footnotes for Minimum Monitoring Requirements in Special Conditions II.B.1.a – II.B.1.e (cont'd)*:**

(15) "STORET" (short for STOrage and RETrieval) is a widely used repository for water quality data reporting and monitoring. The STORET codes for the effluent characteristics described as limitations and/or monitoring requirements are: BOD_5 (00310), BOD_5 percent removal (81010), Total Suspended Solids (00530), Total Suspended Solids percent removal (81011), TKN (00625), Total Ammonia Nitrogen as N (00610), Total Phosphorus as P (00665), Total Nitrogen as N (00600), (Nitrite + Nitrate) as N (00630), Organic Nitrogen as N (00605), Orthophosphate as P (04175), Enterococci (61211), E. coli (51040), Total Residual Chlorine (50060), Dissolved Oxygen (00300), pH (00400), Flow (50050), Total flow (82220), PCBs (79819), Hexachlorobenzene (39700), Chlordane (39350), Toxaphene (39400), 4,4'-DDT (39300), Heptachlor (39410), 3,3' Dichlorobenzidine (34631), Aldrin (39330), Heptachlor Epoxide (39420), Benzidine (39120), Cyanide Total (00720), Dieldrin (39380), 1,2-Diphenylhydrazine (34346), Benzo(a)Anthracene (34526), 3,4-Benzofluoranthene (79531), Chrysene (34320), 4,4'-DDD (39310), 4,4'-DDE (39320), Benzo(k)Fluoranthene (11,12-benzofluoranthene) (34242), Dibenzo(a,h)Anthracene (1,2,5,6-Dibenzanthracene) (34556), Indeno(1,2,3-cd)Pyrene (34403), Butylbenzyl Phthalate (34292), Endrin (39390), Copper (01256), Cyanide Free (00722), WET Acute Toxicity (TS000) and WET Chronic Toxicity (TT000), Sediment as TSS Performance-based Benchmark Load (00530(P)), TSS Performance-based Credit (00530(Q)), Total Nitrogen Performance-based Benchmark Load (00600(P)), Total Nitrogen Performance-based Credit (00600(Q)), Total Phosphorus Performance-based Benchmark Load (00665(P)), Total Phosphorus Performance-based Credit (00665(Q)) and Flow YTD Total (74076(R)).

(16) This parameter (without effluent limitations) must be monitored, and it shall be reported on the Monthly Operating Report (MOR) as individual results and on the Discharge Monitoring Report as monthly average concentrations.

(17) Total nitrogen as N (in mg/L) is a calculated parameter as the sum of individual results for total ammonia nitrogen as N, organic nitrogen as N and (nitrite + nitrate) as N. Total Kjeldahl Nitrogen (TKN) is defined as the total concentration of organic nitrogen and ammonia as N. All nitrogen species must be sampled on the same day. The monitoring result for organic nitrogen may be calculated through the subtraction of the total Ammonia as N monitoring result from the result of TKN sample taken at the same day.

(18) The permittee shall also calculate and report on the monthly DMR the TN, TP, and TSS total monthly loads (Definition I.H.5) plus year-to-date cumulative loads (Definition I.H.6) for the calendar year in question for Monitoring Point 102A, Outfall 001A and Outfall 002A.

For each calendar year, the year-to-date cumulative loads of TN, TP, and TSS for the month of December shall represent the total annual loads at Monitoring Point 102A, Outfall 001A and Outfall 002A and they must be incorporated towards complying with the respective annual maximum load limits.
Refer to Special Condition II.K for "Reporting TN and TP total annual loads for compliance to the Concentration-based maximum annual loading rate limits".

(19) The Minimum monitoring requirements of Three per day-grab samplings for total residual chlorine shall be applicable, when chlorine or any chlorine compound is used in any treatment process(es), including but not limited to disinfection, that could become a potential constituent of the effluent discharged from the Back River WWTP Outfall 001A. The minimum level (quantification level) for total residual chlorine is 0.10 mg/L. The permittee may report all results below the minimum level as <0.10 mg/L. All results reported below the minimum level shall be considered in compliance.

(20) Samples for these parameters (total residual chlorine, pH and dissolved oxygen) shall be taken at intervals evenly distributed throughout the staffed period each day to comply with the General Condition III.A for the representative sampling requirements.

(21) See Special Condition II.Q.1 and II.Q.2 for further details.

(22) Monitoring and reporting for Enterococci and E. coli shall occur in parallel for up to twelve (12) months from the effective date of the permit, after which Enterococci will be monitored for the duration of the permit cycle. Please refer to Special Condition II.T for additional information related to bacteria monitoring.

(23) Flows at Outfall 001A and Monitoring Point 102A shall be reported individually in million gallons per day (mgd) to at least the nearest 10,000 gallons per day. (Example: A flow of 1,524,699 gallons per day shall be reported as 1.52

II. SPECIAL CONDITIONS

***Footnotes for Minimum Monitoring Requirements in Special Conditions II.B.1.a – II.B.1.e (cont'd)*:**

mgd). For each calendar month, flows shall be reported on the MOR as daily individual results and on the DMR as monthly average (mgd) and daily maximum (mgd) for each location.

(24) Flow at Outfall 002A shall be calculated by subtracting flow monitored at Outfall 001A from Monitoring Point 102A. This flow shall be reported in million gallons per day (mgd) to at least the nearest 10,000 gallons per day. (Example: A flow of 1,524,699 gallons per day shall be reported as 1.52 mgd.). For each calendar month, flow shall be reported on the MOR as daily individual results and on the DMR as monthly average (mgd) and daily maximum (mgd) for this location.

(25) Continuous electronic flow measurement and recording which can produce a permanent record are acceptable to the Department.

(26) Total flow is a calculated parameter that shall be reported individually for Outfall 001A and Monitoring Point 102A. It is calculated as a sum of the daily flow results at each individual location in a calendar month. The parameter shall be reported on the monthly DMR as the Total monthly flow in million gallons (MG) to at least the nearest 10,000 gallons. (Example: A flow of 1,524,699 gallons shall be reported as 1.52 MG). The results will be used to calculate the Total Monthly Loading Rates (in lbs./month) for TN, TP and TSS at each individual location. The total flow calculated at Monitoring Point 102A must be the same as the sum of individual flows calculated at Outfall 001A and Outfall 002A for each month.

(27) Total flow at Outfall 002A is a calculated parameter equal to the sum of the daily flow results for this location in a calendar month. It shall be reported on the monthly DMR as the Total monthly flow in million gallons (MG) to at least the nearest 10,000 gallons. (Example: A flow of 1,524,699 gallons shall be reported as 1.52 MG). Results of Total Flow at Outfall 002A will be used to calculate the Total Monthly Loading Rates (in lbs./month) for TN, TP and TSS at this outfall.

(28) The permittee shall distribute the timing for effluent sampling with (a) minimum of 48-hour apart for two per week monitoring frequencies, (b) minimum of 24-hours apart for three per week monitoring frequencies, or (c) no more than one per day for five per week monitoring frequencies. The 48 hours interval for two per week sampling shall be defined as the period between the starting times of the two consecutive effluent sample collections for the same effluent parameter.

(29) Whole Effluent Toxicity (WET) samples shall be collected quarterly, analyzed, and reported in accordance with the latest MDE's Effluent Biotoxicity Testing Protocol, and Special Condition II.D.

(30) The quarterly WET monitoring (Special Condition II.D.2) shall be required upon the effective date of this permit. Refer to the Special Condition II.F for additional WET monitoring and reporting requirements.

(31) The toxic substances shall be measured and reported in units of $\mu g/L$, using the appropriate minimum Limit of Quantification (LOQ) levels suggested in the Department's most updated revision of the protocol. The LOQ is a minimum reporting limit which is the minimum value of the calibration ranges of an analyte. The permittee must ensure that the laboratory contracted for analysis and reporting of the toxic substances shall comply with all requirements of the MDE's latest Toxic Pollutant Monitoring Protocol (See Special Condition II.G.3), including but not limited to the analytical methodology, detection levels, holding times, preservation methods, sample type, and reporting. In addition to the data submitted by the monthly DMR, the permittee shall submit a copy of the laboratory report for the parameter to MDE in accordance with General Condition III.A.2.c of the discharge permit. Water used for the operation of sampling/analysis apparatus shall be free of the elements and compounds under investigation as well as any other elements or compounds whose presence could interfere with the analysis.

(32) The concentration of this parameter shall be monitored for at least four consecutive quarters during the first year of the permit cycle. Samples for Total Cyanide and Free Cyanide shall be collected as a grab sample. For the remaining pollutants, 24-hour composite samples shall be collected using a glass sample container with Polytetrafluoroethylene (PTFE) intake tubing and minimal flexible tubing for the peristaltic pump. After the fourth test, the permittee shall submit all results along with detailed lab reports to the Department for review. Based on the findings from the initial four quarters, the City may request the discontinuation of monitoring for this parameter from Special Condition II.B.1.a. The Department retains the right to make the final determination on whether to discontinue the monitoring requirement.

