



Department of  
Environmental  
Conservation

# State Pollutant Discharge Elimination System (SPDES) DISCHARGE PERMIT

SIC Code: <b>4952</b>	NAICS Code: <b>221320</b>	SPDES Number:	<b>NY 00 22039</b>
Discharge Class (CL):	<b>05</b>	DEC Number:	<b>4-1006-00010/00001</b>
Toxic Class (TX):	<b>T</b>	Effective Date (EDP):	<b>X/X/XXXX</b>
Major-Sub Drainage Basin:	<b>13 – 01</b>	Expiration Date (ExDP):	<b>X/X/XXXX</b>
Water Index Number:	<b>H portion</b>	Item No.: <b>3</b>	Modification Dates (EDPM):
Compact Area:	-		

This SPDES permit is issued in compliance with Title 8 of Article 17 of the Environmental Conservation Law of New York State and in compliance with the Clean Water Act, as amended, (33 U.S.C. '1251 et.seq.)

PERMITTEE NAME AND ADDRESS			
Name:	<b>City of Hudson</b>	Attention:	<b>Robert Perry, Superintendent</b>
Street:	<b>520 Warren St</b>		
City:	<b>Hudson</b>	State:	<b>NY</b> Zip Code: <b>12534</b>
Email:	<a href="mailto:dpwsuperintendent@cityofhudson.org">dpwsuperintendent@cityofhudson.org</a>	Phone:	<b>(518) 828-9458</b>

is authorized to discharge from the facility described below:

FACILITY NAME, ADDRESS, AND PRIMARY OUTFALL										
Name:	<b>Hudson (C) Sewage Treatment Plant</b>									
Address / Location:	<b>North Front and Dock St</b>						County:	<b>Columbia</b>		
City:	<b>Hudson</b>				State:	<b>NY</b>		Zip Code:	<b>12534</b>	
Facility Location:	Latitude:	<b>42</b> °	<b>15</b> ' <b>33</b> " N	& Longitude:	<b>73</b> °	<b>47</b> ' <b>35</b> " W				
Primary Outfall No.:	<b>001</b>	Latitude:	<b>42</b> °	<b>15</b> ' <b>36</b> " N	& Longitude:	<b>73</b> °	<b>47</b> ' <b>38</b> " W			
Outfall Description:	<b>Treated Sanitary and Stormwater</b>		Receiving Water:	<b>Hudson River</b>			Class:	<b>A</b>	Standard:	<b>A</b>

and the additional outfalls listed in this permit, in accordance with: effluent limitations; monitoring and reporting requirements; other provisions and conditions set forth in this permit; and 6 NYCRR Part 750-1 and 750-2.

This permit and the authorization to discharge shall expire on midnight of the expiration date shown above and the permittee shall not discharge after the expiration date unless this permit has been renewed or extended pursuant to law. To be authorized to discharge beyond the expiration date, the permittee shall apply for permit renewal not less than 180 days prior to the expiration date shown above.

**DISTRIBUTION:**

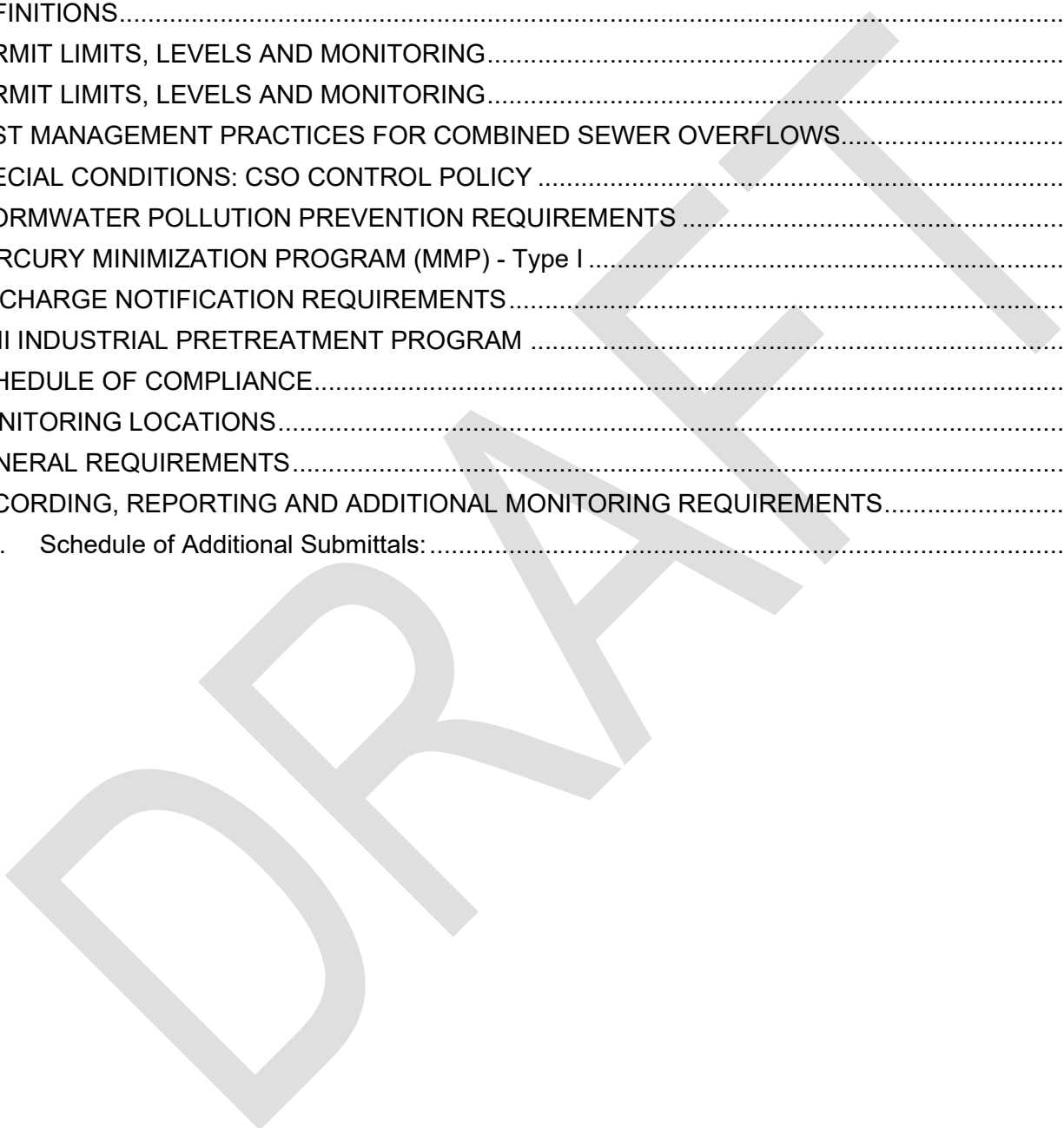
BWP Permit Coordinator ([permit.coordinator@dec.ny.gov](mailto:permit.coordinator@dec.ny.gov))  
 BWP Permit Writer  
 RWE  
 RPA  
 EPA Region II ([Region2\\_NPDES@epa.gov](mailto:Region2_NPDES@epa.gov))  
 NYSEFC ([sara.tully@efc.ny.gov](mailto:sara.tully@efc.ny.gov))

Permit Administrator:	
Address:	625 Broadway Albany, NY 12233-1750

Signature	Date
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## SUMMARY OF ADDITIONAL OUTFALLS

Outfall	Wastewater Description	Outfall Latitude	Outfall Longitude
<b>002</b>	Combined Sewer Overflow	<b>42 ° 15 ' 35 " N</b>	<b>73 ° 47 ' 34 " W</b>
Receiving Water: <b>Tribs of Hudson River</b>			Class: <b>C</b>
Outfall	Wastewater Description	Outfall Latitude	Outfall Longitude
<b>005</b>	Combined Sewer Overflow	<b>42 ° 15 ' 12 " N</b>	<b>73 ° 48 ' 1 " W</b>
Receiving Water: <b>Hudson River</b>			Class: <b>A</b>
Outfall	Wastewater Description	Outfall Latitude	Outfall Longitude
<b>006</b>	Combined Sewer Overflow	<b>42 ° 15 ' 2 " N</b>	<b>73 ° 46 ' 45 " W</b>
Receiving Water: <b>Underhill Pond</b>			Class: <b>B</b>
Outfall	Wastewater Description	Outfall Latitude	Outfall Longitude
<b>007</b>	Combined Sewer Overflow	<b>42 ° 14 ' 58 " N</b>	<b>73 ° 47 ' 44 " W</b>
Receiving Water: <b>Tribs of Hudson River</b>			Class: <b>C</b>
Outfall	Wastewater Description	Outfall Latitude	Outfall Longitude
<b>009</b>	Combined Sewer Overflow	<b>42 ° 15 ' 30 " N</b>	<b>73 ° 47 ' 26 " W</b>
Receiving Water: <b>Tribs of Hudson River</b>			Class: <b>C</b>

## DEFINITIONS

TERM	DEFINITION
7-Day Geo Mean	The highest allowable geometric mean of daily discharges over a calendar week.
7-Day Average	The average of all daily discharges for each 7-days in the monitoring period. The sample measurement is the highest of the 7-day averages calculated for the monitoring period.
12-Month Rolling Average (12 MRA)	The current monthly value of a parameter, plus the sum of the monthly values over the previous 11 months for that parameter, divided by the number of months for which samples were collected in the 12-month period.
30-Day Geometric Mean	The highest allowable geometric mean of daily discharges over a calendar month, calculated as the antilog of: the sum of the log of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.
Action Level	Action level means a monitoring requirement characterized by a numerical value that, when exceeded, triggers additional permittee actions and DEC review to determine if numerical effluent limitations should be imposed.
Compliance Level / Minimum Level	A compliance level is an effluent limitation. A compliance level is given when the water quality evaluation specifies a Water Quality Based Effluent Limit (WQBEL) below the Minimum Level. The compliance level shall be set at the Minimum Level (ML) for the most sensitive analytical method as given in 40 CFR Part 136, or otherwise accepted by the DEC.
Daily Discharge	The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for the purposes of sampling. For pollutants expressed in units of mass, the 'daily discharge' is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the 'daily discharge' is calculated as the average measurement of the pollutant over the day.
Daily Maximum	The highest allowable Daily Discharge.
Daily Minimum	The lowest allowable Daily Discharge.
Effective Date of Permit (EDP or EDPM)	The date this permit is in effect.
Effluent Limitations	Effluent limitation means any restriction on quantities, quality, rates and concentrations of chemical, physical, biological, and other constituents of effluents that are discharged into waters of the state.
Expiration Date of Permit (ExDP)	The date this permit is no longer in effect.
Instantaneous Maximum	The maximum level that may not be exceeded at any instant in time.
Instantaneous Minimum	The minimum level that must be maintained at all instants in time.
Monthly Average	The highest allowable average of daily discharges over a calendar month, calculated as the sum of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.
Outfall	The terminus of a sewer system, or the point of emergence of any waterborne sewage, industrial waste or other wastes or the effluent therefrom, into the waters of the State.
Range	The minimum and maximum instantaneous measurements for the reporting period must remain between the two values shown.
Receiving Water	The classified waters of the state to which the listed outfall discharges.
Sample Frequency / Sample Type / Units	See NYSDEC's "DMR Manual for Completing the Discharge Monitoring Report for the SPDES" for information on sample frequency, type and units.

## PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL	LIMITATIONS APPLY	RECEIVING WATER	EFFECTIVE	EXPIRING
001	All Year	Hudson River	EDP	ExDP

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.	Eff.	
Flow	12 MRA	4.0	MGD			Continuous	Meter		X	1
	Monthly Average	Monitor	MGD			Continuous	Meter		X	
	Daily Max	Monitor	MGD			Continuous	Meter	X	X	
pH	Daily Minimum	6.5	SU			2/day	Grab		X	
	Daily Maximum	8.5	SU							
Temperature	Daily Maximum	Monitor	°C			2/day	Grab		X	
BOD <sub>5</sub>	Monthly Average	30	mg/L	1000	lbs/d	1/week	24-hr. Comp.	X	X	2
BOD <sub>5</sub>	7-Day Average	45	mg/L	1500	lbs/d	1/week	24-hr. Comp.		X	
Total Suspended Solids (TSS)	Monthly Average	30	mg/L	1000	lbs/d	1/week	24-hr. Comp.	X	X	2
Total Suspended Solids (TSS)	7-Day Average	45	mg/L	1500	lbs/d	1/week	24-hr. Comp.		X	
Settleable Solids	Daily Maximum	0.3	mL/L			2/day	Grab		X	
Ammonia (as N)	Monthly Average	Monitor	mg/L			1/quarter	24-hr. Comp.		X	4
Total Mercury	Daily Maximum	50	ng/L			1/month	Grab	X	X	
Biennial Pollutant Scan						1/Two Years	-		X	3
<b>ACTION LEVEL PARAMETERS</b>	Type	Action Level	Units	Action Level	Units	Sample Frequency	Sample Type	Inf.	Eff.	FN
Chloroform	Daily Maximum	150	ug/L			1/quarter	24-hr. Comp		X	4,5,6
<b>EFFLUENT DISINFECTION</b>		Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	FN
Required All Year										
Coliform, Fecal	30-Day Geometric Mean	200	No./100 mL			1/week	Grab		X	
Coliform, Fecal	7-Day Geometric Mean	400	No./100 mL			1/week	Grab		X	
Chlorine, Total Residual	Daily Maximum	0.1	mg/L			2/day	Grab		X	7,8
<b>WHOLE EFFLUENT TOXICITY (WET) TESTING</b>		Limit	Units	Action Level	Units	Sample Frequency	Sample Type	Inf.	Eff.	FN
WET - Acute Invertebrate	See footnote			3.3	TUa	See footnote	See footnote		X	4,9
WET - Acute Vertebrate	See footnote			3.3	TUa	See footnote	See footnote		X	4,9

WET - Chronic Invertebrate	See footnote			21	TUc	See footnote	See footnote		X	4,9
WET - Chronic Vertebrate	See footnote			21	TUc	See footnote	See footnote		X	4,9

**FOOTNOTES:**

1. The 12-month rolling average for flow is defined as the sum of the current month's monthly average added to the monthly averages from the eleven previous months, divided by the number of months for which samples were collected in the 12-month period.
2. Effluent shall not exceed 15% and 15% of influent concentration values for BOD<sub>5</sub> & TSS respectively.
3. Biennial Pollutant Scan: The permittee shall perform effluent sampling every two (2) years for all applicable pollutants identified in the NY-2A Application, Tables A - D. Sampling data shall be collected according to the guidance in the NY-2A application and maintained by the permittee. Monitoring results shall not be submitted on the DMR. Data shall be submitted with the next submission of the NY-2A form.
4. Quarterly samples shall be collected in calendar quarters (Q1 – January 1<sup>st</sup> to March 31<sup>st</sup>; Q2 – April 1<sup>st</sup> to June 30<sup>th</sup>; Q3 – July 1<sup>st</sup> to September 30<sup>th</sup>; Q4 – October 1<sup>st</sup> to December 31<sup>st</sup>).
5. Action Levels: If the action level for chloroform is exceeded, the additional monitoring requirement is triggered, and the permittee shall undertake a short-term, high-intensity, monitoring program for the pollutant which exceeded action levels. Samples identical to those required for routine monitoring purposes shall be taken on each of at least three consecutive days and analyzed. Results shall be expressed in both mass and concentration. If levels higher than the action levels are confirmed, the permittee shall evaluate the treatment system operation and identify and employ actions to reduce concentrations present in the discharge. The permit may also be reopened by the DEC for consideration of revised action levels or effluent limits. Action level monitoring results and the effectiveness of the actions taken shall be summarized and submitted with the monthly operating report or DMR data.
6. At least 4 individual manual grab samples must be collected over the course of 24 hours analyzed separately and the concentrations averaged. Alternatively, grab samples may be collected in the field and composited in the laboratory and analyzed as a single sample if the results are equivalent to the arithmetic averaging of individual grab samples. Where effluent flows do not vary more than 10 percent over the course of composite sample collection, composite samples may be composed of equal size grab samples taken at equal time intervals. Where effluent flows do vary more than 10 percent over the course of sample collection, composite samples must be flow-proportioned.
7. This is a final effluent limitation. See Schedule of Compliance for any applicable interim effluent limitations.
8. Sampling and reporting for total residual chlorine are only necessary if chlorine is used for disinfection, elsewhere in the treatment process, or the facility otherwise has reasonable potential to discharge chlorine. Otherwise, the permittee shall report NODI-9 on the DMR.
9. **Whole Effluent Toxicity (WET) Testing:**

Testing Requirements – Chronic WET testing is required, but report both the acute and chronic results. Testing shall be performed in accordance with 40 CFR Part 136 and TOGS 1.3.2 unless prior written approval has been obtained from the DEC. The test species shall be Ceriodaphnia dubia (water flea - invertebrate) and Pimephales promelas (fathead minnow - vertebrate). Receiving water collected upstream from the discharge should be used for dilution. All tests conducted should be static-renewal (two 24-hr composite samples with one renewal for Acute tests and three 24-hr composite samples with two renewals for Chronic tests). The appropriate dilution series should be used to generate a definitive test endpoint, otherwise an immediate rerun of the test may be required. WET testing shall be coordinated with the monitoring of chemical and physical parameters limited by this permit so that the resulting analyses are also representative of the sample used for WET testing. The ratio of critical receiving water flow to discharge flow (i.e. dilution ratio) is 11:1 for acute, and 21:1 for chronic.