II. SPECIAL CONDITIONS

***Footnotes for Minimum Monitoring Requirements in Special Conditions II.B.1.a – II.B.1.e (cont'd)*:**

(33) Wastewater influent samples for BOD_5 and TSS shall be collected per the sampling type and reporting frequency specified in above (Special Condition II.B.1.d). These measurements shall be utilized to calculate BOD_5 and TSS percent removed using the formula listed below in footnote 34 and results shall be used to comply with the 85% removal effluent limits of BOD_5 and TSS (Special Condition II.A.1 and II.A.2 above). Any effluent excursion of the percent removal limit (Special Condition II.A.1 and II.A.2) reported at the end of each monitoring period will be considered as a violation for the full period, as specified.

(34) At the end of each reporting period, the permittee shall incorporate BOD_5 and TSS monthly average concentrations in the influent and effluent (both reported on a monthly DMR for the calendar month of the influent sampling), and calculate monthly percent (%) of a parameter (BOD_5 or TSS) removed using the following formula:

$$\text{Monthly Average Percent (\%) of Parameter Removed} = \left\{\frac{(A - B)}{A}\right\} \times 100$$

Where:

A = Monthly Average Concentration of Parameter in Influent, mg/L

B = Monthly Average Concentration of Parameter in Effluent, mg/L

The results (monthly average percent (%) of BOD_5 and TSS removed) shall be reported in the DMR submitted for the last calendar month of the reporting period. (Example: If the monitoring frequency of the percent (%) removal is one per quarter, the results shall be reported in the DMRs for March, June, September, and December).

(35) ***Nutrient and Sediment Performance-Based "Benchmark Loads":***

At the end of each month, based on the effluent monitoring results at Monitoring Point 102A, a year-to-date cumulative nutrient and sediment (as total nitrogen, total phosphorus and total suspended solids in the effluent) performance-based "benchmark load" for this facility shall be calculated and reported on monthly DMR using the formulas listed below:

(a) For TN:

Year-to-date cumulative Performance-Based Benchmark Load for TN (pounds)

= 3.0 mg/L × 8.34 × Flow YTD Total (million gallons/year).*

(b) For TP:

Year-to-date cumulative Performance-Based Benchmark Load for TP (pounds)

= 0.30 mg/L × 8.34 × Flow YTD Total (million gallons/year).*

(c) For Sediment:

Year-to-date cumulative Performance-Based Benchmark Load for Sediment (pounds)

*= 30 mg/L *× 8.34 × Flow YTD Total (million gallons/year).*

**Or any more stringent effluent concentration-based limit required in the discharge permit.*

(36) ***Nutrient and TSS "Performance-Based Credit"***

At the end of each month, the facility shall subtract the year-to-date nutrient and sediment cumulative loads (as defined in I.H.5 & I.H.6 in this permit) from the year-to-date nutrient and sediment performance-based benchmark loads (stated above in footnote 35) and report the result as year-to-date "performance-based credit" on the monthly DMR. The "performance-based credit" generated by the facility at the end of each calendar year may be eligible for trading activities authorized by COMAR 26.08.11.

(37) Flow Year-to-Date (YTD) Total (at Monitoring Point 102A) is calculated and reported in million gallons per year as the sum of total flows (stated above in footnote 26) for a period from January 1st through the reporting month.

II. SPECIAL CONDITIONS

B. 2. Report Submittal Requirements

No.	Report Description *	Report Submittal Deadline *(From Permit Effective Date)*	Reporting Frequency	Permit Condition
1.	Annual Cumulative Flow Report	January 28th *(of the following year)*	Annual	Special Condition II.C.1
2.	Effluent Biomonitoring Program Study Plan	3 months	-	Special Condition II.D.1
3.	Effluent Biomonitoring Report	-	Quarterly	Special Condition II.D.2
4.	Toxic Chemical Testing Study Plan	3 months	-	Special Condition II.G.1
5.	Effluent Toxic Chemical Testing Report	-	Annual *(first 3 years)*	Special Condition II.G.3
6.	Climate Change Resiliency Report	6 months	-	Special Condition II.M.3
7.	Per- and Polyfluorinated Alkyl Substances (PFAS) Study Plan	3 months	-	Special Condition II.O.1
8.	PFAS Testing Reports	-	Quarterly *(during a 12-month period)*	Special Condition II.O.2
9.	Final Ammonia Limits - Compliance Schedule Progress Report	6 months	-	Special Condition II.P
10.	PCB Testing Study Plan	3 months	-	Special Condition II.Q.1.a
11.	PCB Monitoring Report	-	Quarterly	Special Condition II.Q.1.b
12.	PCB Minimization Plan	6 months	-	Special Condition II.Q.2
13.	Operations and Maintenance (O&M) Guidance Checklist for ENR Facilities	12 months	-	Special Condition II.R
14.	O&M Checklist Submission Progress Report	6 months	-	Special Condition II.R

* If the permittee has selected a third party for submitting reports to the Department, the permittee must provide the third party with a ***document of authorization for report submission*** which is required with the report.

II. SPECIAL CONDITIONS

C. Wastewater Capacity Management

1. Annual Total Cumulative Flow

The permittee shall report the total cumulative flow (at Monitoring Point 102A) for each calendar year for the above referenced facility. The total cumulative flow shall be reported in million gallons for the entire calendar year to the nearest ten thousand gallons, and it shall represent the total wastewater flow processed through the treatment processes for all days in a calendar year. Each year, the annual total cumulative flow determination shall be provided to the Department using NetDMR no later than January 28th of the following year.

2. At the end of each calendar year, if it is determined that the facility's most recent three-year average flow has exceeded 80% of the current design capacity or if the exceedance is anticipated to occur by the end of the following year, the permittee shall comply with the following requirements:

a. *Wastewater Capacity Management Plan (WCMP)*

The permittee shall submit the WCMP to the Department, using NetDMR, by March 31st of the first year and by January 28th thereafter for each calendar year. The permittee can obtain the WCMP guidance document (*2006*) from the Department's website link: https://mdewwp.page.link/CMPGuidance (this weblink is case-sensitive).

The WCMP report shall provide all the flow management detailed information, including but not limited to the following categories: (a) Inflow/Infiltration (I/I) flow reduction strategy; (b) Utilization of the wastewater flow equalization facilities, if available; (c) Inspection and evaluation of the wastewater collection system; (d) Present population and future growth in the residential, commercial and industrial sectors located within the service areas; (e) Occurrences of the wastewater overflows and plant upsets due to extraneous wastewater flows, and any reasonable corrective actions taken as a preventive measure; and (f) Use of Best Management Practices (BMPs) to address flow spikes resulted from the extreme weather conditions.

b. *Municipal Sewage Flow Capacity Report (MSFCR)*

The permittee shall also submit the MSFCR and its Worksheet (Style # 1 or Style #2) along with the WCMP for each calendar year to the Department using the NetDMR no later than January 28th of the following year.

The permittee can obtain the WCMP guidance document and forms from the Department's website links listed below:

i. https://mdewwp.page.link/CMPFlowCap for MSFCR,
ii. https://mdewwp.page.link/CMPws1 for MSFCR's Worksheet # 1, and
iii. https://mdewwp.page.link/CMPws2 for MSFCR's Worksheet # 2
(these links are case-sensitive).

II. SPECIAL CONDITIONS

Upon submission, the permittee must immediately notify the Department via email at mde.wsacompliance@maryland.gov. **Failure to provide this notification may result in non-submission violations noted in the ICIS and ECHO systems**.

If the permittee encounters any problem in the electronic submission on NetDMR for the December month, the permittee may provide the above documents electronically at mde.wsacompliance@maryland.gov postmarked by January 28th of the following year.

D. Biomonitoring Program

1. Within three months of the effective date of the permit, the permittee shall submit to the Department for approval a study plan to evaluate wastewater whole effluent toxicity (WET) at Outfall 001A using the biomonitoring results.

   The effluent produced by the industrial activities on Trade Point Atlantic is discharged at the same location to Bear Creek and is regulated by another NPDES permit MD0001201. Since Tradepoint Atlantic is required to monitor at their outfalls and wastewater sent to Outfall 002A has received the same treatment as Outfall 001A at Back River WWTP, no biomonitoring requirements are set for Outfall 002A in the Back River WWTP discharge permit.

   The study plan shall include a discussion of:

   a. wastewater and production variability
   b. sampling & sample handling
   c. source & age of test organisms
   d. source of dilution water
   e. testing procedures/experimental design
   f. data analysis
   g. quality assurance/quality control
   h. report preparation
   i. testing schedule

2. The testing program shall consist of definitive chronic testing conducted quarterly for the duration of the permit cycle. This testing shall be initiated no later than the following quarter after the Department's acceptance of the study plan. If results from any of the required tests suggest toxicity in the effluent, the permittee shall repeat the required test within 30 days as a follow-up test. If toxicity is observed from the results of the follow-up test, the permittee shall be subject to the requirements specified in Section 10 below of this Special Condition.

II. SPECIAL CONDITIONS

D. Testing shall include the sheepshead minnow (*Cyprinodon variegatus*) or inland silverside (*Menidia beryllina*) larval survival and growth tests and mysid shrimp (*Americamysis bahia* AKA *Mysidopsis bahia)* survival, growth, and fecundity tests. Testing must include one vertebrate species and one invertebrate species. Test results shall be expressed as NOEC, LOEC, ChV, and IC_{25}.

3. The samples used for biomonitoring shall be collected at the same time and location as the samples analyzed for the effluent limitations and monitoring requirements for this outfall. For chlorinated effluents, samples shall be collected after dechlorination. The permittee shall collect 24-hour flow–proportioned composite samples unless the Department has given prior approval of an alternative sampling type.

4. Testing shall be conducted in accordance with the procedures described in "*Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms,"* Third Edition, EPA-821-R-02-014, October 2002.

5. Test results shall be submitted to the Department within one month of completion of each set of tests.

6. Test results shall be reported following the latest update of the Department's "*Effluent Biotoxicity Testing Protocol for Industrial and Municipal Effluents, Appendix E (Reporting Requirements for Effluent Biomonitoring Data)," rev. 1/23/2019.*
The Effluent Biotoxicity Testing Protocol will be referred to as "**EBT-P***"* throughout the discharge permit and is available for download from the Department's website: https://mdewwp.page.link/Biomonitoring (this link is case-sensitive).
The permittee shall verify that the laboratory contracted for Effluent Biotoxicity Testing meets all requirements of the latest Protocol prior to initiating each testing event.

7. As a minimum, the reported chronic results shall be expressed as NOEC, LOEC, ChV, and IC_{25}.

8. If a 50% mortality or greater occurs in one or more effluent concentrations during the first 48 hours of the chronic tests, 48-hour LC_{50}s shall be calculated and reported along with the chronic results.

9. If testing is not performed in accordance with the MDE-approved study plan, additional testing may be required by the Department.

10. If the test results of any two consecutive valid toxicity tests show acute or chronic toxicity (LC_{50} equal to or less than 100% for acute tests and an IC_{25} equal to or less than the in-stream waste concentration for chronic tests), the permittee shall repeat the test within 30 days to confirm the findings of acute or chronic toxicity. Intermittent toxicity or other concerns may require additional testing or limits. If acute and/or chronic toxicity is confirmed, the permittee shall:

II. SPECIAL CONDITIONS

D.

a. Eliminate the source of toxicity through operational changes as soon as possible but in any case, not longer than within three months, or

b. Perform a TRE. If the permittee repeats the toxicity testing as stated above and the results of the repeat test do not confirm the acute or chronic toxicity, the Department will require the permittee to repeat the toxicity testing as stated above to reconfirm a finding of no acute or chronic toxicity. After reconfirmation, the permittee shall complete any remaining quarterly testing required.

11. When the result of the repeat WET test (per II.D.10) shows reasonable potential for toxicity, unless it can be demonstrated that the source of toxicity has been eliminated, inappropriate test procedures were utilized, or the source has been controlled via a chemical specific permit limitation, WET limits shall continue. The permit may be modified to remove the WET limit if six consecutive follow-up quarterly tests show no toxicity.

12. If plant processes or operations change so that there is a significant change in the nature of the wastewater, the Department may require the permittee to conduct a new set of tests.

13. If a significant industrial user locates within the service area so that significant change in the nature of the wastewater might be anticipated, MDE may require the permittee to conduct a new set of tests.

14. a. The biomonitoring program study plan (Section II.D.1), WET test results and related materials (Section II.D.5) shall be submitted electronically to the Department if the permittee has already been approved for NetDMR. The material shall be attached as separate single files and labeled as "Biomonitoring Program Study Plan" and "WET Test Results" in the NetDMR.

Upon submission, the permittee must immediately notify the Department via email at mde.biomonitoring@maryland.gov. **Failure to provide this notification may result in non-submission violations noted in the ICIS and ECHO systems.**

b. If the permittee encounters problems in the electronic submission through NetDMR, the documents referenced in Section 14.a above shall be immediately submitted via email at mde.biomonitoring@maryland.gov.

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E. Toxicity Reduction Evaluation (TRE)

The permittee shall conduct a Toxicity Reduction Evaluation (TRE) when a review of toxicity test data by the Department indicates unacceptable acute or chronic effluent toxicity. A TRE is an investigation conducted to identify the causative agents of effluent toxicity, isolate the source(s), determine the effectiveness of control options, implement the necessary control measures and then confirm the reduction in toxicity.

1. Within 90 days of notification by the Department that a TRE is required, the permittee shall submit for approval by the Department a plan of study, schedule and completion date for conducting a TRE. The permittee shall conduct the TRE study consistent with the submitted plan and schedule.

2. This plan shall follow the framework presented in *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA/833B-99/002) August 1999.

   Additional Guidance documents on the TRE process are shown below:

   a. *Methods for Aquatic Toxicity Identification Evaluations Phase I Toxicity Characterization Procedures,* Second Edition, United States Environmental Protection Agency Office of Research and Development, Washington, DC 20460, EPA/600/6-9 l/003 February 1991.

   b. *Methods for Aquatic Toxicity Identification Evaluations Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity*, United States Environmental Protection Agency Office of Research and Development, Washington, DC 20460, EPA/600/R-92/080 September 1993.

   c. *Methods for Aquatic Toxicity Identification Evaluations Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity*, United States Environmental Protection Agency Office of Research and Development, Washington, DC 20460, EPA /600/R-92/08 1 September 1993.

   d. *Clarifications Regarding Toxicity Reduction and Identification Evaluations in the National Pollutant Discharge Elimination System Program*, March 27, 2001, U.S. Environmental Protection Agency, Office of Wastewater Management, Office of Regulatory Enforcement, Washington, DC 20460.

3. Beginning 60 days from the date of the Department's acceptance of the TRE study plan and every 60 days thereafter, the permittee shall submit progress reports including all relevant test data to the Department. This shall continue until completion of the toxicity reduction confirmation.

4. Within 60 days of completion of the toxicity identification or the source identification phase of the TRE, the permittee shall submit to the Department a plan, schedule and completion date for implementing those measures necessary to eliminate acute toxicity,

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E. an LC_{50} greater than 100%, and/or eliminate chronic toxicity, an IC_{25} greater than the in-stream waste concentration (IWC). The implementation of these measures shall begin immediately upon submission of this plan.

5. Within 60 days of completing the implementation of the control measures to eliminate or reduce toxicity, the permittee shall submit to the Department for approval a study plan to confirm the elimination or reduction of toxicity by using biomonitoring.

6. If, for any reason, the implemented measures do not result in compliance with the Department's toxicity limitations, the permittee shall continue the TRE and a Whole Effluent Toxicity (WET) permit limit, and a compliance schedule will be required.

7. a. The TRE study plan (Section II.E.1), TRE progress report (Section II.E.3) and all TRE-related materials (Section II.E.4) shall be submitted electronically to the Department, if the permittee has already been approved for NetDMR. The material shall be attached as a separate single file and labeled as "TRE" in the NetDMR.

   Upon submission, the permittee must immediately notify the Department via email at mde.biomonitoring@maryland.gov. **Failure to provide this notification may result in non-submission violations noted in the ICIS and ECHO systems.**

   b. If the permittee encounters problems in the electronic submission through NetDMR, the documents referenced in Section 7.a above shall be immediately submitted via email at mde.biomonitoring@maryland.gov.

F. Whole Effluent Toxicity (WET) Limit

The WET limits established for Back River WWTP shall remain in effect for this permit cycle. The quarterly WET testing shall also continue per Special Condition II.D until the permittee has identified and corrected the cause of toxicity in the effluent. Thereafter, the permittee shall conduct six consecutive follow-up quarterly tests to demonstrate no reasonable potential for effluent toxicity, as specified in Special Condition II.D.11 of the discharge permit.

If the permittee satisfies all the above conditions, the permittee may petition MDE for a permit modification to remove the WET limits and/or reduce the WET monitoring frequency. The Department will evaluate these results and decide whether to remove or adjust the WET limit and the associated requirements.

TU_a is defined as 100 divided by the LC_{50} value resulting from the first 48 hours of a valid acute or chronic toxicity test. Compliance with the LC_{50} requirements shall be determined through testing performed per Special Condition II.D. TU_c is defined as 100 divided by the IC_{25} value resulting from a valid chronic toxicity test. Compliance with the IC_{25} requirements shall be determined through testing performed per Special Condition II.D.

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The WET samples shall be collected, analyzed, and reported per Special Condition II.D, and the Department's latest **EBT-P**. The permittee shall report the quarterly WET testing results in TU_a and TU_c units on the DMR of the following month after completion of the WET testing and analysis.

G. Toxic Chemical Testing

1. Concurrent with the biomonitoring study plan, the permittee shall submit to the Department for approval a study plan to perform the analytical testing for toxic chemicals.

2. The toxic chemical testing study plan shall include a description of:

   a. sampling methods;

   b. analytical methods;

   c. practical detection levels; and

   d. quality control procedures.