Monitoring Period - WET testing shall be performed quarterly (calendar quarters) during calendar years ending in 2 and 7.

Reporting - Toxicity Units shall be calculated and reported on the DMR as follows:  $TU_a = (100)/(48\text{-hr LC50})$  [note that Acute data is generated by both Acute and Chronic testing] and  $TU_c = (100)/(7\text{-day NOEC})$  or  $(100)/(7\text{-day IC25})$  when Chronic testing has been performed or  $TU_c = (TU_a) \times (10)$  when only Acute testing has been performed and is used to predict Chronic test results, where the 48-hr LC50, 7-day NOEC and/or IC25 are all expressed in % effluent. This must be done, including the Chronic prediction from the Acute data, for both species unless otherwise directed. For Chronic results, report the most sensitive endpoint (i.e. survival, growth and/or reproduction) corresponding to the lowest 7-day NOEC or IC25 and resulting highest TUc. For Acute results, report a TUa of 0.3 if there is no statistically significant mortality in 100% effluent as compared to the control. Report a TUa of 1.0 if there is statistically significant mortality in 100% effluent as compared to the control, but insufficient mortality to generate a 48-hr LC50. Also, in the absence of a 48-hr LC50, use 1.0 TUa for the Chronic prediction from the Acute data, and report a TUc of 10.0.

The complete test report including all bench sheets, statistical analyses, reference toxicity data, daily average flow at the time of sampling and other appropriate supporting documentation, shall be submitted within 60 days following the end of each test period with your WET DMR and to the [WET@dec.ny.gov](mailto:WET@dec.ny.gov) email address. A summary page of the test results for the invertebrate and vertebrate species indicating TUa, 48-hr LC50 for Acute tests and/or TUc, NOEC, IC25, and most sensitive endpoints for Chronic tests, should also be included at the beginning of the test report.

WET Testing Action Level Exceedances - If an action level is exceeded then the DEC may require the permittee to conduct additional WET testing including Acute and/or Chronic tests. Additionally, the permittee may be required to perform a Toxicity Identification/Reduction Evaluation (TI/RE) in accordance with DEC guidance. Enforceable WET limits may also apply. The permittee shall be notified in writing by their Regional DEC office of additional requirements. The written notification shall include the reason(s) why such testing, TI/RE and/or limits are required.

## PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL	LIMITATIONS APPLY	RECEIVING WATER	EFFECTIVE	EXPIRING	FN
002A	During HRD Discharge	Tribs of Hudson River (via Outfall 002)	EDP	ExDP	1

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.	Eff.	
Flow (Volume)	Monthly Total	Monitor	MG			Continuous	Meter		X	2,3
BOD <sub>5</sub>	Monthly Average	Monitor	mg/L			See Footnote 4	Composite		X	
Total Suspended Solids (TSS)	Monthly Average	Monitor	mg/L			See Footnote 4	Composite		X	
Settleable Solids	Daily Maximum	Monitor	mL/L			See Footnote 4	Grab		X	
Ammonia (as N)	Monthly Average	Monitor	mg/L			See Footnote 4	Composite		X	
EFFLUENT DISINFECTION Required All Year		Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	FN
Coliform, Fecal	30-Day Geometric Mean	200	No./100 mL			See Footnote 4	Grab		X	
Coliform, Fecal	7-Day Geometric Mean	Monitor	No./100 mL			See Footnote 4	Grab		X	5
Chlorine, Total Residual	Daily Maximum	2.0	mg/L			See Footnote 4	Grab		X	

### FOOTNOTES:

1. The monitoring point for Outfall 002A shall be as noted in "Monitoring Locations". Outfall 002A is internal to Outfall 002, and sampling must be representative of the HRD effluent prior to flow combining with other sources for Outfall 002.
2. Flows shall be managed in accordance with the Best Management Practices for Combined Sewer Overflows section of this permit and the approved Wet Weather Operating Plan. No discharge is permitted except as caused by excess flows above the wet weather capacity of the secondary treatment process.
3. Flows shall be continuously recorded and totalized. Flow reported on the Discharge Monitoring Report shall be the total flow discharge for the calendar month reporting period.
4. Representative composite samples shall be a composite of grab samples, one taken every four hours. Required grab samples shall be collected a minimum of once every four hours during each event. Sampling shall begin within 30 minutes of the start of the discharge from Outfall 002A.
5. The seven-day average shall be calculated as the averages of the results for each of the discharge days over the seven-day period. For example, if Outfall 002A discharges for three days (or any part of a day) during the seven-day period, the average of the three days would constitute the seven-day average for the purposes of compliance.

## BEST MANAGEMENT PRACTICES FOR COMBINED SEWER OVERFLOWS

The permittee shall implement the following Best Management Practices (BMPs). These BMPs are designed to implement operation & maintenance procedures, utilize the existing treatment facility and collection system to the maximum extent practicable, and implement sewer design, replacement and drainage planning, to maximize pollutant capture and minimize water quality impacts from combined sewer overflows. The BMPs are equivalent to the "Nine Minimum Control Measures" required under the USEPA National Combined Sewer Overflow policy. The EPA's policy is available at <https://www.epa.gov/npdcs/combined-sewer-overflows-csos>

1. CSO Maintenance/Inspection - The permittee shall develop a written maintenance and inspection program for all CSOs. The permittee shall continue to maintain and inspect all CSOs. This program shall include all regulators tributary to these CSOs and shall be conducted during periods of both dry and wet weather. This is to ensure that no discharges occur during dry weather and that the maximum amount of wet weather flow is conveyed to the STP for treatment. This program shall consist of inspections with required repair, cleaning and maintenance done as needed. This program shall consist of weekly inspections.

Inspection reports shall be completed indicating visual inspection, any observed flow, incidence of rain or snowmelt, condition of equipment and work required. These reports shall be in a format approved by the Region 4 Office and submitted to the Region with the monthly operating report (Form 92-15-7).

2. Maximum Use of Collection System for Storage - The permittee shall optimize the collection system by operating and maintaining it to minimize the discharge of pollutants from CSOs. It is intended that the maximum amount of in-system storage capacity be used (without causing service backups) to minimize CSOs and convey the maximum amount of combined sewage to the treatment plant in accordance with Item 4 below. This shall be accomplished by an evaluation of the hydraulic capacity of the system but should also include a continuous program of flushing or cleaning to prevent deposition of solids and the adjustment of regulators and weirs to maximize storage.
3. Industrial Pretreatment - The approved Industrial Pretreatment Program, if applicable, shall consider CSOs in the calculation of local limits for indirect discharges. Discharge of persistent toxics upstream of CSOs will be in accordance with guidance under **NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.3.8 New Discharges to POTWs**. ([http://www.dec.ny.gov/docs/water\\_pdf/togs138.pdf](http://www.dec.ny.gov/docs/water_pdf/togs138.pdf)). For industrial operations characterized by use of batch discharge, consideration shall be given to the feasibility of a schedule of discharge during conditions of no CSO. For industrial discharges characterized by continuous discharge, consideration must be given to the collection system capacity to maximize delivery of waste to the treatment plant. Non-contact cooling water should be excluded from the combined system to the maximum extent practicable. Direct discharges of cooling water must apply for a SPDES permit.

To the maximum extent practicable, consideration shall be given to maximize the capture of nondomestic waste containing toxic pollutants and this wastewater should be given priority over residential/commercial service areas for capture and treatment by the POTW.

4. Maximize Flow to POTW - Factors cited in Item 2. above shall also be considered in maximizing flow to the POTW. Maximum delivery to the POTW is particularly critical in treatment of "first-flush" flows. The treatment plant shall be capable of receiving and treating: the peak design hydraulic loading rates for all process units; i.e., a minimum of 16.9 MGD through the plant headworks; a minimum of 16.9 MGD through the primary treatment works and HRD system; and a minimum of 6 MGD through the secondary treatment works and secondary disinfection during wet weather. The collection system and headworks must be capable of delivering these flows during wet weather. If the permittee cannot deliver maximum design flow for treatment, the permittee shall submit a plan and schedule for accomplishing this requirement within 12 months after the effective date of this permit.
5. Prohibition of Dry Weather Overflow - Dry weather overflows from the combined sewer system are prohibited. The occurrence of any dry weather overflow shall be promptly abated and reported to the NYSDEC Region 4 Office in accordance with 6 NYCRR Part 750-2.7.

## BEST MANAGEMENT PRACTICES FOR COMBINED SEWER OVERFLOWS (continued)

6. Wet Weather Operating Plan (WWOP) - The permittee shall maximize treatment during wet weather events. This shall be accomplished by having a WWOP containing procedures to operate unit processes to treat maximum flows while not appreciably diminishing effluent quality or destabilizing treatment upon return to dry weather operation. The WWOP shall be developed in accordance with the DEC guidance, Wet Weather Operating Practices for POTWs With Combined Sewers, ([http://www.dec.ny.gov/docs/water\\_pdf/wwtechtran.pdf](http://www.dec.ny.gov/docs/water_pdf/wwtechtran.pdf)), and submitted to the Regional Water Engineer and the Bureau of Water Permits for review and approval in accordance with the Schedule of Submittals.

**The submission of a WWOP is a one-time requirement that shall be done to the Department's satisfaction once. However, a revised wet weather operating plan must be submitted whenever the POTW or sewer collection system is replaced or modified. When this permit is administratively renewed by DEC letter entitled "SPDES NOTICE/RENEWAL APPLICATION/PERMIT", the permittee is not required to repeat the submission. The above due dates are independent from the effective date of the permit stated in the letter of "SPDES NOTICE/RENEWAL APPLICATION/PERMIT".**

7. Control of Floatable and Settleable Solids - The discharge of floating solids, oil and grease, or solids of sewage origin which cause deposition in the receiving waters, is a violation of the NYS Narrative Water Quality Standards contained in Part 703. As such, the permittee shall implement best management practices to eliminate or minimize the discharge of these substances. All of the measures cited in Items 1, 2, 4 & 5 above shall constitute approvable "BMPs" for mitigation of this problem. If aesthetic problems persist, the permittee should consider additional BMPs including but not limited to: street sweeping, litter control laws, installation of floatables traps in catch basins (such as hoods), booming and skimming of CSOs, and disposable netting on CSO outfalls. In cases of severe or excessive floatables generation, booming and skimming should be considered an interim measure prior to implementation of final control measures. Public education on harmful disposal practices of personal hygienic devices may also be necessary including but not limited to: public broadcast television, printed information inserts in sewer bills, or public health curricula in local schools.
8. Combined Sewer System Replacement - Replacement of combined sewers shall not be designed or constructed unless approved by DEC. When replacement of a combined sewer is necessary it shall be replaced by separate sanitary and storm sewers to the greatest extent possible. These separate sanitary and storm sewers shall be designed and constructed simultaneously but without interconnections to maximum extent practicable. When combined sewers are replaced, the design should contain cross sections which provide sewage velocities which prevent deposition of organic solids during low flow conditions.
9. Combined Sewer/Extension - Combined sewer/extension, when allowed should be accomplished using separate sewers. These sanitary and storm sewer extensions shall be designed and constructed simultaneously but without interconnections. No new source of stormwater shall be connected to any separate sanitary sewer in the collection system.

If separate sewers are to be extended from combined sewers, the permittee shall demonstrate the ability of the sewerage system to convey, and the treatment plant to adequately treat, the increased dry-weather flows. Should the Regional Water Engineer determine additional justification for sewer extension is necessary, the permittee shall assess the effects of the increased flow of sanitary sewage or industrial waste on the character and frequency of CSOs and the effects on the best use of the receiving water. This assessment should use techniques such as collection system and water quality modeling contained in the 1999 Water Environment Federation Manual of Practice FD-17 entitled, Prevention and Control of Sewer System Overflows, 2<sup>nd</sup> edition.

Should such assessment not be feasible, a project that reduces infiltration and inflow (I/I) to the CSS tributary to the same downstream CSO regulator can be proposed. The I/I reduction shall be estimated by a professional engineer licensed to practice in the State of New York, and shall be at least equal to the estimated increased peak hourly dry-weather flow or four (4) times the average daily dry-weather flow, whichever is greater. I&I offsets from previously completed I&I removal projects can be banked. The City will own the applicable banked I&I credits and will allocate these to applicable sewer extensions as appropriate.

10. Sewage Backups - If there are documented, recurrent instances of sewage backing up into house(s) or discharges of raw sewage onto the ground surface from surcharging manholes, the permittee shall, upon letter notification from DEC,

prohibit further connections that would exacerbate the surcharging/back-up problems.