3. Alongside the whole effluent toxicity test (Special Condition II.D.2) performed in the first quarter of each calendar year for the first three (3) years of the permit cycle, the permittee must also perform analytical testing for toxic chemicals as outlined in the Department's most recent document, "*Toxic Pollutant Monitoring Protocol and Reporting Requirements for Toxic Chemical Testing Analytical Data," rev. 12/2/2023.* The Toxic Chemical Testing Protocol will be referred to as "**TCT-P"** throughout the discharge permit and is available for download from the Department's website: https://mdewwp.page.link/TCT (this link is case-sensitive).
The permittee must verify that the laboratory contracted for toxic substances analysis and reporting meets all requirements of the latest MDE Toxic Pollutant Monitoring Protocol, as indicated in footnote 31, prior to initiating each testing event.

4. Toxic chemical testing shall be performed in accordance with 40 CFR Part 136 and the Department-approved toxic chemical testing plan. Testing for Total Polychlorinated Biphenyls (tPCBs) shall be performed in accordance with MDE's protocol titled "*Reporting Requirements for Total PCBs (PCB Congeners) By EPA Method 1668 C or A, rev. 11/9/2017*" when analyzing effluent samples for Total Polychlorinated Biphenyls (Total PCBs) using EPA Method 1668 C. Refer to Special Condition II.Q "Monitoring, Reporting, and Minimization of Polychlorinated Biphenyls (PCBs)" for additional PCB requirements. The total PCBs concentration is the summation of all individually measured congeners. Both the individual congeners and the total PCBs concentrations shall be reported.

   Grab samples must be used for cyanide, phenols, and volatile organic compounds. All other pollutants shall be collected using 24-hour flow–proportioned composite samples unless the Department has given prior approval of an alternative sampling type.

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G. 5. Substances other than those identified in Section 3 above may be detected in the effluent. If so, the permittee shall identify and quantify the ten (10) present in highest concentrations for those compounds for which standards are available.

6. Results of each toxic chemical test performed as per Sections II.G.3 and II.G.4 shall be submitted to the Department with results of the concurrent biomonitoring toxicity test.

7. Toxic chemical testing results shall be reported following the Department's latest updated **TCT-P**.

8. If testing is not performed in accordance with the Department's approved study plan, additional testing may be required by the Department.

9. a. The toxic chemical testing study plan (Section II.G.1), toxic chemical testing results and related materials (Section II.G.6) shall be submitted electronically to the Department if the permittee has already been approved for NetDMR. The results shall be attached as separate single files and labeled as "Toxic Chemical Testing Study Plan" and "Toxic Chemical Testing Results" in the NetDMR.

Upon submission, the permittee must immediately notify the Department via email at mde.wsacompliance@maryland.gov. **Failure to provide this notification may result in non-submission violations noted in the ICIS and ECHO systems.**

b. If the permittee encounters problems in the electronic submission through NetDMR, the documents referenced in Section 9.a. above shall be immediately submitted via email at mde.wsacompliance@maryland.gov.

H. Pretreatment Program

The permittee shall operate and maintain the pretreatment program in accordance with COMAR 26.08.08, the General Pretreatment Regulations for Existing and New Sources of Pollution (40 CFR Part 403) and the approved pretreatment program submission as approved on August 7, 1985, by the Department. The program must be updated if needed to comply with COMAR 26.08.08 or 40 CFR Part 403 or modifications to the State of Maryland Publicly Owned Treatment Works (POTW) Pretreatment Delegation Agreement signed on May 19, 1986, and as amended on January 11, 1993, as amended on September 14, 1994, and as modified on March 13, 2002. The terms of the POTW Pretreatment Delegation Agreement are expressly incorporated herein as if set forth in full.

1. The permittee is not authorized to receive a discharge of any type or quantity of substances which may cause interference with the operation of the treatment works. The permittee is required to notify the Pretreatment Section of the Department, in writing, prior to allowing:

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a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Section 301 or 306 of the Clean Water Act and COMAR 26.08.08 if it were directly discharging those pollutants; and

b. Any substantial change in the volume or character of pollutants being introduced by a source introducing pollutants into the treatment works at the time of issuance of this permit.

Adequate notification shall include information on (i) the quality, quantity and frequency of wastewater introduced into the treatment works, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the treatment works.

I. Protection of Water Quality

It is a violation of this permit to discharge any substance not otherwise listed under the permit's "Effluent Limitations and Monitoring Requirements" special conditions at a level which would cause or contribute to any exceedance of the numerical water quality standards in COMAR 26.08.02.03 unless the level and the substance were disclosed in writing in the permit application prior to the issuance of the permit. If a discharge regulated by this permit causes or contributes to an exceedance of the water quality standards in COMAR 26.08.02.03, including but not limited to the general water quality standards, or if the discharge includes a pollutant that was not disclosed or addressed in the public record for the permit determination, the Department is authorized to modify, suspend or revoke this permit or take enforcement action to address unlawful discharges of pollutants.

J. Reapplication for a Permit

No later than 18 months before the expiration date of the permit, unless permission for a later date has been granted by the Department, the permittee shall submit a new application for a permit or notify the Department of the intent to cease discharging by the expiration date. In the event that a timely and complete reapplication has been submitted and the Department is unable, through no fault of the permittee, to issue a new permit before the expiration date of this permit, the terms and conditions of this permit continue and remain fully effective and enforceable. The renewal application is required by that date in accordance with the requirements of MDE's Watershed Permitting Plan under which all discharge permits in a watershed should be issued in the same year.

K. Reporting Nutrient Total Annual Loads to Comply with Concentration-based Annual Loading Rate Limits

The Permittee shall report the concentration-based (also known as Floating Cap) annual loading requirements for TN and TP on the December DMR designated "102A". The permittee shall submit to the Department the Discharge Monitoring Report for the month of December with this designation. For each calendar year, the permittee shall calculate the annual concentration-based loads for TN and TP as per the footnote 9 of the Special Condition II.A and report these loadings along with the total annual cumulative flow at Monitoring Point 102A on the December month

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DMR in accordance with the General Condition III.A.2.a of this discharge permit.

Since Back River WWTP discharges effluent at more than a single outfall (Outfall 001A and Outfall 002A), the total annual loads for TN, TP and total annual discharge flow calculated at Monitoring Point 102A must be the same as the sum of individual annual discharge flows calculated at Outfall 001A and Outfall 002A for each month.

L. Combined Sewer Overflows (CSOs)

There are no known combined sewer overflows in the Back River wastewater collection system service areas at the time of issuance of this permit (last CSO Point Source # 013P, Forest Park area in Baltimore City area was eliminated on June 20, 2006). However, since parts of Baltimore City's collection system are old and the system serves an urban area, there may be secluded and hidden CSOs, which are not known at this time. In order to address this potential, the following CSO reopener clause will apply to any CSO that subsequently comes to the knowledge of the Department. If a CSO is identified in the collection system contributing to this facility, this permit may be reopened to incorporate the CSO requirements developed in accordance with the National Combined Sewer Overflow Strategy promulgated on October 8, 2001, by the EPA.

M. Climate Change Resiliency Requirements

The effects of climate change are projected to be more pronounced in the coming decades. As a result, the intensity and frequency of extreme weather events may quickly overload the wastewater facility hydraulically, disrupt the operation in the treatment works, and cause the potential endangerment of aquatic life and public health. The permittee shall enhance the climate change resiliency of the facility through the following measures:

1. The permittee shall conduct annual assessment and maintenance, as needed, of the operational processes at the treatment works to confirm they are adequate to address the potential inflow surges during extreme weather events. The assessment shall be based on the history of storms and their corresponding peak flows and waste loads recorded at the facility. The records of evaluations and maintenance shall be documented and made available to the Department upon request.

2. The permittee shall plan for impacts to power supplies during extreme weather events based on the history of storms and the demand from critical operations at the facility. Please refer to General Conditions III.B.4 "Adverse Impact" and III.B.8 "Power Failure" of the discharge permit for further details.

3. No later than six months from the effective date of this permit, the permittee shall develop and submit a Climate Change Resiliency Report to the Department that explains the permittee's plan to address peak flow surges and the potential impacts on power supplies during extreme weather events as cited in Sections II.M.1 and II.M.2 respectively.

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N. Maintenance of Laboratory Certification Records

The permittee shall maintain, on-site, certification records of all analytical laboratories used for monitoring effluent parameters required by this discharge permit. The records shall be made available to the Department upon request and, consistent with the O&M Guidance Checklist, include at minimum:

1. Exclusive use of EPA-approved methods for pollutant analysis, with documented justifications for any deviations.

2. Establishment of a comprehensive QA/QC program covering calibration, verification, validation, and routine checks of instruments and equipment, as well as protocols for sample and reagent handling.

3. Provision of adequate training to personnel involved in sample collection, preparation, and analysis, with documented records of competency.

4. Calibration, maintenance, and operation of laboratory equipment in accordance with manufacturer specifications and EPA requirements, with detailed records maintained and available for inspection.

5. Maintenance of complete and accurate records of all laboratory procedures, including sample collection, preparation, analysis, and interpretation, as per recordkeeping requirements specified in 40 CFR Part 136.

O. Testing and Analysis of Per- and Polyfluorinated Alkyl Substances (PFAS)

The permittee shall perform analytical testing of the PFAS compounds to monitor the PFAS level in the influent, effluent, and biosolids of the Back River WWTP. No later than 90 (ninety) days from the effective date of the discharge permit, the permittee shall submit a PFAS monitoring plan (the Plan) to the Department for approval.

The Plan shall incorporate all pertinent information, including but not limited to, the following items:

1. The permittee shall commence the monitoring of PFAS within 180 (one hundred and eighty) days after the Department approves the Plan.

2. PFAS monitoring shall consist of definitive quarterly sampling of PFAS compounds in the influent, effluent and biosolids to be conducted concurrently during each sampling event for four (4) consecutive quarters during a 12 (twelve) month period after approval of the Plan. At least one of the four (4) quarterly sampling events shall be planned and scheduled to evaluate the impacts of wet weather conditions (i.e., with precipitation of 0.5 (one-half) inches or greater) on PFAS levels within the treatment works. The wet weather sampling event shall be conducted, and all samples collected no later than 48 (forty-eight) hours after the end of precipitation. The weather conditions during each sampling event shall be identified in the report.

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O. No later than 60 (sixty) days after the permittee receives results from sampling**,** the permittee shall submit test results and all pertinent physical documents of the test results from the quarterly PFAS effluent monitoring to:

Attention: Testing and Analysis of Per- and Polyfluorinated Alkyl Substances (PFAS)
Municipal Wastewater Discharge Permits Division
Water and Science Administration (WSA)
Maryland Department of the Environment
1800 Washington Boulevard, STE-455
Baltimore, MD 21230-1708

3. The effluent sample shall be collected as a "Composite-Grab" sample at Monitoring Point 102A during each sampling event. The composite-grab sample shall be a composition of a minimum of four individual grab samples collected at evenly distributed intervals during the daytime shift(s) of the facility on a sampling day.

4. The PFAS samples shall be analyzed using EPA Method 1633 (EPA 821-R-24-001), or its latest subsequent version, for the 40 (forty) PFAS compounds covered by the protocol (https://www.epa.gov/system/files/documents/2024-01/method-1633-final-for-web-posting.pdf)

5. For each PFAS sampling event, the sample collection procedures, method-specified holding times, sample preservation, and QA/QC procedures shall be consistent with MDE's "*Per- and Polyfluoroalkyl Substances (PFAS) Sampling Guidance Document*," *rev. 9/10/2024*, or its latest iteration, available at MDE's website at the link: (https://mdewwp.page.link/PFASGuidance).

6. The methods shall be consistent with the Minimum Reporting Limits for PFAS analytes specified in the latest updated EPA Analytical Method 1633.

7. The Department will notify the permittee if two consecutive results exceed the action level set by the Department at the time when the latest sampling results are made available. The permittee shall submit an action plan (the Plan) to the Department no later than 90 days after the receipt of notification that describes how the permittee will take practicable steps (e.g., a desktop analysis) to identify potential sources of PFAS discharging to the facility's collection system. Upon concurrence of the Plan from the Department, the permittee shall submit progress reports on a semi-annual basis to the Department documenting the status of actions taken. Based on the progress reports, the Department may incorporate additional requirements in the discharge permit through permit modification and the public participation process.

8. The permittee may petition the Department to discontinue monitoring when levels of PFAS in the effluent or waste bio-solids from the first three monitoring results are below the action levels set by the Department at the time when the latest sampling results are made available.

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P. Compliance Schedule for Meeting Total Ammonia Nitrogen as N Effluent Limits

As per Code of Federal Regulation (CFR), 40 CFR § 122.47 "Schedules of compliance," the permittee shall follow the schedules listed below to achieve compliance with the final total ammonia nitrogen as N limits as listed in Special Condition II.A.1 and II.A.2 from this discharge permit:

~~1.~~ *Interim Limits:* These limits are effective from the effective date of this permit until the effective date of the final limits.

2. *Final Limits:* The final limits shall be effective 12 (twelve) months from the effective date of this discharge permit. The permittee must make all efforts to meet these limits as soon as possible.

3. *Progress Report:* No later than six (6) months from the effective date of this permit, the permittee shall provide the Department with a report on progress status to meet the final limits.

Q. Monitoring, Reporting and Minimization for Polychlorinated Bi Phenyls (PCBs)

1. PCB Monitoring & Reporting

   a. No later than three months from the effective date of the permit, the permittee shall submit to the Department for approval a study plan to perform analytical testing for Total Polychlorinated Biphenyls (Total PCBs or tPCBs).

   b. The study plan shall include a description of:

      i. sampling methods;

      ii. analytical methods;

      iii. practical detection levels; and

      iv. quality control procedures.

   c. The permittee shall conduct quarterly testing for tPCBs for the duration of the permit cycle.

   d. The first test shall be performed in the immediate quarter following the Department's acceptance of the study plan. The quarters shall end in March, June, September, and December.

   e. The permittee shall use the approved EPA testing methods in accordance with MDE's protocol titled "*Reporting Requirements for Total PCBs (PCB Congeners) by EPA Method 1668 C or A, rev 11/9/2017"* when analyzing effluent samples for Total PCBs using EPA Method 1668 C. The Total PCBs concentration is the summation of all

II. SPECIAL CONDITIONS

Q. individually measured congeners. Both the individual congeners and the total PCBs concentrations shall be reported.

f. The permittee shall measure and report tPCBs in picograms/liter (*pg/L*) to incorporate the PCBs TMDL for Back River and Baltimore Harbor, approved by the EPA on 10/1/2012.

g. The permittee may use tPCB results of the quarterly TCTs to substitute for tPCB quarterly monitoring performed in the same month, only when the TCT analysis is conducted using EPA Method 1668 C.

h. The permittee may report all results below 5 pg/L as non-detectable.

i. The tPCBs shall be reported on the Monthly Operating Reports (MORs) as individual results in picogram/liter (*pg/L)* and reported on the monthly Discharge Monitoring Reports (DMRs) for the quarter-ending month as the quarterly average concentration in picogram/liter (*pg/L)*, total quarterly loading rate in grams/quarter *(g/qtr)*, and year-to-date cumulative load in grams/year (*g/yr*).

The quarterly loading rate (*g/qtr*) is calculated for each quarter using this formula:

$$\textbf{tPCB Total Quarterly Loading Rate (}\textit{g/qtr}\textbf{)} = \frac{(\mathbf{A}\times\mathbf{B})}{\mathbf{264{,}172}}$$

where,

A= tPCBs Quarterly Average Concentration (*pg/L*)

B= Quarterly Total Cumulative Discharge Flow (*MGal/qtr*)

j. The year-to-date cumulative loading rate *(g/yr)* shall be a sum of the individual total quarterly loads from the 1st reporting quarter through the 4th reporting quarter for a calendar year. The tPCBs year-to-date cumulative load reported for the month of December shall represent the annual maximum loading rate.

k. The results of tPCBs monitoring shall determine whether the Department should require a continuation of tPCBs monitoring or change the monitoring frequency once the tPCBs sources are identified and eliminated through the PCB Minimization Plan referenced in Special Condition II.Q.2 of this permit. Any changes to the effluent tPCBs limits and/or monitoring requirements shall be addressed through a permit modification process.

l. If testing is not performed in accordance with the Department's approved study plan, additional testing may be required by the Department.

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Q.

m. The tPCBs study plan (Section II.Q.1.a), and testing results and related materials (Section II.Q.1.c) shall be submitted electronically to the Department if the permittee has already been approved for NetDMR. The results shall be attached as separate single files and labeled as "Total Polychlorinated Biphenyls Study Plan" and "Total Polychlorinated Biphenyls Testing Results" in the NetDMR.

Upon submission, the permittee must immediately notify the Department via email at mde.wsacompliance@maryland.gov. **Failure to provide this notification may result in non-submission violations noted in the ICIS and ECHO systems.**

n. If the permittee encounters problems in the electronic submission through NetDMR, the documents referenced in Section Q.1.m above shall be immediately submitted via email at mde.wsacompliance@maryland.gov.

2. PCB Minimization Plan

a. The permittee shall submit an updated Total Polychlorinated Biphenyls (tPCBs) Minimization Plan (The Plan) to the Department for review and approval within 180 days of the effective date of the permit. The Plan shall aim to track and eliminate sources of PCBs through the implementation of Best Management Practices (BMPs).

b. The key elements of the Plan shall include:

i. *Identification of PCB Sources*: The Plan must identify the main sources of PCB discharge(s) within the facility.

ii. *BMP(s) Implementation*: The Plan shall outline specific BMPs to be implemented, targeting identified sources to minimize PCB discharge. Examples of BMPs may include improved source control measures, operational changes, or treatment process modifications.

iii. *Monitoring and Evaluation*: The Plan shall establish a monitoring program to track the effectiveness of implemented BMPs and measure progress towards achieving tPCB load reduction goals.

iv. *Schedule and Milestones*: The Plan shall present a clear timeline for implementation, outlining key milestones and deadlines for achieving compliance.

c. The permittee shall initiate implementation of the approved Plan within 30 days of Departmental approval.

d. At the end of each calendar year, if the facility exceeds the annual Waste Load Allocation (WLA) assigned for any outfall, the permittee shall submit an updated PCB Minimization Plan to the MDE Compliance Program. This Plan can be submitted via NetDMR concurrent with the February Discharge Monitoring Report (DMR) submission of the following year.