## BEST MANAGEMENT PRACTICES FOR COMBINED SEWER OVERFLOWS (continued)

11. Septage and Hauled Waste - The discharge or release of septage or hauled waste upstream of a CSO is prohibited.
12. Control of Runoff - It is recommended that the impacts of runoff from development and redevelopment in areas served by combined sewers be reduced by requiring compliance with the New York Standards for Erosion and Sediment Control and the quantity control requirements included in the New York State Stormwater Management Design Manual. (<http://www.dec.ny.gov/chemical/8694.html>.)
13. Public Notification – The permittee shall maintain identification signs at all CSO outfalls owned and operated by the permittee. The permittee shall place the signs at or near the CSO outfalls and ensure that the signs are easily readable by the public. The signs shall have **minimum** dimensions of eighteen inches by twenty-four inches (18" x 24") and shall have white letters on a green background and contain the following information:

<p><b>N.Y.S. PERMITTED DISCHARGE POINT</b> <b>(wet weather discharge)</b> <b>SPDES PERMIT No.: NY _____</b></p> <p><b>OUTFALL No. : _____</b></p> <p>For information about this permitted discharge contact:</p> <p>Permittee Name:</p> <p>Permittee Contact:</p> <p>Permittee Phone: ( ) - ### - #####</p> <p>OR:</p> <p>NYSDEC Division of Water Regional Office Address:</p> <p>NYSDEC Division of Water Regional Phone: ( ) - ### - #####</p>
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14. Characterization and Monitoring - The permittee shall characterize the combined sewer system, determine the frequency of overflows, and identify CSO impacts in accordance with Combined Sewer Overflows, Guidance for Nine Minimum Controls, EPA, 1995, Chapter 10. These are minimum requirements, more extensive characterization and monitoring efforts which may be required as part of the Long-Term Control Plan.
15. Annual Report - The permittee shall electronically submit the Combined Sewer Overflows (CSO) Annual Report using nForm (<https://www.dec.ny.gov/chemical/48595.html>), which summarizes the implementation of the above BMPs and the CSO Long-Term Control Plan. The CSO Annual Report shall be submitted by January 31st of each year. The complete documentation shall be stored at a central location and be made available to DEC upon request.

## SPECIAL CONDITIONS: CSO CONTROL POLICY

### A. Water Quality Requirements for Combined Sewer Overflows

#### Long-Term Control Plan

The permittee submitted a LTCP in 2009 in accordance with the Guidance for Long-Term Control Plan, EPA, September 1995. The plan was approved on April 13, 2009. In accordance with the approved LTCP, the permittee was required to perform the following upgrades to achieve 85% capture:

- Upgrade the STP from a 2.8 MGD Design Flow to 4 MGD, and install a primary treatment/disinfection bypass system
- Improve the capacity of the South Front Street Pump Station

#### Water Quality Criterion – Presumption Approach

The permittee shall not discharge any pollutant at a level that causes an in-stream excursion of the applicable water quality requirements. The EPA 1994 CSO Control Policy indicates that a CSO control plan that meets the criteria below would provide an adequate level on control to meet the water quality requirements of the CWA. Following implementation of the approved LTCP, the following criteria shall be an enforceable performance metric under this permit:

- The permittee shall eliminate or capture for treatment, at least 85 percent by volume of the system-wide combined sewage collected in combined sewer system during precipitation events on a system-wide annual average basis.

Any additional discharges of combined sewage flow during wet weather shall receive the minimum treatment specified below:

- Primary clarification or equivalent, and
- Solids and floatables disposal, and
- Disinfection, if required to meet WQS, protect designated uses, and protect human health, including removal of harmful disinfection chemical residuals

The LTCP projects were completed on December 16, 2011.

### B. Monitoring Requirements – Post Construction Compliance Monitoring Program

1. In accordance with the Schedule of Additional Submittals, the permittee shall submit an approvable post-construction monitoring plan (PCCMP) that (a) is adequate to ascertain the effectiveness of the CSO controls and (b) can be used to verify attainment of water quality standards. The PCCMP must include the proposed sampling locations, sampling schedule, details on how effectiveness of the CSO controls will be assessed, and a Quality Assurance Project Plan<sup>1</sup> (QAPP) that details the laboratory that will be performing the analysis<sup>2</sup>, monitoring protocols to be followed, where appropriate, including CSO and ambient monitoring. The sampling schedule shall be developed to target the periods for which CSO events are most likely to occur. Ambient sampling must be conducted, at a minimum, for all pollutants listed in Section B below and for all pollutants for which the 303(d) list identifies CSOs as a source of the pollutant to the receiving water(s). Guidance on CSO post construction compliance monitoring and reporting can be found at:

[https://www.epa.gov/sites/default/files/2015-10/documents/final\\_cso\\_pccm\\_guidance.pdf](https://www.epa.gov/sites/default/files/2015-10/documents/final_cso_pccm_guidance.pdf).

2. The PCCM Program sampling shall be implemented, in accordance with the approved PCCMP, for an initial period of two years, beginning in the year following PCCMP approval. Following the initial 2-year PCCM period, subsequent PCCM shall be conducted during years ending in 3 and 8.

PARAMETER	Units	Sample Type
BOD <sub>5</sub>	mg/L	Grab
Coliform, Fecal	#/100ml	Grab
Dissolved Oxygen	mg/L	Grab

<sup>1</sup> The QAPP shall be developed as outlined in the EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations, EPA QA/R-5.

<sup>2</sup> All chemical analyses must be conducted by a laboratory certified by the NYS Health Department under the National Environmental Laboratory Approval Program (NELAP) for test or sample results which require certificates of approval. Tests for pH, temperature, dissolved oxygen and settleable solids do not require certificates of approval but a description of the equipment used, and the calibration schedule of appropriate equipment is required.

PARAMETER	Units	Sample Type
Floatable Material	-	Visual Observation
Ammonia (as NH <sub>3</sub> )	mg/L	Grab
Phosphorus	mg/L	Grab
Solids, Settleable	mL/L	Grab
Solids, Suspended	mg/L	Grab

3. By March 31<sup>st</sup> of the year following PCCM sampling, the permittee shall submit an approvable PCCM Program Report. The PCCM Program Report shall include:
  - a. Analytical results of the PCCM sampling,
  - b. The number of CSO events and volume of CSO discharged during the PCCM period,
  - c. An assessment of whether CSO receiving water quality complies with applicable water quality standards,
  - d. Recommendations for potential improvements in CSO controls for when water quality standards are not attained, and
  - e. A discussion of whether the CSO controls are meeting the frequency goals of the Presumptive Approach, selected by the permittee in the LTCP, to verify the effectiveness of the CSO controls.

### C. Special Conditions

#### 1. Sensitive Area<sup>3</sup> Reassessment

The permittee shall reassess overflows to sensitive areas stated in the LTCP, where elimination or relocation of the overflows is not physically possible or economically achievable. The permittee shall also assess whether new or additional sensitive areas may be affected by overflows that were not initially identified in the LTCP. The permittee shall consider new or improved techniques to eliminate or relocate overflows or changed circumstances that influence economic achievability. The permittee shall prepare and submit to the Regional Water Engineer a report, separately from the PCCM Program Report, that presents the results of this reassessment, feasible improvements to eliminate or minimize overflows to sensitive areas, and the permittee's recommendation regarding the elimination or relocation of these outfalls. The permittee shall submit such reports by December 31<sup>st</sup> in the same year the PCCM Program Report is submitted.

#### 2. Reopener

This permit may be modified or revoked and reissued, as provided pursuant to 6 NYCRR 750-1.18, 6 NYCRR 750-1.20, 40 CFR 122.62 and 124.5, for the following reasons:

- I. To include new or revised conditions developed to comply with any state or federal law or regulation that addresses CSOs that are adopted or promulgated subsequent to the effective date of this permit.
- II. To include new or revised conditions if new information, not available at the time of permit issuance, indicates that CSO controls imposed under the permit have failed to ensure the attainment of applicable water quality requirements.

## STORMWATER POLLUTION PREVENTION REQUIREMENTS

### NO EXPOSURE CERTIFICATION

The permittee submitted a Conditional Exclusion for No Exposure Form on 7/12/2023, certifying that all industrial activities and materials are completely sheltered from exposure to rain, snow, snowmelt, and stormwater runoff except as allowed under 40 CFR 122.26(g)(2). The permittee must maintain a condition of no exposure for the exclusion to remain applicable. If conditions change resulting in the exposure of materials and activities to stormwater, the permittee must notify the Regional Water Engineer. The permittee must recertify a condition of no exposure every five years by completing the "No Exposure Certification Form" found on the DEC website.

<sup>3</sup> Sensitive areas include designated Outstanding National Resource Waters, National Marine Sanctuaries, waters with threatened or endangered species and their habitat, waters with primary contact recreation, public drinking water intakes or their designated protection areas, and shellfish beds, waters listed on the NYSDEC 303(d) list, or any other area determined by the Department.

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## MERCURY MINIMIZATION PROGRAM (MMP) - Type I

1. General - The permittee must develop, implement, and maintain a mercury minimization program (MMP), containing the elements set forth below, to reduce mercury effluent levels with the goal of achieving the WQBEL of 0.7 ng/L.
2. MMP Elements - The MMP must be a written document and must include any necessary drawings or maps of the facility and/or collection system. Other related documents already prepared for the facility may be used as part of the MMP and may be incorporated by reference. At a minimum, the MMP must include the following elements as described in detail below:
  - a. Monitoring - Monitoring at Outfall 001, influent and other locations tributary to compliance points shall be performed using either USEPA Method 1631 or another sufficiently sensitive method, as approved under 40 CFR Part 136<sup>4</sup>. Monitoring of raw materials, equipment, treatment residuals, and other non-wastewater/non-stormwater substances may be performed using other methods as appropriate. Monitoring must be coordinated so that the results can be effectively compared between locations.

Minimum required monitoring is as follows:

- i. Sewage Treatment Plant Influent and Effluent – The permittee must collect samples at the location(s) and frequency as specified in the SPDES permit limitations table.
  - ii. Key Locations and Potential Mercury Sources – The permittee must sample *key locations*, chosen to identify *potential mercury sources*, at least semi-annually. Sampling of discharges from dental facilities in compliance with 6 NYCRR 374.4 is not required.
  - iii. Hauled Wastes – The permittee must establish procedures for the acceptance of hauled waste to ensure the hauled waste is not a potential mercury source. Loads which may exceed 500 ng/L,<sup>5</sup> must receive approval from the DEC prior to acceptance.
  - iv. Decreased Monitoring Requirements - Facilities with EEQ at or below 12 ng/L are eligible for the following:
    - 1) Reduced requirements, through a permittee-initiated permit modification
      - a) Conduct influent monitoring, sampling quarterly, in lieu of monitoring within the collection system, such as at *key locations*; and
      - b) Conduct effluent compliance sampling quarterly.
    - 2) If a facility with reduced requirements reports discharges above 12 ng/L for two of four consecutive effluent samples, the DEC may undertake a Department-initiated modification to remove the allowance of reduced requirements.
    - 3) Under the decreased permit requirements, the facility must continue to conduct a status report, as applicable in accordance with 2.c of this MMP, to determine if any waste streams have changed.
- b. Control Strategy - The control strategy must contain the following minimum elements:
    - i. Pretreatment/Sewer Use Law - The permittee must review pretreatment program requirements and the Sewer Use Law (SUL) to ensure it is up-to-date and enforceable with applicable permit requirements and will support efforts to achieve a dissolved mercury concentration of 0.70 ng/L in the effluent.
    - ii. Monitoring and Inventory/Inspections -
      - 1) Monitoring shall be performed as described in 2.a above. As mercury sources are found, the permittee must enforce its sewer use law to track down and minimize these sources.
      - 2) The permittee must inventory and/or inspect users of its system as necessary to support the MMP.
        - a) Dental Facilities
          1. The permittee must maintain an inventory of each dental facility.
          2. The permittee must inspect each dental facility at least once every five years to verify compliance with the wastewater treatment operation, maintenance, and notification elements of 6 NYCRR 374.4. Alternatively, the permittee may develop and implement an outreach program,<sup>6</sup> which informs users of their responsibilities, and collect the “Amalgam

<sup>4</sup> Outfall monitoring must be conducted using the methods specified in Table 8 of *DOW 1.3.10*.

<sup>5</sup>A level of 0.2 mg/L (200,000 ng/L) or more is considered hazardous per 40 CFR Part 261.11. 500 ng/L is used here to alert the permittee that there is an unusual concentration of mercury and that it will need to be managed appropriately.

<sup>6</sup> For example, the outreach program could include education about sources of mercury and what to do if a mercury source is found.

Waste Compliance Report for Dental Dischargers”<sup>7</sup> form, as needed, to satisfy the inspection requirements. The permittee must conduct the outreach program at least once every five years and ensure the “Amalgam Waste Compliance Report for Dental Dischargers” are submitted by new users, as necessary. The outreach program could be supported by a subset of site inspections.

3. A file shall be maintained containing documentation demonstrating compliance with 2.b.ii.2)a) above. This file shall be available for review by DEC representatives and copies shall be provided upon request.
- b) *Other potential mercury sources*
1. The permittee must maintain an inventory of other *potential mercury sources*.
  2. The permittee must inspect other *potential mercury sources* once every five years. Alternatively, the permittee may develop and implement an outreach program which informs users of their responsibilities as *potential mercury sources*. The permittee must conduct the outreach program at least once every five years. The outreach program should be supported by a subset of site inspections.
  3. A file shall be maintained containing documentation demonstrating compliance with 2.b.ii.2)b) above. This file shall be available for review by DEC representatives and copies shall be provided upon request.
- iii. Systems with CSO & Type II SSO Outfalls – Permittees must prioritize *potential mercury sources* upstream of CSOs and Type II SSOs for mercury reduction activities and/or controlled-release discharge.
- iv. Equipment and Materials – Equipment and materials (e.g., thermometers, thermostats) used by the permittee, which may contain mercury, must be evaluated by the permittee. As equipment and materials containing mercury are updated/replaced, the permittee must use mercury-free alternatives, if possible.
- v. Bulk Chemical Evaluation – For chemicals, used at a rate which exceeds 1,000 gallons/year or 10,000 pounds/year, the permittee must obtain a manufacturer’s certificate of analysis, a chemical analysis performed by a certified laboratory, and/or a notarized affidavit which describes the substances’ mercury concentration and the detection limit achieved. If possible, the permittee must only use bulk chemicals utilized in the wastewater treatment process which contain <10 ppb mercury.
- c. **Status Report** - An annual status report must be developed and maintained on site, in accordance with the [Schedule of Additional Submittals](#), summarizing:
- i. All MMP monitoring results for the previous reporting period;
  - ii. A list of known and *potential mercury sources*
    - 1) If the permittee meets the criteria for MMP Type IV, the permittee must notify the DEC for a permittee-initiated modification;
  - iii. All actions undertaken, pursuant to the control strategy, during the previous reporting period;
  - iv. Actions planned, pursuant to the control strategy, for the upcoming reporting period; and
  - v. Progress towards achieving a dissolved mercury concentration of 0.70 ng/L in the effluent (e.g., summarizing reductions in effluent concentrations as a result of the control strategy implementation and/or installation/modification of a treatment system).
- The permittee must maintain a file with all MMP documentation. The file must be available for review by Department representatives and copies must be provided upon request in accordance with 6 NYCRR 750-2.1(i) and 750-2.5(c)(4).
3. **MMP Modification** - The MMP must be modified whenever:
- a. Changes at the facility, or within the collection system, increase the potential for mercury discharges;
  - b. Effluent discharges exceed the current permit limitation(s); or
  - c. A letter from the DEC identifies inadequacies in the MMP.

<sup>7</sup> The form, “Amalgam Waste Compliance Report for Dental Dischargers,” can be found here: [https://www.dec.ny.gov/docs/water\\_pdf/dentalform.pdf](https://www.dec.ny.gov/docs/water_pdf/dentalform.pdf)

The DEC may use information in the status reports, as applicable in accordance with 2.c of this MMP, to determine if the permit limitations and MMP Type is appropriate for the facility.