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e. Upon completion of the review of the Plan, the Department may request additional material or modification of the Plan from the permittee, based on the status of the progress of the PCB source minimization.

R. Operations and Maintenance (O&M) Guidance Checklist Requirements

To ensure adequate maintenance, effectiveness, and optimization of wastewater facilities in Maryland equipped with Enhanced Nutrient Removal (ENR) systems, the Department requires completion and submission of an Operations and Maintenance (O&M) Guidance Checklist from all ENR facilities as part of the permit renewal process. As a result, the permittee shall submit a completed and signed checklist, no later than twelve months after the effective date of the permit, to the Department for review and approval.

Additionally, a progress report detailing steps taken towards completing the O&M guidance checklist must be submitted to MDE no later than six (6) months from the permit's effective date.

The progress report, and the completed checklist submitted to MDE shall be addressed as follows:

Attention: Operations & Maintenance Guidance Checklist
Municipal Wastewater Discharge Permits Division
Water & Science Administration
Maryland Department of the Environment
1800 Washington Boulevard, STE-455
Baltimore, Maryland 21230-1708

The Department will inform the permittee in writing whether the checklist is accepted after the review.

S. Wastewater Treatment Plant Operator Licensing and Certification

The permittee shall ensure Back River WWTP is operated and maintained solely by operators certified by the Maryland Board of Waterworks and Waste Systems Operators, as required in General Condition III.B.3.b. The operators supervising the operations and maintenance of the facility must hold a minimum Class 5A certification and meet all qualifications outlined in COMAR 26.06.01. The treatment facility must not be operated at any time without a certified operator on duty.

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T. Protection of Water Contact Recreational Activity in the Receiving Waters

Per the requirements outlined below, the permittee shall monitor and report bacteria levels in the effluent discharged from the facility to protect the contact recreational use of the receiving water and ensure prompt public notification of health risks associated with elevated bacteria counts in the wastewater effluent.

1. Monitoring during April 1st through October 31st (Warm Season)

   During the warm season, when water contact recreation activities are expected to occur, the permittee shall calculate the monthly Statistical Threshold Value (STV) for Enterococci and E. Coli, in addition to the monthly Geometric Mean (GM) value, at a sampling frequency of one per day, following the EPA approved analytical methods outlined in 40 CFR Part § 136.3. The results shall be reported as the Most Probable Number (MPN) per 100 ml.

2. Monthly Reporting

   The permittee shall calculate results of STV as a 90th percentile at the end of each calendar month during the warm season. These results shall be reported on NetDMR against an **action level** of 130 MPN/100 ml for Enterococci, and 410 MPN/100 ml for E. coli (during the first 12-month period only), along with the monthly GM concentrations.

3. Notification of Exceedances

   If the calculated 90th percentile for STV exceeds the defined action level(s) at the end of each calendar month during the warm season, the permittee shall notify (a) MDE's Beaches Program and (b) the local health department, as soon as practicable, but no later than 24 hours. Electronic notifications may be submitted to MDE at heather.merritt@maryland.gov.

4. Required Notification Content

   The notification shall, at minimum, include:

   a. A daily log of bacterial sampling results with dates and times, along with the original laboratory records.

   b. Additional details including:

      i. A comparison of the daily bacteria sampling results against the action level(s).

      ii. Identification of the number(s) of samples exceeding the action level(s).

   c. A subsequent action plan to address the STV action level exceedance.

II. SPECIAL CONDITIONS

T. 5. Submission of a Written Report

Within five (5) calendar days of the STV action level exceedance, the permittee shall submit to MDE a written report detailing the information provided above in 4a - 4c, as well as an evaluation of the effectiveness of the implemented action plan.

The report shall be sent at the following address:

Attention: Bacteria STV Exceedance 5-Day Report
Maryland Beaches Program
Maryland Department of the Environment
1800 Washington Boulevard, Suite 540
Baltimore, Maryland 21230

The Department reserves the right to re-open the permit and modify the STV action levels into permit limits upon seeing a pattern of recurring exceedances.

III. GENERAL CONDITIONS

A. Monitoring and Reporting

1. Representative Sampling

Samples and measurements shall be taken at times that are representative of the quantity and quality of the discharge, and at evenly spaced intervals.

2. Monthly Monitoring Results

a. Discharge Monitoring Reports

Monitoring results obtained during each calendar month shall be summarized and submitted electronically using the NetDMR. Results shall be submitted to the Department via NetDMR no later than the 28th of the month following the end of the reporting month.

If the permittee encounter problems in electronic submission for any month, the permittee must consult the MDE's Compliance Program by telephone at (410) 537-3250 or by email at mde.netdmr@maryland.gov to avoid missing the deadline for submission of the above stated documents.

b. Monthly Operating Reports (MORs)

The permittee shall submit monthly operating reports on a form acceptable to the Compliance Program. For each calendar month, the permittee shall submit to the Department a signed original of the MOR as an attachment to Copy of Record (COR) via NetDMR in electronic format concurrently with the Discharge Monitoring Report submission postmarked no later than the 28th day of the month following the reporting month.

If the permittee encounter problems in electronic submission for any month, the permittee must consult the MDE's Compliance Program by telephone at (410) 537-3250 or by email at mde.netdmr@maryland.gov to avoid missing the deadline for submission of the above stated documents.

c. Toxic Chemical Reporting

Any data collected according to the Department's latest updated "*Toxic Pollutant Monitoring Protocol and Reporting Requirements for Toxic Chemical Testing Analytical Data, as amended,*" which can be downloaded from Department's website link: https://mdewwp.page.link/TCT (this link is case-sensitive), and

III. GENERAL CONDITIONS

A. submitted to the Department, either in fulfillment of Special Conditions II.B or pursuant to the toxic chemical testing requirement, pretreatment requirements or toxic metals or organic data collected on a voluntary basis, must be accompanied by laboratory data reports. At a minimum, these reports shall include, the name of the facility, the date(s) of sampling, beginning and ending sample time, place of sampling collection, the sample type (grab, composite, etc.), the sample description (influent or effluent), the preservation method, the analytical method used for each parameter, the analytical method detection limit, the date of analysis, the name of person performing the analysis, the analytical result, and the name and address of the laboratory performing the analyses. Chain-of-custody forms shall also be submitted.

If the permittee encounter problems in electronic submission of this information along with the supporting documentations through the NetDMR, the permittee must submit these documents immediately via email at mde.wsacompliance@maryland.gov.

3. Sampling and Analysis Methods

Analytical and sampling methods shall conform to test procedures for the analysis of pollutants as identified in 40 CFR Part 136 - "Guidelines Establishing Test Procedures for the Analysis of Pollutants."

4. Use of Sufficiently Sensitive Test Methods

In accordance with 40 C.F.R. § 122.44(i)(1)(iv), the permittee shall use sufficiently sensitive test procedures (i.e., methods) approved under 40 C.F.R. Part 136 or required under 40 C.F.R. Chapter I, Subchapter N or O, for the analysis of pollutants or pollutant parameters limited in this permit. A method is considered “sufficiently sensitive” when either: (1) the method minimum level (ML) is at or below the level of the effluent limit established in this permit for the measured pollutant or pollutant parameter; or (2) the method has the lowest ML of the analytical methods approved under 40 C.F.R. Part 136 or required under 40 C.F.R. Chapter I, Subchapter N or O for the measured pollutant or pollutant parameter. The ML is not the minimum level of detection, but rather the lowest level at which the test equipment produces a recognizable signal and acceptable calibration point for a pollutant or pollutant parameter, representative of the lowest concentration at which a pollutant or pollutant parameter can be measured with a known level of confidence. For the purposes of this permit, the detection limit is the lowest concentration that can be reliably measured within specified limits of precision and accuracy for a specific laboratory analytical method during routine laboratory operating conditions (i.e., the level above which an actual value is reported for an analyte, and the level below which an analyte is reported as non-detect).

III. GENERAL CONDITIONS

A. 5. Analytical Laboratory

Within 30 days after the effective date of this permit, the permittee shall submit to the Department the name and address of the analytical laboratory (including the permittee's own laboratory) which is used to perform the monitoring required by this permit. If the laboratory changes during the effective period of this permit, the permittee shall notify the Department of the new laboratory within 30 days after the change.