**DEFINITIONS:**

Key location – a location within the collection/wastewater system (e.g. including but not limited to a specific manhole/access point, tributary sewer/wastewater connection, or user discharge point) identified by the permittee as a potential mercury source. The permittee may adjust key locations based upon sampling and/or best professional judgement.

Potential mercury source – a source identified by the permittee that may reasonably be expected to have total mercury contained in the discharge. Some potential mercury sources include switches, fluorescent lightbulbs, cleaners, degreasers, thermometers, batteries, hauled wastes, universities, hospitals, laboratories, landfills, Brownfield sites, or raw material storage.

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## DISCHARGE NOTIFICATION REQUIREMENTS

- (a) The permittee shall install and maintain identification signs at all outfalls to surface waters listed in this permit, unless the Permittee has obtained a waiver in accordance with the Discharge Notification Act (DNA). Such signs shall be installed before initiation of any new discharge location.
- (b) Subsequent modifications to or renewal of this permit does not reset or revise the deadline set forth in (a) above, unless a new deadline is set explicitly by such permit modification or renewal.
- (c) The Discharge Notification Requirements described herein do not apply to outfalls from which the discharge is composed exclusively of storm water, or discharges to ground water.
- (d) The sign(s) shall be conspicuous, legible and in as close proximity to the point of discharge as is reasonably possible while ensuring the maximum visibility from the surface water and shore. The signs shall be installed in such a manner to pose minimal hazard to navigation, bathing or other water related activities. If the public has access to the water from the land in the vicinity of the outfall, an identical sign shall be posted to be visible from the direction approaching the surface water.

The signs shall have **minimum** dimensions of eighteen inches by twenty-four inches (18" x 24") and shall have white letters on a green background and contain the following information:

<p><b>N.Y.S. PERMITTED DISCHARGE POINT</b></p> <p><b>SPDES PERMIT No.: NY_____</b></p> <p><b>OUTFALL No. : _____</b></p> <p>For information about this permitted discharge contact:</p> <p>Permittee Name: _____</p> <p>Permittee Contact: _____</p> <p>Permittee Phone: ( ) - ### - ####</p> <p>OR:</p> <p>NYSDEC Division of Water Regional Office Address:</p> <p>NYSDEC Division of Water Regional Phone: ( ) - ### - ####</p>
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- (e) Upon request, the permittee shall make available electronic or hard copies of the sampling data to the public. In accordance with the RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS page of your permit, each DMR shall be maintained (either electronically or as a hard copy) on record for a period of five years.
- (f) The permittee shall periodically inspect the outfall identification sign(s) in order to ensure they are maintained, are still visible, and contain information that is current and factually correct. Signs that are damaged or incorrect shall be replaced within 3 months of inspection.

## MINI INDUSTRIAL PRETREATMENT PROGRAM

The permittee previously performed the actions described in items 1 through 4 below in order to develop a mini pretreatment program:

1. Industrial Survey  
The permittee submitted the results of an industrial survey.
2. Develop Procedures  
The permittee submitted documentation of procedures for obtaining and ensuring compliance with applicable standards. Such procedures include requirements and schedules for discharge permits, industrial self-monitoring, compliance monitoring of industries by the permittee, on-going POTW monitoring, and an enforcement program. Such procedures are equivalent to procedures described or referenced in the document entitled Introduction to the National Pretreatment Program, USEPA, June, 2011, ([https://www3.epa.gov/npdes/pubs/pretreatment\\_program\\_intro\\_2011.pdf](https://www3.epa.gov/npdes/pubs/pretreatment_program_intro_2011.pdf)).
3. Treatment Plant/Industry Monitoring  
The permittee submitted the results of industrial and POTW monitoring and a completed Fast Report On Significant Industries forms (FROSI) for all significant industrial users (SIUs).
4. Local Sewer Use Law  
The permittee submitted a draft local sewer use law equivalent to the DEC Model Sewer Use Law, NYSDEC, 1994. Local limits for substance capable of causing SPDES permit violations, endangering municipal employees or limiting sludge disposal options were included in the local law. Such limits were developed in accordance with document entitled Local Limits Development Guidance, US EPA, July 2004, EPA 833-R-04-002A (<https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=300062Q1.txt>). After approval by the DEC, dated 11/19/2007, the permittee submitted a copy of the enacted Law accompanied by proof of enactment.

Therefore, the permittee shall continue to implement the procedures developed in accordance with 2. above and approved by the DEC. At a minimum, the following activities shall continue to be undertaken by the permittee:

1. Issue permits including limitations, monitoring requirements, and reporting requirements to its significant industrial users.
2. Enforce the local limits set forth in the POTW local sewer use law.
3. Carry out inspections and monitoring of significant industrial users to determine compliance with categorical standards and local limits.
4. Undertake enforcement actions in accordance with DEC approved procedures.

In accordance with the Schedule of Additional Submittals, the permittee shall submit yearly Fast Report On Significant Industries forms (FROSI) for each SIU to the DEC. Every third year, on the same date, the permittee shall submit Industrial Chemical Survey forms completed by all SIUs to the DEC. At the same time the permittee shall notify the DEC of any proposed significant changes to its implementing procedures or local sewer use law.

## SCHEDULE OF COMPLIANCE

a) The permittee shall comply with the following schedule:

Outfall(s)	Compliance Action	Compliance Date <sup>8</sup>
	INTERIM PROGRESS REPORT <sup>9</sup> The permittee shall provide a status update on the <i>Preliminary Engineering Report</i> .	EDP + 6 Months
	PRELIMINARY ENGINEERING REPORT The permittee shall submit an approvable <sup>10</sup> Preliminary Engineering Report (PER) that meets the requirements of the EFC/DEC Engineering Report Outline ( <a href="https://www.dec.ny.gov/permits/6054.html">https://www.dec.ny.gov/permits/6054.html</a> ). The report shall describe treatment alternatives that may be used to comply with the final effluent limitation for Total Residual Chlorine (TRC).	EDP + 12 Months
	INTERIM PROGRESS REPORT The permittee shall provide a status update for the <i>Design Documents</i> .	EDP + 18 Months
	DESIGN DOCUMENTS The permittee shall submit approvable <sup>10</sup> Design Documents including a Basis of Design Report (BODR), Plans, Specifications, and Construction Schedule for the selected alternative that will ensure compliance with final effluent limitation for TRC.	EDP + 24 Months
	INTERIM PROGRESS REPORT The permittee shall provide a status update for <i>Complete Construction</i> .	EDP + 30 Months EDP + 36 Months EDP + 42 Months EDP + 48 Months
	COMPLETE CONSTRUCTION The permittee shall provide a Construction Completion Certification <sup>11</sup> to the DEC (send to the Regional Water Engineer, DOWCompl@dec.ny.gov, and NetDMR@dec.ny.gov) that the project has been fully completed in accordance with the approved Design Documents.	EDP + 54 Months
<b>Unless noted otherwise, the above actions are one-time requirements.</b>		

OUTFALL	PARAMETER	INTERIM EFFLUENT LIMIT					MONITORING REQUIREMENTS				Notes
		Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
									Inf.	Eff.	
001	Chlorine, Total Residual	Daily Maximum	2.0	mg/L	-	-	2/Day	Grab	-	X	1
Notes:	1. Interim limits expire upon submission of the Construction Completion Certification above.										

b) The permittee shall submit a [Report of Non-Compliance Event](#) form with each of the above schedule dates no later than 14 days following each elapsed date, unless conditions require more immediate notice as prescribed in 6 NYCRR Part 750-1.2(a) and 750-2. All notifications shall be sent to the locations listed under the section of this permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS. Each notice of

<sup>8</sup> 6 NYCRR 750-1.14 (a)

<sup>9</sup> 6 NYCRR 750-1.14 (b)

<sup>10</sup> 6 NYCRR 750 1.2 (a)(8)

<sup>11</sup> 6 NYCRR 750-2.10 (c)

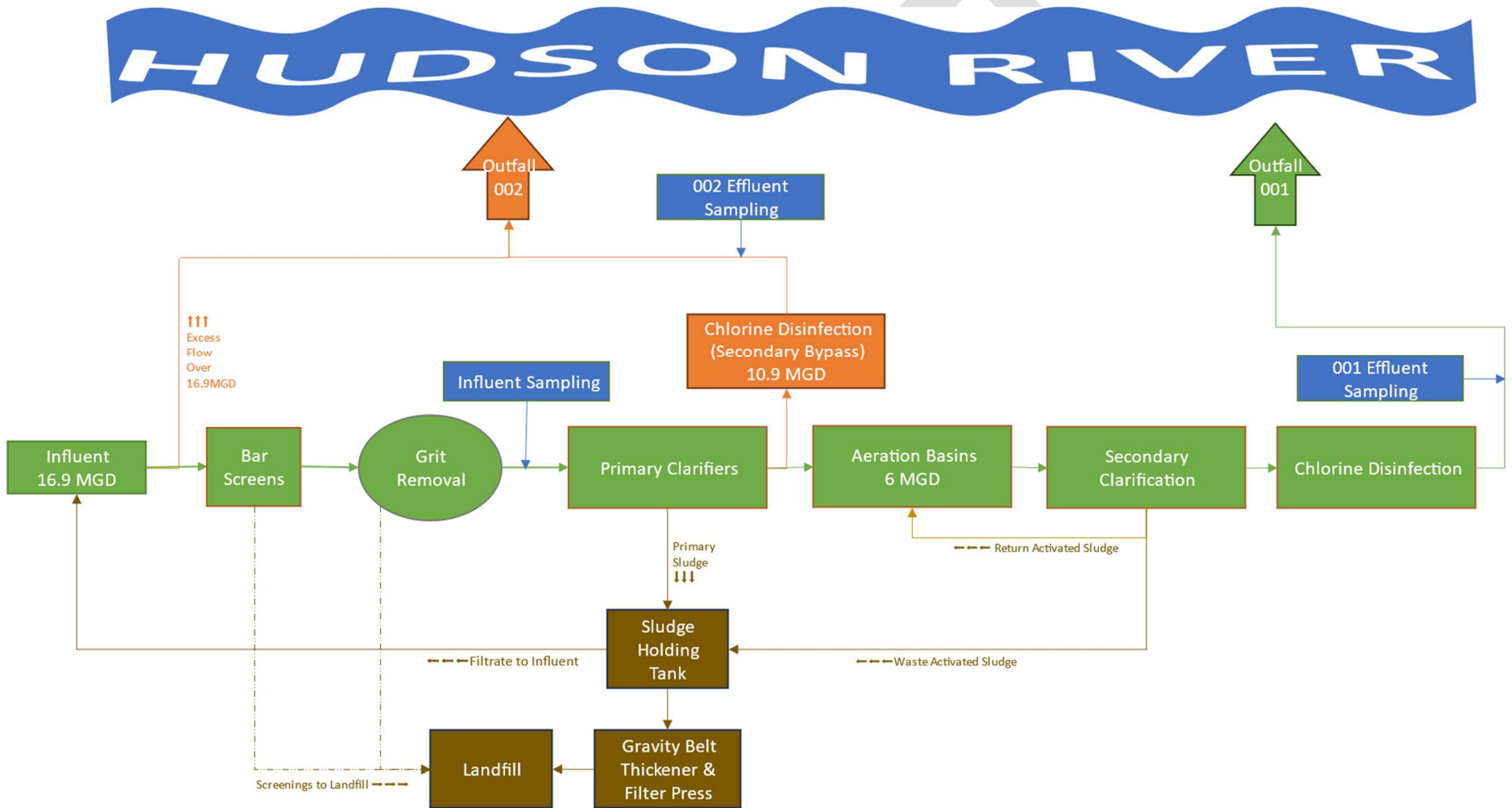
non-compliance shall include the following information:

1. A short description of the non-compliance;
  2. A description of any actions taken or proposed by the permittee to comply with the elapsed schedule requirements without further delay and to limit environmental impact associated with the non-compliance;
  3. Any details which tend to explain or mitigate an instance of non-compliance; and
  4. An estimate of the date the permittee will comply with the elapsed schedule requirement and an assessment of the probability that the permittee will meet the next scheduled requirement on time.
- c) The permittee shall submit copies of any document required by the above schedule of compliance to the DEC Regional Water Engineer and to the Bureau of Water Permits.

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# MONITORING LOCATIONS

The permittee shall take samples and measurements, to comply with the monitoring requirements specified in this permit, at the locations specified below:



## GENERAL REQUIREMENTS

- A. The regulations in 6 NYCRR Part 750 are hereby incorporated by reference and the conditions are enforceable requirements under this permit. The permittee shall comply with all requirements set forth in this permit and with all the applicable requirements of 6 NYCRR Part 750 incorporated into this permit by reference, including but not limited to the regulations in paragraphs B through I as follows:
- B. General Conditions
- |  |   |
|--|---|
| 1. Duty to comply                                | 6 NYCRR 750-2.1(e) & 2.4                |
| 2. Duty to reapply                               | 6 NYCRR 750-1.16(a)                     |
| 3. Need to halt or reduce activity not a defense | 6 NYCRR 750-2.1(g)                      |
| 4. Duty to mitigate                              | 6 NYCRR 750-2.7(f)                      |
| 5. Permit actions                                | 6 NYCRR 750-1.1(c), 1.18, 1.20 & 2.1(h) |
| 6. Property rights                               | 6 NYCRR 750-2.2(b)                      |
| 7. Duty to provide information                   | 6 NYCRR 750-2.1(i)                      |
| 8. Inspection and entry                          | 6 NYCRR 750-2.1(a) & 2.3                |
- C. Operation and Maintenance
- |                                   |                                      |
|-----------------------------------|--------------------------------------|
| 1. Proper Operation & Maintenance | 6 NYCRR 750-2.8                      |
| 2. Bypass                         | 6 NYCRR 750-1.2(a)(17), 2.8(b) & 2.7 |
| 3. Upset                          | 6 NYCRR 750-1.2(a)(94) & 2.8(c)      |
- D. Monitoring and Records
- |                           |  |
|---------------------------|--|
| 1. Monitoring and records | 6 NYCRR 750-2.5(a)(2), 2.5(a)(6), 2.5(c)(1), 2.5(c)(2), & 2.5(d) |
| 2. Signatory requirements | 6 NYCRR 750-1.8 & 2.5(b)   |
- E. Reporting Requirements
- |   |                             |
|---|-----------------------------|
| 1. Reporting requirements                     | 6 NYCRR 750-2.5, 2.7 & 1.17 |
| 2. Anticipated noncompliance                  | 6 NYCRR 750-2.7(a)          |
| 3. Transfers                                  | 6 NYCRR 750-1.17            |
| 4. Monitoring reports                         | 6 NYCRR 750-2.5(e)          |
| 5. Compliance schedules                       | 6 NYCRR 750-1.14(d)         |
| 6. 24-hour reporting                          | 6 NYCRR 750-2.7(c) & (d)    |
| 7. Other noncompliance                        | 6 NYCRR 750-2.7(e)          |
| 8. Other information                          | 6 NYCRR 750-2.1(f)          |
| 9. Additional conditions applicable to a POTW | 6 NYCRR 750-2.9             |
- F. Planned Changes
- The permittee shall give notice to the DEC as soon as possible of planned physical alterations or additions to the permitted facility when:
    - The alteration or addition to the permitted facility may meet any of the criteria for determining whether facility is a new source in 40 CFR §122.29(b); or
    - The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject either to effluent limitations in the permit, or to notification requirements under 40 CFR §122.42(a)(1); or
    - The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

In addition to the DEC, the permittee shall submit a copy of this notice to the United States Environmental Protection Agency at the following address: U.S. EPA Region 2, Clean Water Regulatory Branch, 290 Broadway, 24th Floor, New York, NY 10007-1866.

## GENERAL REQUIREMENTS (continued)

### 2. Notification Requirement for POTWs

All POTWs shall provide adequate notice to the Department and the USEPA of the following:

- a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging those pollutants; or
- b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
- c. For the purposes of this paragraph, adequate notice shall include information on:
  - i. the quality and quantity of effluent introduced into the POTW, and
  - ii. any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

POTWs shall submit a copy of this notice to the United States Environmental Protection Agency, at the following address:

U.S. EPA Region 2, Clean Water Regulatory Branch, 290 Broadway, 24th Floor, New York, NY 10007-1866

### G. Sludge Management

The permittee shall comply with all applicable requirements of 6 NYCRR Part 360.

### H. SPDES Permit Program Fee

The permittee shall pay to the Department an annual SPDES permit program fee within 30 days of the date of the first invoice, unless otherwise directed by the DEC, and shall comply with all applicable requirements of ECL 72-0602 and 6 NYCRR Parts 480, 481 and 485. Note that if there is inconsistency between the fees specified in ECL 72-0602 and 6 NYCRR Part 485, the ECL 72-0602 fees govern.

### I. Water Treatment Chemicals (WTCs)

New or increased use and discharge of a WTC requires prior DEC review and authorization. At a minimum, the permittee must notify the DEC in writing of its intent to change WTC use by submitting a completed *WTC Notification Form* for each proposed WTC. The DEC will review that submittal and determine if a SPDES permit modification is necessary or whether WTC review and authorization may proceed outside of the formal permit administrative process. The majority of WTC authorizations do not require SPDES permit modification. In any event, use and discharge of a WTC shall not proceed without prior authorization from the DEC. Examples of WTCs include biocides, coagulants, conditioners, corrosion inhibitors, defoamers, deposit control agents, flocculants, scale inhibitors, sequestrants, and settling aids.

1. WTC use shall not exceed the rate explicitly authorized by this permit or otherwise authorized in writing by the DEC.
2. The permittee shall maintain a logbook of all WTC use, noting for each WTC the date, time, exact location, and amount of each dosage, and, the name of the individual applying or measuring the chemical. The logbook must also document that adequate process controls are in place to ensure that excessive levels of WTCs are not used.
3. The permittee shall submit a completed WTC Annual Report Form each year that they use and discharge WTCs. This form shall be submitted in electronic format and attached to either the December DMR or the annual monitoring report required below. The *WTC Notification Form* and *WTC Annual Report Form* are available from the DEC's website at: <http://www.dec.ny.gov/permits/93245.html>

## RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

- A. The monitoring information required by this permit shall be retained for a period of at least five years from the date of the sampling for subsequent inspection by the DEC or its designated agent.
- B. Discharge Monitoring Reports (DMRs): Completed DMR forms shall be submitted for each 1 month reporting period in accordance with the DMR Manual available on DEC's website.

DMRs must be submitted electronically using the electronic reporting tool (NetDMR) specified by DEC. Instructions on the use of NetDMR can be found at <https://www.dec.ny.gov/chemical/8461.html>. **Hardcopy paper DMRs will only be accepted if a waiver from the electronic submittal requirements has been granted by DEC to the facility.**

Attach the monthly "Wastewater Facility Operation Report" (form 92-15-7) and any required DMR attachments electronically to the DMR or with the hardcopy submittal.

The first monitoring period begins on the effective date of this permit, and, unless otherwise required, the reports are due no later than the 28th day of the month following the end of each monitoring period.

- C. Additional information required to be submitted by this permit shall be summarized and reported to the Regional Water Engineer and Bureau of Water Permits at the following addresses:

Department of Environmental Conservation  
Division of Water, Bureau of Water Permits  
625 Broadway, Albany, New York 12233-3505      Phone: (518) 402-8111

Department of Environmental Conservation  
Regional Water Engineer, Region 4  
700 Delaware Avenue, Buffalo, NY 14209

- D. Bypass and Sewage Pollutant Right to Know Reporting: In accordance with the Sewage Pollutant Right to Know Act (ECL § 17-0826-a), Publicly Owned Treatment Works (POTWs) are required to notify DEC and Department of Health within two hours of discovery of an untreated or partially treated sewage discharge and to notify the public and adjoining municipalities within four hours of discovery. Information regarding reporting and other requirements of this program may be found on the DEC's website. In addition, POTWs are required to provide a five-day incident report and supplemental information to the DEC in accordance with Part 750-2.7(d) by utilizing the Division of Water Report of Noncompliance Event form unless waived by DEC on a case-by-case basis.

- E. Schedule of Additional Submittals:

The permittee shall submit the following information to the Regional Water Engineer and to the Bureau of Water Permits, unless otherwise instructed:

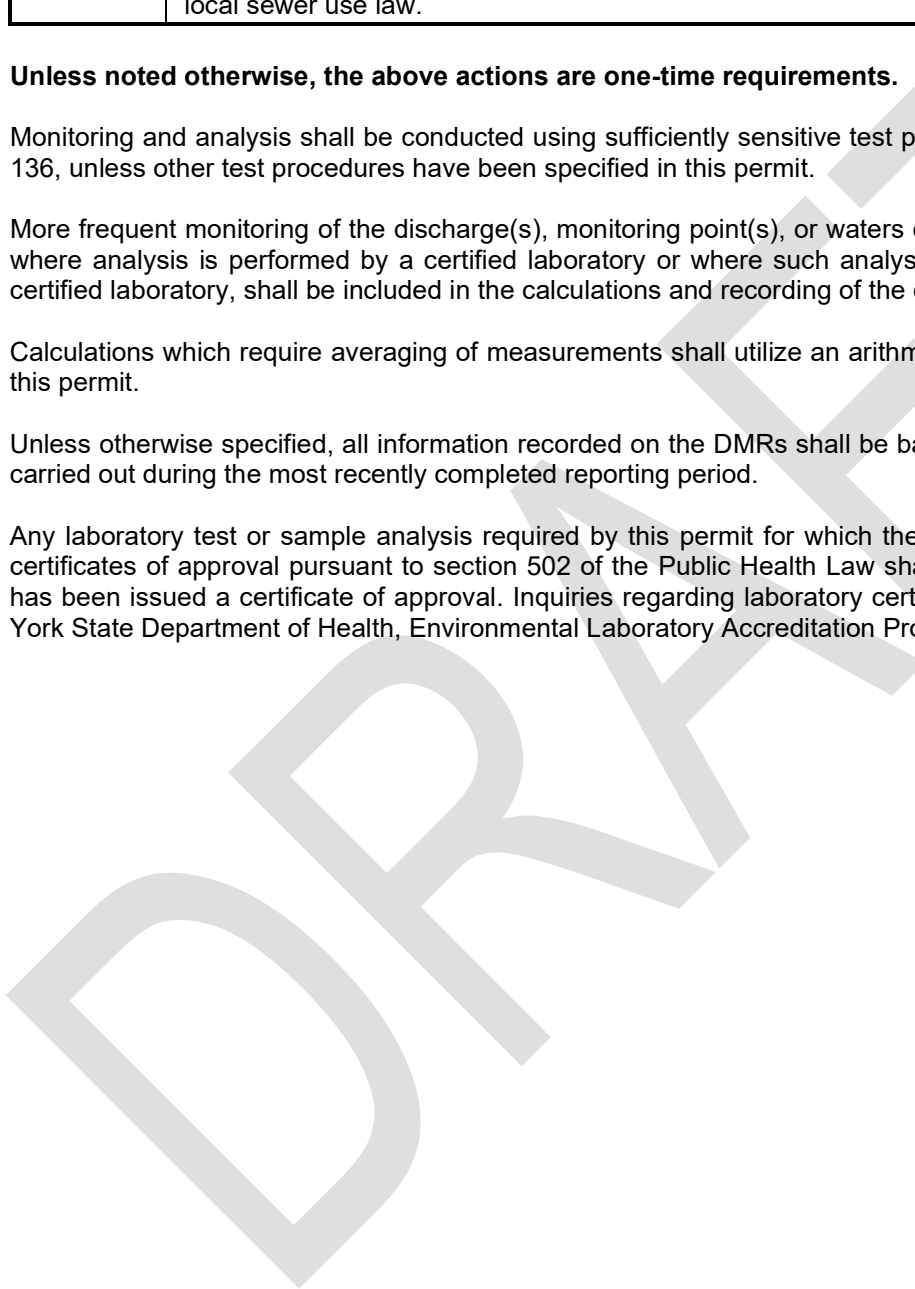
<b>SCHEDULE OF ADDITIONAL SUBMITTALS</b>		
<b>Outfall(s)</b>	<b>Required Action</b>	<b>Due Date</b>
	<p><b><u>EMERGING CONTAMINANT SHORT-TERM MONITORING PROGRAM</u></b>            The permittee shall collect grab samples of both the influent and effluent from the facility's treatment system(s) associated with the identified outfall for Per- and Polyfluoroalkyl Substances (PFAS) and 1,4-Dioxane (1,4-D), unless permittee receives written notification from the DEC during this time that sampling can be discontinued. Samples must be analyzed utilizing EPA method 1633 and EPA Method 8270D SIM or 8270E SIM, respectively. The samples must represent normal discharge conditions and treatment operations and shall be obtained on a quarterly basis for at least 4 consecutive quarters, unless written notification from the DEC indicates otherwise.</p> <p>Emerging Contaminants results must be reported utilizing the template provided and should be kept on file with the permittee until all 4 sampling event results are obtained. Once all 4 sampling event results are received, they shall be reported together to the DEC through the "Emerging Contaminants Survey for POTWs" found at: <u>Emerging Contaminants In NY's Waters - NYSDEC</u>. The template, instructions for the laboratory, and chain of custody form are also available at this link.</p> <p>If results indicate the presence of Emerging Contaminants, the permittee shall initiate track down of potential sources by completing the "Emerging Contaminants Investigation Checklist for POTWs" available at the above link.</p> <p>The DEC may periodically request updates or additional monitoring to check progress on track down investigations. Elements of the checklist may be used as permit conditions in future permit modifications.</p>	EDP + 18 months
	<p><b><u>WATER TREATMENT CHEMICAL (WTC) ANNUAL REPORT FORM</u></b>            The permittee shall submit a completed WTC Annual Report Form each year that Water Treatment Chemicals are used. The form shall be attached to the December DMR.</p>	December DMR (January 28 <sup>th</sup> )
	<p><b><u>ANNUAL FLOW CERTIFICATION</u></b>            The permittee shall submit an Annual Flow Certification form each year in accordance with 750-2.9(C)(4). The form shall be attached to the February DMR or submitted through nForm.</p>	February DMR (March 28 <sup>th</sup> )
	<p><b><u>BIENNIAL POLLUTANT SCAN</u></b>            The permittee shall implement an ongoing monitoring program and perform effluent sampling every two years as specified in footnote of the permit limits table.</p>	Retain and submit with next NY-2A Application
	<p><b><u>WHOLE EFFLUENT TOXICITY (WET) TESTING</u></b>            WET testing shall be performed as required in the footnote of the permit limits table. The toxicity test report including all information requested of this permit shall be attached to your WET DMRs and sent to the <u>WET@dec.ny.gov</u> email address.</p>	Within 60 days following the end of each monitoring period
	<p><b><u>WET WEATHER OPERATING PLAN (WWOP)</u></b>            The permittee shall submit a Wet Weather Operating Plan (WWOP) as detailed in the Best Management Practices for Combined Sewer Overflows section of this permit.</p>	EDP + 6 months

<b>SCHEDULE OF ADDITIONAL SUBMITTALS</b>		
<b>Outfall(s)</b>	<b>Required Action</b>	<b>Due Date</b>
	<p><u>COMBINED SEWER OVERFLOW (CSO) ANNUAL REPORT</u> The permittee shall submit a Combined Sewer Overflows (CSO) Annual Report, which summarizes the implementation of BMPs and the Long-Term Control Plan (if applicable) via nForm (<a href="https://www.dec.ny.gov/pubs/95925.html">https://www.dec.ny.gov/pubs/95925.html</a>). Additional information regarding CSO Annual Report is available on-line at <a href="https://www.dec.ny.gov/chemical/48595.html">https://www.dec.ny.gov/chemical/48595.html</a>.</p>	January 31 <sup>st</sup> Each Year
	<p><u>POST-CONSTRUCTION COMPLIANCE MONITORING PLAN (PCCMP)</u> The permittee shall submit an approvable PCCMP that (a) is adequate to ascertain the effectiveness of the CSO controls and (b) can be used to verify attainment of water quality standards. The PCCMP must include the proposed sampling locations, sampling schedule, details on how effectiveness of the CSO controls will be assessed, and a Quality Assurance Project Plan (QAPP) that details the monitoring protocols to be followed, where appropriate, including CSO and ambient monitoring</p>	EDP + 6 Months
	<p><u>POST-CONSTRUCTION COMPLIANCE MONITORING (PCCM) PROGRAM REPORT</u> The permittee shall submit a PCCM Program Report as detailed in the SPECIAL CONDITIONS: CSO CONTROL POLICY section of this permit. The initial report shall be due by March 31<sup>st</sup> in the year following the initial 2-year sampling period. Subsequent PCCM Program Reports shall be submitted by March 31<sup>st</sup> in years ending in 4 and 9).</p>	March 31 <sup>st</sup> of PCCMP Approval + 2 Years, and March 31 <sup>st</sup> of subsequent years ending in 4 and 9 thereafter
	<p><u>SENSITIVE AREA REASSESSMENT REPORT</u> The permittee shall submit a report, separately from the PCCM Program Report, that presents the results of the sensitive area reassessment, feasible improvements to eliminate or minimize overflows to sensitive areas, and the permittee's recommendation regarding the elimination or relocation of these outfalls. The permittee shall submit such reports by December 31<sup>st</sup> in the same year the PCCM Program Report is submitted.</p>	December 31 <sup>st</sup> of same year PCCM Program Report submitted
	<p><u>STORMWATER NO EXPOSURE CERTIFICATION</u> Permittee must recertify every five years a condition of no exposure to stormwater in order to continue to qualify for the no exposure exclusion. The No Exposure Certification Form can be found on the DEC website.</p>	7/12/2028, and every 5 years thereafter
	<p><u>MERCURY MINIMIZATION PLAN</u> The permittee must complete and maintain onsite an annual mercury minimization status report in accordance with the requirements of this permit.</p>	<b>Maintained Onsite</b> EDP + 12 months, annually thereafter
	<p><u>MINI INDUSTRIAL PRETREATMENT PROGRAM - FROSI</u> Submit completed Fast Report On Significant Industries forms (FROSI) for each SIU to the Department, or notification letter that no new significant industrial users have been added.</p>	September 28 <sup>th</sup> of each year

SCHEDULE OF ADDITIONAL SUBMITTALS		
Outfall(s)	Required Action	Due Date
	<u>MINI INDUSTRIAL PRETREATMENT PROGRAM – Industrial Chemical Survey (ICS) Forms</u> Submit Industrial Chemical Survey forms completed by all SIUs to the DEC. Notify the DEC of any proposed significant changes to its implementing procedures or local sewer use law.	September 28 <sup>th</sup> 2028 and every three years thereafter

**Unless noted otherwise, the above actions are one-time requirements.**

- F. Monitoring and analysis shall be conducted using sufficiently sensitive test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.
- G. More frequent monitoring of the discharge(s), monitoring point(s), or waters of the State than required by the permit, where analysis is performed by a certified laboratory or where such analysis is not required to be performed by a certified laboratory, shall be included in the calculations and recording of the data on the corresponding DMRs.
- H. Calculations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.
- I. Unless otherwise specified, all information recorded on the DMRs shall be based upon measurements and sampling carried out during the most recently completed reporting period.
- J. Any laboratory test or sample analysis required by this permit for which the State Commissioner of Health issues certificates of approval pursuant to section 502 of the Public Health Law shall be conducted by a laboratory which has been issued a certificate of approval. Inquiries regarding laboratory certification should be directed to the New York State Department of Health, Environmental Laboratory Accreditation Program.