6. Monitoring Equipment Maintenance

a. The permittee shall calibrate and maintain all monitoring and analytical instrumentation to ensure accuracy of measurements.

b. Environment Article, Section 9-343 provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

7. Recording of Results

For each measurement or sample taken pursuant to the requirements of the permit, the permittee shall record the following information:

a. the date, exact place and time of sampling or measurement;

b. the person(s) who performed the sampling or measurement;

c. the dates analyses were performed;

d. the person(s) who performed each analysis;

e. the analytical techniques or methods used; and

f. the results of such analyses.

8. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report. The increased frequency shall also be reported. The results of any other

III. GENERAL CONDITIONS

monitoring performed by the permittee shall be made available to the Department upon request.

9. Record Retention

All data used to complete the permit application and all records and information resulting from the monitoring activities required by this permit, including all records of sampling and analyses performed, calibration and maintenance of instrumentation, and recordings from continuous monitoring instruments, shall be retained for a minimum of three years. This period shall be extended automatically during the course of litigation or when requested by the Department.

B. General Requirements

1. Permit Noncompliance - Notification Requirements

All discharges authorized herein shall be consistent with the terms and conditions of this permit. If, for any reason, the permittee does not comply with or will be unable to comply with any permit condition, the permittee shall, within 24 hours, notify the Department by telephone at (410) 537-3510 during work hours or at (866) 633-4686 during evenings, weekends, and holidays. The permittee shall provide the Department with the following information electronically at mde.wsacompliance@maryland.gov or in writing within five days of such oral notification.

a. a description of the noncomplying discharge including the name of the stream and the impact upon the receiving waters;

b. cause of noncompliance;

c. the duration of the period of noncompliance and the anticipated time the condition of noncompliance is expected to continue;

d. steps taken by the permittee to reduce and eliminate the noncomplying discharge;

e. steps to be taken by the permittee to prevent recurrence of the condition of noncompliance;

f. a description of the accelerated or additional monitoring to determine the nature and impact of the noncomplying discharge; and

g. the results of the monitoring described in f. above.

III. GENERAL CONDITIONS

B. 2. Change in Discharge

The permittee shall report any anticipated facility expansions, production increases, or process modifications which will result in new, different or an increased discharge of pollutants by submitting a new application at least 180 days prior to the commencement of the changed discharge except that if the change only affects a listed pollutant and will not violate the effluent limitations specified in this permit, by providing written notice to the Department. Following such notice, the permit may be modified by the Department to include new effluent limitations on those pollutants.

3. Facility Operation and Quality Control

All waste collection, control, treatment and disposal facilities shall be operated in a manner consistent with the following:

a. Facilities shall be operated efficiently to minimize upsets and discharges of excessive pollutants.

b. The permittee shall provide an adequate operating staff qualified to carry out operation, maintenance and testing functions required to ensure compliance with this permit. Superintendents and operators must be certified by the Board of Waterworks and Waste Systems Operators located at Montgomery Park Business Center, 1800 Washington Boulevard, STE- 410, Baltimore, Maryland 21230 in accordance with Title 12 of Environmental Article, Annotated Code of Maryland, and Section 26.06.01 of the COMAR.

c. Facility maintenance work, which adversely affects or may adversely affect the discharge quality shall be scheduled during non-critical water quality periods.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize or prevent any adverse impact to waters of the State or to public health resulting from noncompliance with any effluent limitation specified in this permit, including any contributions to noncompliant discharges from increased frequency and intensity of extreme precipitation events, and must perform the accelerated or additional monitoring necessary to determine the nature and impact of the noncompliant discharge.

5. Bypassing

Any bypass of treatment facilities is prohibited unless the bypass does not cause any violations of the effluent limitations specified in Special Condition II.A, and

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B. is for essential maintenance to assure efficient operation, or unless the permittee can prove that:

a. the bypass is unavoidable to prevent loss of life, personal injury, or substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources; and

b. there are no feasible alternatives to the bypass; and

c. the Department receives notification pursuant to General Condition III.B.1 above. Where the need for a bypass is known (or should have been known) in advance, this notification shall be submitted to the Department for approval at least ten days before the date of the bypass or at the earliest possible date if the period of advance knowledge is less than ten days; and

d. The Department may approve an anticipated bypass, after considering its adverse effects; if the Department determines that it will meet the three conditions listed above in Sections ***a*** through ***c*** of this General Condition III.B.5.

6. Conditions Necessary for Demonstration of Upset

An upset shall constitute an affirmative defense to an action brought for noncompliance with technology-based effluent limitations only if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence, that:

a. an upset occurred and that the permittee can identify the specific cause(s) of the upset;

b. the permitted facility was at the time being operated in a prudent and workman-like manner and in compliance with proper operation and maintenance procedures;

c. the permittee submitted a 24-hour notification of upset in accordance with the reporting requirements of General Condition III.B.1 above;

d. the permittee submitted, within five calendar days of becoming aware of the upset, documentation to support and justify the upset; and

e. the permittee complied with any remedial measures required to minimize adverse impact.

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B. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

7. Sewage Sludge Requirements

The permittee shall comply with all State and federal laws and regulations regarding Sewage Sludge Management, and with any regulations promulgated pursuant to Environment Article, Section 9-230 et seq. or to the Clean Water Act, Section 405 (d). A Sewage Sludge Utilization Permit is required for the collection, handling, burning, storage, treatment, land application, disposal, or transportation of sewage sludge, processed sewage sludge, or any product containing these materials in Maryland. If the sludge is hauled out of the State for disposal, a transportation permit must be obtained from the Department.

8. Power Failure

The permittee shall maintain compliance with the effluent limitations and all other terms and conditions of this permit in the event of a reduction, loss or failure of the primary source of power to the wastewater collection and treatment facilities.

9. Right of Entry

In accordance with 40 CFR §122.41(i), the permittee shall allow the Secretary of the Department, the Regional Administrator of the Environmental Protection Agency, and their authorized representatives (including an authorized contractor acting as a representative), upon presentation of credentials and other documents as required by the law, to:

a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

III. GENERAL CONDITIONS

B. 10. Property Rights/Compliance With Other Requirements

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property, invasion of personal rights, or any infringement of federal, State or local laws or regulations.

11. Reports and Information

a. Upon request, the permittee shall provide to the Department, within a reasonable time, copies of records required to be kept by this permit. The permittee shall also furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit; or to determine compliance with this permit.

b. All applications, reports or information submitted to the Department shall be signed and certified as required by COMAR 26.08.04.01 and 40 CFR 122.22.

c. Except for data determined to be confidential under COMAR 26.08.04.01, all data shall be available for public inspection at the Department and the Office of the Regional Administrator of the Environmental Protection Agency. Effluent data shall not be considered confidential.

d. Environment Article, Section 9-343 provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, shall upon conviction be punished by a fine of not more than $10,000 or by imprisonment for not more than six months or by both.

12. Transfer of Ownership or Control

In the event of any change in ownership or control of facilities from which the authorized discharge emanates, the permit may be transferred automatically to another person only if:

a. the current permittee notify the Department, in writing, of the proposed transfer at least 30 days prior to the proposed transfer date;

b. the notice includes a written agreement between the existing permittee and a new permittee containing the specific date of proposed transfer of

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B. permit coverage, and of responsibilities and liabilities under the permit; and

c. neither the current permittee nor the new permittee receive notification from the Department, within 30 days of the Department's receipt of the agreement, of its intent to modify, revoke, reissue or terminate the existing permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 12.b. above.

13. New Effluent Standards

This permit shall be revoked and reissued or modified to meet any effluent standard, water quality standard or prohibition established under the Environment Article, the Clean Water Act, or regulations promulgated thereto, and the permittee shall be so notified.

14. Industrial Users

The permittee shall require all industrial users of the wastewater treatment facility to comply with user charges as established by the permittee, pursuant to Section 9-326(a)(i) of the Environment Article.

15. Noncompliance

Nothing in this permit shall be construed to preclude the institution of any legal action for noncompliance with State, federal or local laws and regulations.

16. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action against the permittee or to relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Clean Water Act or under the Environment Article.

17. Waterway Construction and Obstruction

The permit does not authorize the construction or placing of physical structures, facilities, debris, or the undertaking of related activities in any waters of this State including the 100-year flood plain.

18. Construction Permit

This permit is not a permit to construct. For a new facility, in order to make this permit valid, a construction permit shall be obtained to meet the requirements of COMAR 26.03.12.03(A) and Environment Article, Section 9-204(d).

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B. 19. Stormwater Pollution Prevention

a. The permittee shall maintain coverage or No Exposure Certification (NEC) under the "General Permit for Discharges from Storm Water Associated with Industrial Activities" in accordance with Part II A of the State NPDES Permit No. MDR0000, and

b. Industrial storm water is not authorized under this individual permit.

20. Severability

If any provision of this permit shall be held invalid for any reason, the remaining provisions shall remain in full force and effect, and such invalid provisions shall be considered severed and deleted from this permit.

C. Wastewater Collection System

This permit shall not authorize discharges from the wastewater collection system for this facility. The permittee shall perform frequent inspections and maintenance of the facility's wastewater collection system and its infrastructures located within the service area and take all necessary corrective actions to prevent any unauthorized discharges resulting from extreme weather events and failing infrastructures. Records for such maintenance and inspection activities shall be documented by the facility and provided to the Department upon request.