# **SPDES Permit Fact Sheet**

## **City of Hudson**

### **Hudson (C) STP**

#### **NY 00 22039**

DRAFT



Department of  
Environmental  
Conservation

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## Summary of Permit Changes

A State Pollutant Discharge Elimination System (SPDES) Environmental Benefits Permit Strategy (EBPS) permit renewal has been drafted by the New York State Department of Environmental Conservation (NYSDEC, the Department) for the Hudson (C) STP. The changes to the permit are summarized below:

- Updated the Summary of Additional Outfalls to reflect the Combined Sewer Overflows (CSOs) that discharge to surface water only.
- Permit Limits changes:
  - Increased flow limitation to 4.0 Million Gallons per Day (MGD) and changed to a 12-month rolling average limitation.
  - Added flow monitoring for monthly average and daily maximum.
  - Increased 5-Day Biochemical Oxygen Demand (BOD<sub>5</sub>) and Total Suspended Solids (TSS) loading limitations due to the increase in design flow.
  - Changed Ammonia monitoring to “as N” from “as NH<sub>3</sub>”, and monitoring for Total Kjeldahl Nitrogen (TKN) was removed.
  - Added Total Mercury limitation at 50 ng/L with monthly sampling.
  - Added Biennial Pollutant Scan.
  - Added Chloroform action level of 43 ug/L with quarterly monitoring.
  - Reduced the final limitation for Total Residual Chlorine (TRC) to 0.1 mg/L, and added a compliance schedule to allow time to meet this limitation.
  - Added Whole Effluent Toxicity (WET) action levels.
- Added monitoring requirements and some limits for Outfall 002A, a CSO-related bypass.
  - Monitoring added for:
    - Flow Volume
    - BOD<sub>5</sub>
    - TSS
    - Settleable Solids
    - Ammonia (as N)
    - Fecal Coliform (7-day geometric mean)
  - Limits added for:
    - TRC
    - Fecal Coliform (30-day geometric mean)
- Added “Mini Industrial Pretreatment Program” section to replace the former “Pretreatment Mini Schedule” section.
- Revised “Best Management Practices (BMPs) for Combined Sewer Overflows (CSOs)” section due to facility upgrades and new standard language. An offset program was also incorporated.
- Added “Special Conditions: CSO Control Policy” to replace the former “Long Term Control Plan” (LTCP) section. The new section includes LTCP language and Post-Construction Compliance Monitoring (PCCM) language.
- Added “Stormwater Pollution Prevention Requirements” section.
- Added “Mercury Minimization Program (MMP) – Type I” section.
- Added a Schedule of Compliance to meet the reduced TRC final effluent limitation. An interim limit at the existing 2.0 mg/L limit was included.
- Added an updated process schematic with monitoring locations.
- Added “General Requirements” section.
- Revised “Recording, Reporting and Additional Monitoring Requirements” section to include new standard language.
- Added a Schedule of Additional Submittals to the “Recording, Reporting and Additional Monitoring Requirements” section, which includes:

- Emerging Contaminant Short-Term Monitoring Program
- Water Treatment Chemical (WTC) Annual Report Form
- Annual Flow Certification
- Biennial Pollutant Scan
- Whole Effluent Toxicity (WET) Testing
- Combined Sewer Overflow (CSO) Annual Report
- Post Construction Compliance Monitoring Plan (PCCMP)
- Post Construction Compliance Monitoring (PCCM) Program Report
- Sensitive Area Reassessment Report
- Stormwater No Exposure Certification
- Mercury Minimization Plan
- Mini Industrial Pretreatment Program – FROSI
- Mini Industrial Pretreatment Program – Industrial Chemical Survey (ICS) Forms

**This fact sheet summarizes the information used to determine the effluent limitations (limits) and other conditions contained in the permit. General background information including the regulatory basis for the effluent limitations and other conditions are in the [Appendix](#) linked throughout this fact sheet.**

## Administrative History

4/1/2001 The last full technical review was performed and the SPDES permit became effective with a new five-year term and expiration date of 4/1/2006. The 2001 permit has formed the basis of this permit.

11/20/2002 The permit was modified to include CSO Outfall 012. Other minor errors were corrected.

The 2001 permit was administratively renewed in 2006 and again in 2011.

5/31/2016 The permit was allowed to stay in effect pursuant to SAPA<sup>1</sup> with a valid application submitted November 15, 2015.

3/7/2023 NYSDEC issued a Request for Information (RFI) to modify and renew the SPDES permit due to the facility's EBPS score<sup>2</sup>. At the time of the RFI, the facility had an EBPS score of 405 and ranking of 7.

8/23/2023 The City of Hudson (Hudson) submitted a NY-2A permit application.

The Notice of Complete Application, published in the [Environmental Notice Bulletin](#) and newspapers, contains information on the public notice process.

## Facility Information

This facility is a publicly owned treatment works (POTW) that receives flow from domestic users, with effluent consisting of treated sanitary sewage and stormwater. The collection system consists of combined sewers. Hudson does not have any significant industrial users (SIUs).

The current 4.0 MGD sewage treatment plant (STP, facility) consists of:

<sup>1</sup> State Administrative Procedures Act Section 401(2) and 6 NYCRR 621.11(f)

<sup>2</sup> Pursuant to 6 NYCRR 750-1.18 and NYS Environmental Benefit Permit Strategy (EBPS)

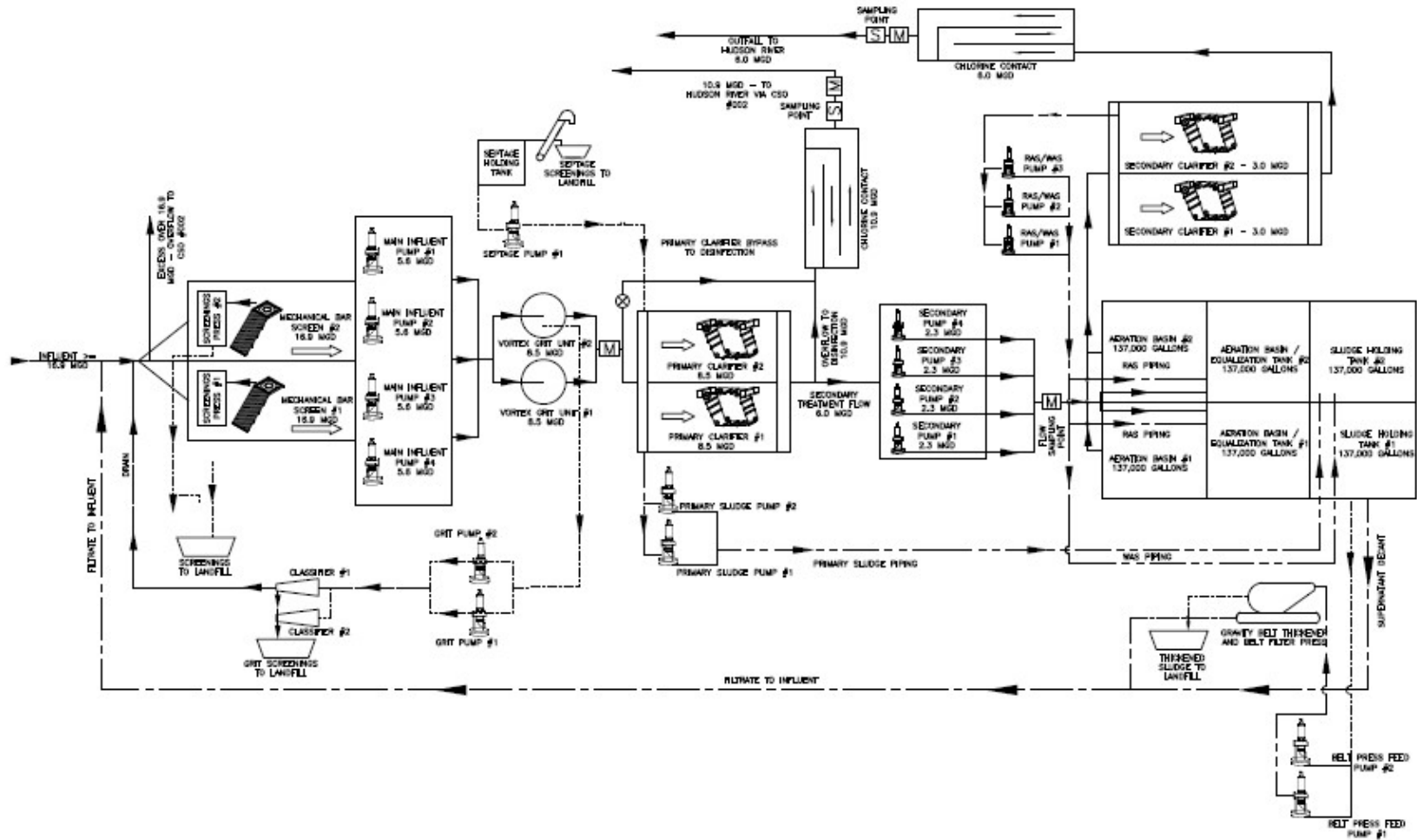
Permittee: City of Hudson  
Facility: Hudson (C) STP  
SPDES Number: NY 00 22039  
USEPA Major/Class 05 Municipal

Date: October 29, 2025 v.1.26  
Permit Writer: Bryce Nickolas Heinen  
Water Quality Reviewer: Bryce Nickolas Heinen  
Full Technical Review

- Preliminary Treatment: Screening, Grit Removal
- Primary Treatment: Primary Clarification
- Secondary Treatment: Activated Sludge, Secondary Clarification
- Disinfection: Chlorine Contact, High-Rate Disinfection (bypass system)

Sludge is belt pressed and sent to landfill. The facility's provided process flow diagram is shown on the following page.

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The facility increased design flow from 2.8 MGD to 4 MGD under a capital improvement project in 2012 as required by Order on Consent R4-20070103-4. This flow upgrade was not codified in the permit prior to this renewal.

The facility does not have any planned improvements.

The facility accepts wastewater from the following municipalities:

Municipality	POSS # or SPDES #	Collection System
City of Hudson	NY 00 22039	Combined

During wet-weather events, combined sewage is also permitted, under special conditions, to be discharged through the following 5 CSOs:

CSO Outfall #	Latitude	Longitude
002	42°15'35" N	73°47'34" W
005	42°15'12" N	73°48'01" W
006	42°15'02" N	73°46'45" W
007	42°14'57.5" N	73°47'43.75" W
009	42°15'29.5" N	73°47'25.5" W

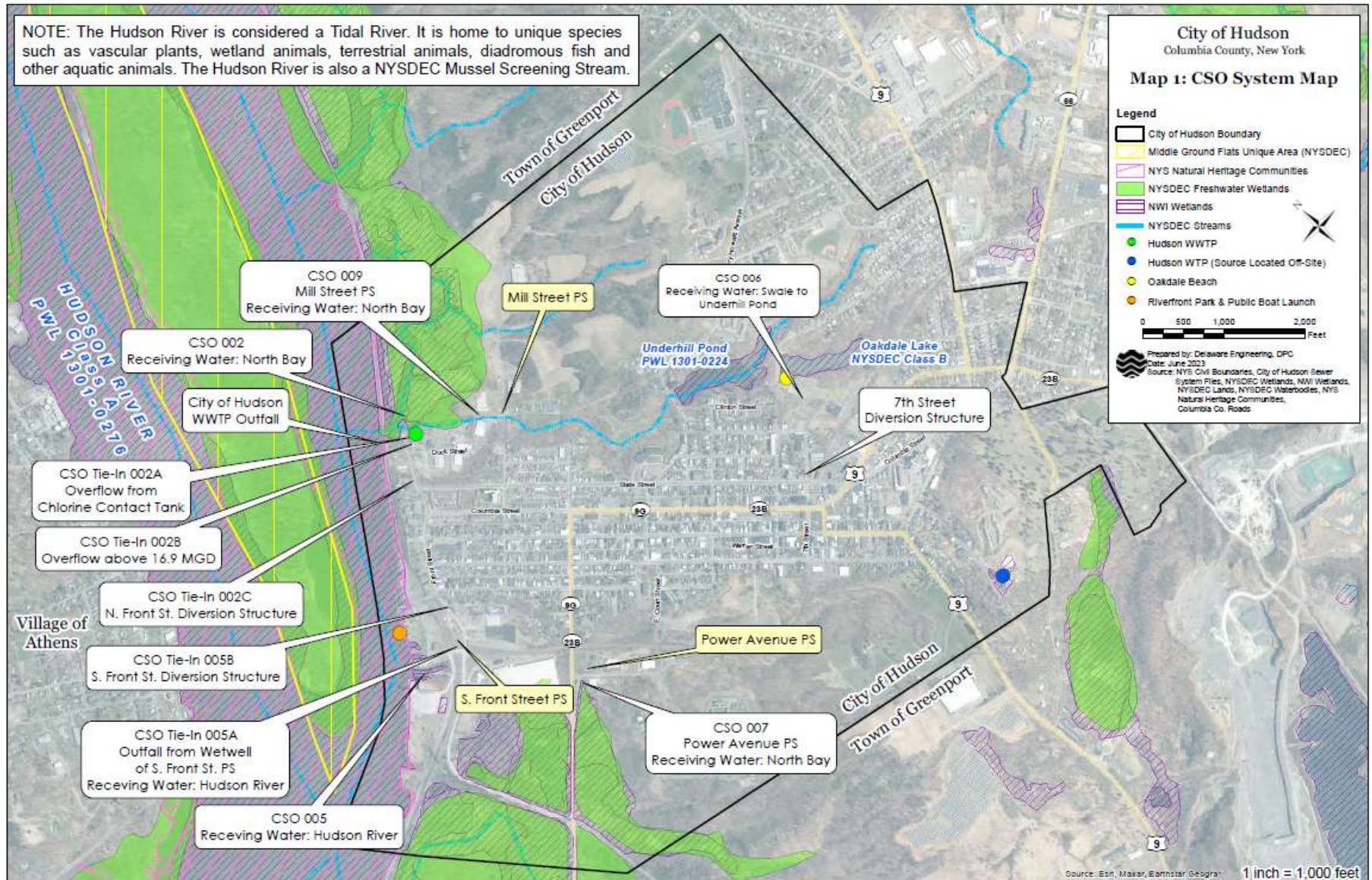
During high flow events, up to 16.9 MGD can be processed through the primary treatment system. When the secondary treatment capacity of 6 MGD is exceeded, the excess flow, up to 10.9 MGD, bypasses secondary treatment and is chlorinated in a High-Rate Disinfection system before being discharged via CSO Outfall 002. This discharge is subject to effluent limitations at internal Outfall 002A. Additional untreated internal overflows (flow above 16.9 MGD) from upstream of the facility may also discharge through Outfall 002 during wet weather events.