1. Reporting Requirements

Pursuant to Environment Article Sub title 9-331.1, the permittee must report sanitary sewer overflows (SSOs) which result in the direct or potential discharge of raw or diluted sewage into the surface waters or ground waters of the State to the Water and Science Administration's Compliance Program. Concurrently, the permittee shall also notify the local health department. Such reports must be made via telephone as soon as practicable, but no later than 24 hours after the time that the permittee became aware of the event. Reportable SSOs include, but are not limited to, overflows into the surface of the ground, into waterways, storm drains, ditches or other manmade or natural drainage conveyances to surface or ground waters which are reasonably likely to reach waters of the State. Overflows that are wholly contained within buildings and not likely to discharge to waterways need not be reported. Treatment plant bypasses shall be reported under General Condition III.B.1. Telephone reports shall be made to (410) 537-3510 on weekdays between 8:00 a. m. and 5:00 p.m. After hours telephone notification shall be made to emergency response number at (866) 633-4686.

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C. When the incident is reported to the Department, the following information needs to be included:

a. the location of the overflow, including city or county,

b. the name of the receiving water, if applicable;

c. an estimate of the volume of sewage discharged;

d. a description of the sewer system or treatment plant component from which the overflow was released (such as manhole, crack in pipe, pumping station wet well or constructed overflow pipe);

e. an estimate of the overflow's impact upon public health and to waters of the State;

f. the cause or suspected cause of the overflow;

g. the estimated date and time when the overflow began and stopped or the anticipated time the overflow is expected to continue;

h. if known at the time of reporting, the steps taken or planned to reduce, eliminate and prevent reoccurrence of the overflow and a schedule of major milestones for those steps; (if unknown at the time the telephone report is made, the steps must be included in the written reports submitted under general conditions III.C.2).

i. if known at the time of reporting, measures taken or planned to mitigate the adverse impact of the overflow and a schedule of major milestones for those steps (if unknown at the time the telephone report is made, the steps must be included in the written reports submitted under general conditions III.C.2); and

j. whether there has already been a notification to the public and other City or County Agencies or Departments and how notification was done.

2. Written Reports

Within 5 calendar days following telephone notification of the event, the permittee shall provide MDE with a written report regarding the incident that includes, at a minimum, the information cited above.

The permittee shall maintain copies of all overflow records and reports, work orders associated with investigation of overflows, a list and description of complaints from customers or others related to overflows (including backups of sewage in to houses or businesses), and documentation of performance and

III. GENERAL CONDITIONS

implementation measures for minimum period of three years and shall make this information available to MDE for review upon written request.

This wastewater collection system provision may be superseded by a general permit for collection systems, when such a permit is issued by MDE and the permittee have been accepted for registration under the permit.

3. Other Requirements

The permittee, as directed by the State or local health department, shall also be responsible for posting notification in close proximity to the affected area/stream and for conducting appropriate water quality sampling as deemed necessary.

D. Permit Expiration, Modification, or Revocation

1. Expiration of Permit

This permit and the authorization to discharge shall expire at midnight on the expiration date of the permit unless the permittee has submitted a timely and complete reapplication pursuant to Section II.I.

2. [Reserved.]

3. Permit Modification - Request of Responsible Permittee

A permit may be modified by the Department upon the written request of the permittee and after notice and opportunity for a public hearing in accordance with the provisions set forth in COMAR 26.08.04.10.

4. Permit Modification, Suspension, Revocation - Violation of Laws

A permit may also be modified, suspended or revoked by the Department, in the event of a violation of the terms or conditions of the permit, or of State or federal laws and regulations and in accordance with the provisions set forth in COMAR 26.08.04.10. This permit may be suspended or revoked upon a final, unreviewable determination that the permittee lacks, or is in violation of, any federal, state, or local approval necessary to conduct the activities authorized by this permit.

IV. CIVIL AND CRIMINAL PENALTIES

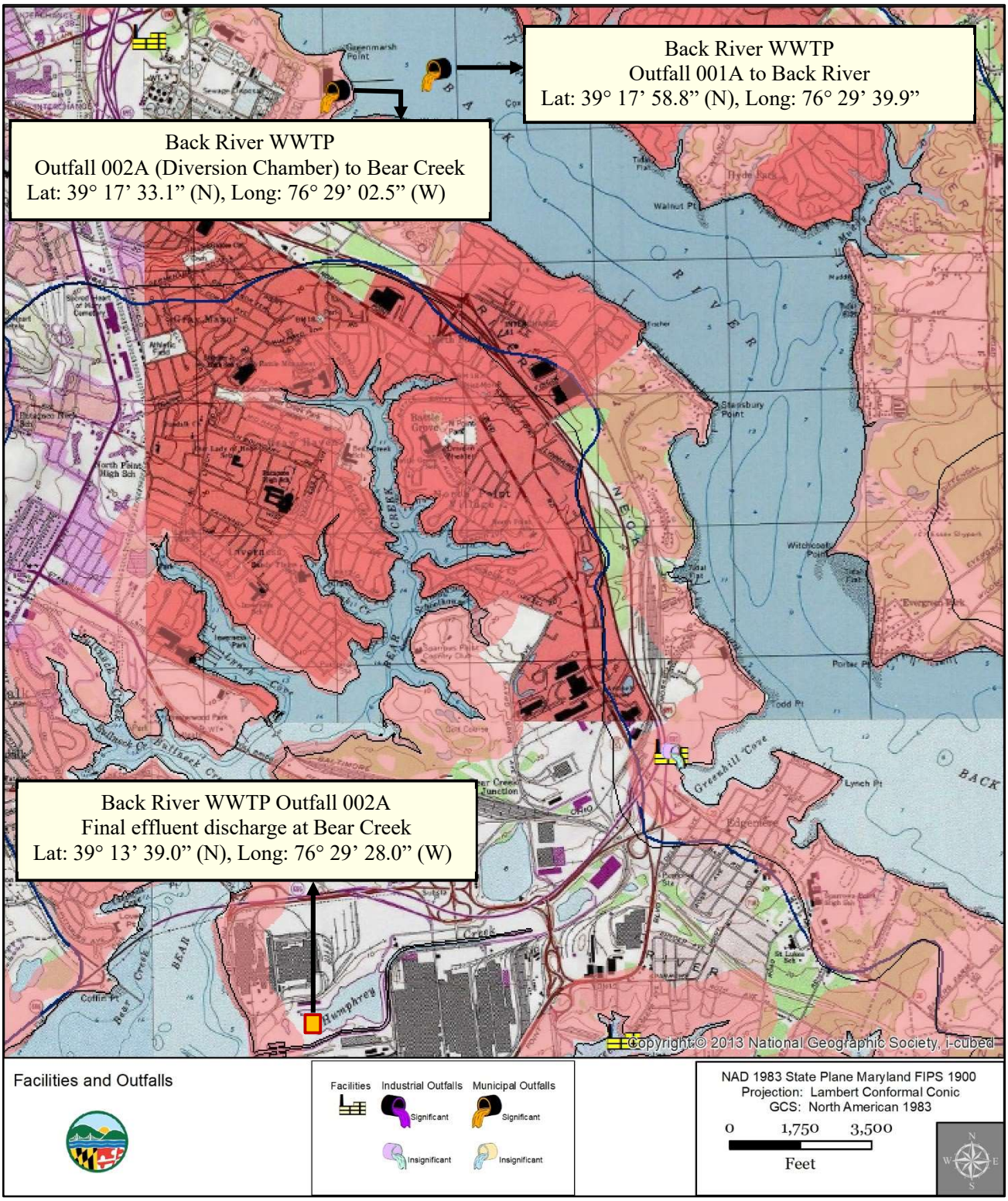
A. Civil Penalties for Violations of Permit Conditions

In addition to civil penalties for violations of State water pollution control laws set forth in Section 9-342 of the Environment Article, Annotated Code of Maryland; the Permittee shall be subject to civil penalty set forth in 33 U.S.C. § 1319 (d) of the Clean Water Act as adjusted for inflation according to 40 CFR §19.4.

B. Criminal Penalties for Violations of Permit Conditions

In addition to criminal penalties for violations of State water pollution control laws set forth in Section 9-343 of the Environment Article, Annotated Code of Maryland, the Permittee shall be subject to criminal penalty set forth in 33 U.S.C. § 1319 (c).

V. MAP SHOWING DISCHARGE POINT LOCATION



VI. NPDES PROGRAM

On September 5, 1974, the Administrator of the U.S. Environmental Protection Agency approved the proposal submitted by the State of Maryland for the operation of a permit program for wastewater discharges pursuant to Section 402 of the Clean Water Act.

Pursuant to the aforementioned approval, this discharge permit is both a State of Maryland discharge permit and an NPDES permit.

Naomi Howell, Program Manager
Wastewater Pollution Prevention and
Reclamation Program
Water and Science Administration