### Site Overview

The Hudson STP is located on the east bank of the Hudson River, in the northwestern corner of the municipality. The location is shown in the maps below. It is notable that the facility is located on a portion of the Hudson River divided by an island.



The location of the CSO Outfalls and notable internal control points are provided in the map below.



## Enforcement History

Hudson has operated the POTW under New York State Order on Consent R4-20070103-4, executed May 3, 2007 (The 2007 Order). The 2007 Order was executed to address effluent violations at the facility and failure to submit an approvable Long Term Control Plan (LTCP). The 2007 Order required Hudson to complete the following actions:

- submit responses to Department comments on a 2003 LTCP submission
- Improve Hudson's pretreatment program through increased reporting and development of a Sewer Use Law

The 2007 Order was modified, and this modification executed, on September 16, 2008 (The 2008 Modified Order). The revision was prompted by a request for extension by Hudson on the LTCP milestones. The 2008 Modified Order required Hudson to submit:

- Responses to Department comments on the revised 2007 LTCP
- A draft Sewer Use Law submitted to the Department
- Evaluation of the POTW, an Engineering Report, and construction of upgrades necessary to accept 85% of annual wet-weather flow.
- A plan and schedule to investigate and address inflow and infiltration (I&I Report).

Hudson was also issued an Administrative Compliance Order by the United States Environmental Protection Agency (USEPA) in 2017. This Order required the facility comply with its CSO BMPs as listed in the permit.

Finally, the facility is operating under a New York State Order on Consent R4-20240325-116 dated June 6, 2024. The Order requires the following compliance actions:

- Submit an updated I&I Report
- Include sewer extension reviews in planning board review processes
- Establish an inflow and infiltration (I&I) bank for sewer extension projects

Compliance and enforcement information can be found on the USEPA's [Enforcement and Compliance History Online \(ECHO\)](#) website.

## Existing Effluent Quality

The [Pollutant Summary Table](#) presents the existing effluent quality and effluent limitations. The existing effluent quality was determined from Discharge Monitoring Reports submitted by the permittee for the period 1/1/2019 to 12/31/2023. In addition, data from the 2023 NY-2A application was used to supplement this information.

## Receiving Water Information

The facility discharges via the following outfalls:

Outfall No.	SIC Code	Wastewater Type	Receiving Water
001	4952	Treated Sanitary Sewage and Stormwater	Hudson River, Class A
002	4952	Partially Treated CSO <sup>3</sup>	Tribs. of Hudson River, Class C

<sup>3</sup> Outfall 002 has internal outfalls from different points in the treatment train. See the Facility Information section.

005	4952	CSO	Hudson River, Class A
006	4952	CSO	Underhill Pond, Class B
007	4952	CSO	Tribs. of Hudson River, Class C
009	4952	CSO	Tribs. of Hudson River, Class C
Removed Outfalls			
003	Removed from Permit – revised to internal outfall 002C		
010	Removed from Permit – Abandoned		
011	Removed from Permit – stormwater outfall		
012	Removed from Permit – plugged and abandoned		

**Reach Description:** The Hudson River (PWL ID: 1301-0276) is a tidal estuary within the Lower Hudson River Drainage Basin. The Hudson River is a Class A waterbody starting at Houghtaling Island (14 miles upstream of the City of Hudson) and remains Class A until it reaches Chelsea and Roseton.

See the [Outfall and Receiving Water Summary Table](#) and [Appendix](#) for additional information.

### Impaired Waterbody Information

Outfalls 001 and 005 discharge to the Hudson River segment (PWL No. 1301-0276), which was first listed on the 1998 [New York State Section 303\(d\) List](#) of Impaired/TMDL Waters as impaired due to PCBs. The segment continues to be listed as of the 2020/2022 NYS Section 303(d) List. A Total Maximum Daily Load (TMDL) has not been developed to address the impairment and, therefore, there are no applicable wasteload allocations (WLAs) for this facility.

The remaining CSO Outfalls discharge to Tribs. of Hudson River segments (PWL No. 1301-0222) and Underhill Pond (PWL No. 1301-0224), which are not listed on the 2020/2022 [New York State Section 303\(d\) List](#) of Impaired/TMDL Waters. Therefore, there are no applicable WLAs for this discharge.

### Critical Receiving Water Data & Mixing Zone

The low flow condition for the Hudson River was obtained from a drainage basin ratio analysis with USGS gage station 01358000, Hudson River at Green Island, located Approximately 30 miles upstream. The 7Q10 flow and drainage area at the gage were found from the Low-Flow Statistics for Selected Streams in New York, Excluding Long Island (2024). The 1Q10 flow was estimated as half the 7Q10 and the 30Q10 flow was estimated as 1.2 x 7Q10.

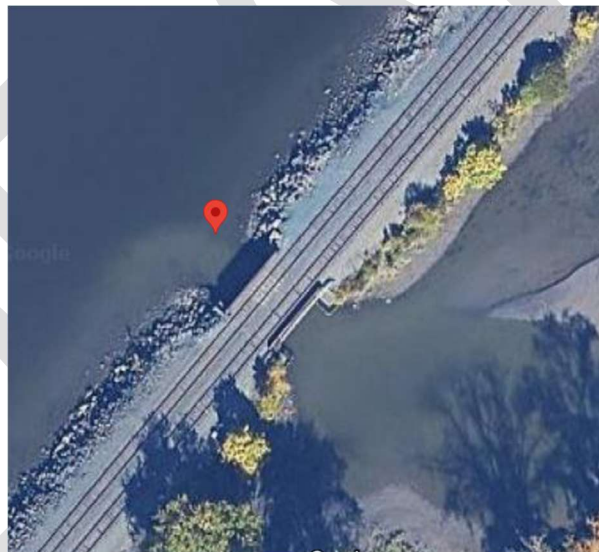
The low flows at the facility location were found from a drainage basin ratio analysis and are shown below.

<b>DRAINAGE BASIN RATIO</b>	<b>1Q10</b>	<b>7Q10</b>	<b>30Q10</b>
Gage Name		Hudson River at Green Island	
Gage ID Number	1358000	1358000	1358000
Low Flow at Gage (cfs)	1414	2828	3393
Drainage Area at Gage (mi <sup>2</sup> )	8090	8090	8090
Drainage Area at Facility (mi <sup>2</sup> )	9330	9330	9330
Drainage Basin Ratio (facility / gage)	1.2	1.2	1.2
<b>Calculated Flow at Facility (cfs)</b>	<b>1630.73</b>	<b>3261.46</b>	<b>3913.06</b>

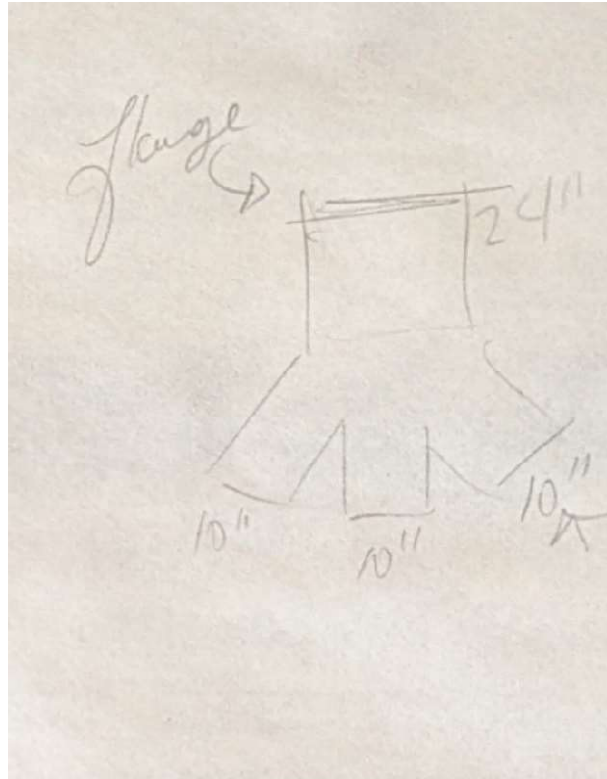
Consistent with TOGS 1.3.1, the outfall information submitted in the application, mixing zone form, and supplemental documents was used to develop a mixing zone model to establish dilution ratios for the water quality analysis.

Hudson was initially unable to provide specific information regarding the outfall location and condition. As part of the permit development process, Hudson performed a dive study to determine the outfall location and configuration.

The dive study determined that the outfall is a 3-port “duckfoot” structure consisting of a 24” diameter pipe coming from the treatment works. At approximately the bank of the Hudson River (underneath the Amtrak railline) the pipe splits into three 10” diameter pipes that extend further out into the river. The coordinate location of the central, 10” pipe outlet was provided by Hudson as seen below.



The additional segments’ outlets were noted as being separated by 12” from the central pipe. The outlets were determined by the dive study to be 12’ below the water level. A rough drawing of the configuration is below.



CORMIX modelling was used to determine the dilution for this outfall. CORMIX allows for two types of outfall modeling relevant to this configuration – CORMIX-1 (single port model) and CORMIX-2 (multi-port model). Due to the nature of the structure, both CORMIX-1 and CORMIX-2 were used to create two separate models – the “3-port” model with CORMIX-2 and the “virtual outfall” model with CORMIX-1.

The 3-port model was configured to be as accurate to the outfall configuration as CORMIX-2 would allow. CORMIX-2 is generally used to model a ‘line-source’ outfall, typically for a diffusion structure with multiple closely situated ports that is of comparable or longer length to the local water depth. In our configuration, estimated water depth was 14’ while the outfall structure only 44” (<4’) across. In order for the model to run, the water depth was reduced to be equal to the outfall depth (12’) and the outfall structure was expanded to 12’ accordingly. This resulted in a configuration that had three, 10” diameter ports, each separated center-to-center by 6’, significantly more separated than the actual structure.

The virtual outfall model was created using CORMIX-1 to approximate an equivalent momentum flux originating from a single port located at the center of the actual diffusion structure. Instead of three, 10” diameter ports, a single port of 17.32” diameter was modeled at the center of the structure. The 17.32” diameter port has equivalent cross-sectional area to the three 10” ports and therefore should maintain effluent velocity.

The Department determined that the best model using the Department’s available tools is the virtual outfall. CORMIX-2 models the discharge as an “equivalent slot diffuser” [[CORMIX Mixing Zone Model: CORMIX2: Multi-Port Discharges](#)], which is not an accurate description of actual conditions. The virtual outfall will be more representative of discharge as essentially a point-source discharge and should be conservative due to lower dispersion from one port versus three.

The virtual outfall model showed that mixing is moderately effective in worst-case conditions (1 hour past Low Water Slack). Using the USEPA Technical Support Document for Water Quality-Based Toxics Control criteria establishing the acute mixing zone at 50 times the Discharge Length Scale, the acute dilution was determined from the CORMIX output to be 11:1. NYSDEC guidance allows the chronic and HEW mixing zones to be set as 3-5 times the acute mixing zone length, resulting in a dilution of 21:1 with a multiplier of 5.

Outfall No.	Acute Dilution Ratio A(A)	Chronic Dilution Ratio A(C)	Human, Aesthetic, Wildlife Dilution Ratio (HEW)	Basis
001	11:1	21:1	21:1	CORMIX

Critical receiving water data are listed in the [Pollutant Summary Table](#) at the end of this fact sheet. [Appendix Link](#)

## Permit Requirements

The technology based effluent limitations ([TBELs](#)), water quality-based effluent limitations ([WQBELs](#)), [Existing Effluent Quality](#) and a discussion of the selected effluent limitation for each pollutant present in the discharge are provided in the [Pollutant Summary Table](#).

### Whole Effluent Toxicity (WET) Testing

An evaluation of the discharge indicates the potential for toxicity based on the following criteria: [Appendix Link](#)

- Treatment plants which equal or exceed a discharge of 1MGD. (#7)

The requirement for WET testing is new. No previous WET data was available to perform a reasonable potential analysis. Consistent with TOGS 1.3.2, given the dilution available and location outside of the Great Lakes basin, the permit requires chronic WET testing. WET testing action levels of 3.3 TUa and 21 TUc have been included in the permit for each species. The acute action levels for each species represent the acute dilution ratio times a factor of 0.3. The chronic action levels represent the chronic dilution ratio. Samples will be collected quarterly for a period of one year beginning with 2027, and on years ending 2 and 7 thereafter.

### Anti-backsliding

The limitations contained in the permit are at least as stringent as the previous permit limits and there are no instances of backsliding.

[Appendix Link](#)

### Antidegradation

The permit contains effluent limitations which ensure that the best usages of the receiving waters will be maintained. The Notice of Complete Application published in the Environmental Notice Bulletin contains information on the State Environmental Quality Review (SEQR)<sup>4</sup> determination.

[Appendix Link](#)

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<sup>4</sup> As prescribed by 6 NYCRR Part 617

## Discharge Notification Act Requirements

In accordance with the Discharge Notification Act (ECL 17-0815-a), the permittee is required to post a sign at each point of wastewater discharge to surface waters, unless a waiver is obtained. This requirement is being continued from the previous permit.

Additionally, the permit contains a requirement to make the Discharge Monitoring Report (DMR) sampling data available to the public upon request. This requirement is updated from the previous permit.

## Requirements for Combined Sewer Overflows (CSOs)

### [Appendix Link](#)

#### Best Management Practices (BMPs) for Combined Sewer Overflows (CSOs)

The BMPs for CSOs require the permittee to implement operation and maintenance procedures<sup>5</sup>; use the existing treatment plant and collection system to the maximum extent practicable; effect sewer design replacement and drainage planning; maximize pollutant capture; and minimize water quality impacts from CSOs. The submittal requirements are summarized in the [Schedule of Additional Submittals](#). This requirement is being continued from the previous permit.

#### Long-Term Control Plan (LTCP)

On April 13, 2009, the Department approved Hudson's LTCP. The LTCP and associated Engineering Report required upgrades to the treatment plant and the South Front Street Pump Station in order to capture at least 85% of wet weather flows.

On December 16, 2011, Hudson confirmed completion of the treatment plant and pump station upgrades, completing the projects required under the LTCP. The treatment plant's design capacity was increased from 2.8 to 4.0 MGD (with a maximum wet weather capacity of 16.9 MGD). Since then, Hudson has continued to work on miscellaneous collection system improvements including sewer separation which are not required by the LTCP.

#### Post-Construction Compliance Monitoring (PCCM)

PCCM is required by all CSO permittees to verify compliance with the USEPA National CSO Control policy and evaluate attainment of NYS water quality standards. A PCCM plan has not been submitted. The requirement to submit a PCCM plan is detailed in the Schedule of Additional Submittals and Special Conditions: CSO Control Policy. Monitoring is required in years ending 3 and 8 in accordance with the Schedule of Additional Submittals and submitted in a PCCM report the following year.

#### Sensitive Area Reassessment

The permit requires the reassessment of the feasibility of eliminating or relocating CSO outfalls discharging to sensitive areas. The reassessment is required once per permit term, or every five years.

## Stormwater Pollution Prevention Requirements

The facility is a publicly owned treatment works  $\geq 1$  MGD that requires SPDES permit coverage under 40 CFR 122.26 (b)(14)(ix).

On July 12, 2023, the permittee submitted a Conditional Exclusion for No Exposure Form, certifying that all industrial activities and materials are completely sheltered from exposure. This condition must be maintained for the exclusion to remain applicable. The schedule of

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<sup>5</sup> See 6 NYCRR 750-2.8(a)(2)

submittals also includes a due date for re-certification every five years as required by 40 CFR 122.26(g)(iii). This requirement is new.

### Mercury<sup>6</sup>

The multiple discharge variance (MDV) for mercury provides the framework for NYSDEC to require mercury monitoring and mercury minimization programs (MMPs), through SPDES permitting. [Appendix Link](#)

The facility is a USEPA Major, Class 05 Municipal Facility outside of the Great Lakes Basin. Because the design flow is >1 MGD, the permit includes requirements for the implementation of MMP Type I.

Based on 1 data point of 1.3 ng/L collected as part of the application the facility is expected to meet the new daily max permit limit of 50 ng/L (with monthly sampling frequency). The limit represents the general level currently achievable (GLCA). The data collected will be used to establish an additional 12-month rolling average effluent limit during the next permit review.

A mercury minimization program consisting of the following is also required:

- Additional monitoring of key locations, as defined in the MMP
- Control strategy for implementation of the MMP
- Annual status report (maintained onsite)

### Biennial Pollutant Scan

The permit includes a requirement to perform biennial sampling (once every two years) of the WWTP effluent for the parameters in the NY-2A Application, Tables A – D. This sampling will provide the required three effluent samples from applicable parameters for submittal with the next NY-2A Application<sup>7</sup>. This requirement ensures the data is representative of effluent conditions over the permit term and will be available for the next application submittal and permit review. This requirement is new.

### Mini Industrial Pretreatment Program

The previous permit required implementation of a Mini-Pretreatment Program due to Significant Industrial Users (SIUs) in the collection system. While the treatment plant does not currently serve SIUs, the permittee is required to continue implementation of a Mini-Pretreatment Program to allow for coverage of future users. The program requires implementation of an industrial user compliance program, submission of user information, modification of local sewer use law (if necessary), and periodic reporting. [Appendix Link](#)

### Schedule of Compliance

A Schedule of Compliance is being included<sup>8</sup> for the following items ([Appendix Link](#)):

- Facility upgrades to meet the final effluent limitation for Total Residual Chlorine

### Emerging Contaminant Monitoring

Pursuant to 6 NYCRR Part 750-1.13(b), the permit includes a short-term monitoring program listed in the Schedule of Additional Submittals to evaluate the influent and effluent discharge levels of Per- and Polyfluoroalkyl Substances (PFAS) and 1,4-Dioxane. This monitoring program

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<sup>6</sup> In accordance with DOW 1.3.10 Mercury – SPDES Permitting & Multiple Discharge Variance (MDV), December 30, 2020.

<sup>7</sup> Pursuant to 40 CFR 122.21(j)(4)(vi).

<sup>8</sup> Pursuant to 6 NYCRR 750-1.14

is consistent with guidance released in USEPA guidance memos dated April 28, 2022, and December 5, 2022.

NYSDEC will review the monitoring results and pursuant to 6 NYCRR 750-2.1(i) may notify the permittee of the need for further monitoring to identify potential sources as specified in the Emerging Contaminants Investigation Checklist for POTWs to determine whether cause exists to modify the permit to incorporate a pollutant minimization program per 6 NYCRR 750-1.14(f).

NYSDEC will consider this information and progress made to track down and reduce or eliminate the source of the identified pollutants in determining if a permit modification is needed.

### Schedule of Additional Submittals

A schedule of additional submittals has been included for the following ([Appendix Link](#)):

- Emerging Contaminant Short-Term Monitoring Program
- Water Treatment Chemical (WTC) Annual Report Form
- Annual Flow Certification
- Biennial Pollutant Scan
- Whole Effluent Toxicity (WET) Testing
- Wet Weather Operating Plan (WWOP)
- Combined Sewer Overflow (CSO) Annual Report
- Post-Construction Compliance Monitoring Plan (PCCMP)
- Post-Construction Compliance Monitoring (PCCM) Program Report
- Sensitive Area Reassessment Report
- Stormwater No Exposure Certification
- Mercury Minimization Plan
- Mini Industrial Pretreatment Program – FROSI
- Mini Industrial Pretreatment Program – Industrial Chemical Survey (ICS) Forms

## OUTFALL AND RECEIVING WATER SUMMARY TABLE

Outfall	Latitude	Longitude	Receiving Water Name	Water Class	Water Index No. / Priority Waterbody Listing (PWL) No.	Major / Sub Basin	Hardness (mg/l)	1Q10 (MGD)	7Q10 (MGD)	30Q10 (MGD)	Critical Effluent Flow (MGD)	Dilution Ratio		
												A(A)	A(C)	HEW
001	42° 15' 33" N	73° 47' 35" W	Hudson River	A	H (portion 4b) PWL: 1301-0276	Lower Hudson River	83.1 <sup>9</sup>	527.0	1054	1239	4	11:1	21:1	21:1
002A	42° 15' 34" N	73° 47' 34" W	Tribs of Hudson River (via Outfall 002)	C	H-189 thru 203 PWL: 1301-0276	Lower Hudson River	-	-	-	-	-	-	-	-

## POLLUTANT SUMMARY TABLE

### Outfall 001

Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement	
			Permit Limit	Existing Effluent Quality <sup>10</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis			
<b>Outfall #</b>	001	<b>Description of Wastewater:</b> Treated combined sewage.														
		<b>Type of Treatment:</b> Screening, grit removal, primary clarification, aeration, secondary clarification, chlorination.														
<b>General Notes:</b>	Existing discharge data from January 2019 to December 2023 was obtained from Discharge Monitoring Reports provided by the permittee. All applicable water quality standards were reviewed for development of the WQBELs. The standard and WQBEL shown below represent the most stringent.															
Flow Rate	MGD	30 Day Avg	2.8	2.4 Actual Average	60 / 0	4.0	Design Flow	No alterations that will impair the waters for their best usages.						703.2	-	Design Flow
Consistent with 40CFR Part 133.102 and TOGS 1.3.3, a monthly average flow limitation equal to the average daily design capacity of the treatment plant is specified. The facility has proposed a design flow increase from 2.8 MGD to 4 MGD. This upgrade is described in the Facility Information section.																
pH	SU	Minimum	6.5	7.06 Actual Min	60 / 0	6.0	40 CFR 133.102	7.6 <sup>11</sup>	-	6.5 – 8.5	Range	-	703.3	-	WQBEL	
		Maximum	8.5	7.69 Actual Max	60 / 0	9.0										
Consistent with TOGS 1.3.3 for POTWs, TBELs reflect secondary treatment standards. Given the available dilution, an effluent limitation equal to the WQS is appropriate.																

<sup>9</sup> Ambient hardness was calculated from RIBs station 13-LHUD-120.2, located ~20 miles upstream, using 39 samples collected from 2005 – 2016.

<sup>10</sup> Existing Effluent Quality: Unless otherwise stated, Daily Max = 99% lognormal; Monthly Avg = 95% lognormal (for datasets with ≤3 nondetects); Daily Max = 99% delta-lognormal; Monthly Avg = 95% delta-lognormal (for datasets with >3 nondetects)

<sup>11</sup> Ambient pH calculated from RIBs station 13-LHUD-120.2, located ~20 miles upstream, using 35 samples collected from 2005 – 2011.

Outfall #	Description of Wastewater: Treated combined sewage.														
	Type of Treatment: Screening, grit removal, primary clarification, aeration, secondary clarification, chlorination.														
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>10</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
Temperature	°C	Daily Max	Monitor	24.8 Actual Max	60 / 0	Monitor	750-1.13 Monitor	16.5 <sup>12</sup>	(Estuary): The water temperature at the surface of an estuary shall not be raised to more than 90F at any point			704.2	-	Monitor	
	Consistent with 6 NYCRR 750-1.13(a), monitoring is required and may be used to inform future permitting decisions. This requirement is continued from the previous permit.														
Dissolved Oxygen (DO)	mg/L	Daily Min	Monitoring Not Currently Required			-	-	-	7.25 Critical Point	(Non-Trout) 4.0 mg/L	No Reasonable Potential		-	No Limitation	
	<p>The downstream DO concentration was modeled using the Streeter-Phelps equations and the following assumptions: Effluent DO = 2.0 mg/l (assumed value consistent with TOGS 1.3.1D), Effluent CBOD<sub>5</sub> = 40.0 mg/L (assumed secondary treatment requirement), Effluent NOD = 35.5 mg/L (maximum of effluent data), Effluent UOD = 94.0 mg/L (calculated from CBOD<sub>5</sub> and NOD), and design flow of 4 MGD.</p> <p>The model was divided into 3 reaches. The first reach runs from the point of discharge to the end of an island in the Hudson River. For this reach, ambient flow was assumed at 50% of the 7Q10 due to the island causing flow to split. This reach ended where flow recombined after the island. The second reach included the full 7Q10 flow of the Hudson River and ended at the discharge point of the Catskill WWTP (NY0020389). The final reach included the discharge from the Catskill WWTP (using 1.55 MGD, 40 mg/L CBOD<sub>5</sub>, and 97.7 mg/L NOD as Catskill effluent values) and ended 5 miles downstream.</p> <p>The model showed that DO standards are maintained and consequently WQBELs for DO, UOD, and BOD/CBOD are unnecessary and the TBELs are protective of water quality.</p>														
5-day Biochemical Oxygen Demand (BOD <sub>5</sub> )	mg/L	Monthly Avg	30	4.74	60 / 0	30	40 CFR 133.102	-	See Dissolved Oxygen	No Reasonable Potential	-	TBEL			
		7 Day Avg	45	12.0	60 / 0	45	40 CFR 133.102								
	lbs/d	Monthly Avg	700	90.9	60 / 0	1000	-								
		7 Day Avg	1050	313	60 / 0	1500	-								
	% Rem	Minimum	85	92 Actual Min	60 / 0	85	40 CFR 133.102								
Consistent with 40 CFR Part 133.102 and TOGS 1.3.3 for POTWs, TBELs reflect secondary treatment standards. See justification for Dissolved Oxygen.															
The allowable loading has been increased due to the increase in design flow.															

<sup>12</sup> Ambient Temperature calculated from RIBs station 13-LHUD-120.2, located ~20 miles upstream, using 6 samples collected from 2008.

Outfall #	001	Description of Wastewater: Treated combined sewage.													
		Type of Treatment: Screening, grit removal, primary clarification, aeration, secondary clarification, chlorination.													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>10</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
Total Suspended Solids (TSS)	mg/L	Monthly Avg	30	2.71	60 / 0	<b>30</b>	40 CFR 133.102	-	None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages.	703.2	-	TBEL			
		7 Day Avg	45	12.3	60 / 0	<b>45</b>	40 CFR 133.102								
	lbs/d	Monthly Avg	700	53.7	60 / 0	<b>1000</b>	-								
		7 Day Avg	1050	292	60 / 0	<b>1500</b>	-								
	% Rem	Minimum	85	98.6 Actual Average	60 / 0	<b>85</b>	40 CFR 133.102								
<p>Consistent with 40 CFR Part 133.102 and TOGS 1.3.3 for POTWs, TBELs reflect secondary treatment standards. Given the available dilution, an effluent limitation equal to the TBEL, and consistent with TOGS 1.3.3, is protective of water quality standards.</p> <p>The allowable loading has been increased due to the increase in design flow.</p>															
Settleable Solids	mL/L	Daily Max	0.3	0.3 Actual Max	5 / 55	<b>0.3</b>	TOGS 1.3.3	-	None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages	703.2	-	TBEL			
<p>Consistent with TOGS 1.3.3, the effluent limitation is equal to the TBEL of 0.3 mL/L for POTWs providing secondary treatment without filtration. Given that adequate dilution is available the TBEL is protective of WQS.</p>															
Nitrogen, Ammonia (as N) Summer (June 1 <sup>st</sup> – October 31 <sup>st</sup> )	mg/L	Monthly Avg	Monitor	3.70 (As NH <sub>3</sub> )	20 / 0	-	-	0.1	0.84	1.2	A(C)	No Reasonable Potential	-	<b>Monitor</b>	
<p>Ammonia samples are taken on a quarterly basis. Because the sampling period does not cleanly allow evaluation of the summer and winter periods, the full dataset was evaluated against both criteria.</p> <p>Reporting for Ammonia has been changed from (as NH<sub>3</sub>) to (as N) for simpler data reporting, as this is consistent with the laboratory reporting units. Values can be converted using the equation: Ammonia (as N) = Ammonia (as NH<sub>3</sub>) x 0.8224.</p> <p>The WQS for Ammonia was determined from TOGS 1.1.1 from a pH of 7.5 and a summer temperature of 25 °C. The temperature of the receiving waterbody was an assumed value and consistent with TOGS 1.3.1E.</p> <p>A comparison of the projected instream concentration to the WQS indicates no reasonable potential to cause or contribute to a WQS violation. The monitor requirement is being maintained from the previous permit. The permit limit includes both seasons under a single monitoring requirement.</p>															

Outfall #	Description of Wastewater: Treated combined sewage.														
	Type of Treatment: Screening, grit removal, primary clarification, aeration, secondary clarification, chlorination.														
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>10</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
Nitrogen, Ammonia (as N) Winter (November 1 <sup>st</sup> – May 31 <sup>st</sup> )	mg/L	Monthly Avg	Monitor	3.70 (As NH <sub>3</sub> )	20 / 0	-	-	0.1	0.84	1.9	A(C)	No Reasonable Potential	-	<b>Monitor</b>	
	<p>Ammonia samples are taken on a quarterly basis. Because the sampling period does not cleanly allow evaluation of the summer and winter periods, the full dataset was evaluated against both criteria.</p> <p>Reporting for Ammonia has been changed from (as NH<sub>3</sub>) to (as N) for simpler data reporting, as this is consistent with the laboratory reporting units. Values can be converted using the equation: Ammonia (as N) = Ammonia (as NH<sub>3</sub>) x 0.8224.</p> <p>The WQS for Ammonia was determined from TOGS 1.1.1 from a pH of 7.5 and a winter temperature of 10 °C. The temperature of the receiving waterbody was an assumed value and consistent with TOGS 1.3.1E.</p> <p>A comparison of the projected instream concentration to the WQS indicates no reasonable potential to cause or contribute to a WQS violation. The monitor requirement is being maintained from the previous permit. The permit limit includes both seasons under a single monitoring requirement.</p>														
Total Kjeldahl Nitrogen (TKN)	mg/L	Monthly Avg	Monitor	4.7	19 / 1	-	-	-	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usages.			<a href="#">703.2</a>	-	Discontinued	
	<p>TKN samples are taken on a quarterly basis. The 1Q2021 sample was below detection.</p> <p>Previous monitoring of TKN for informational purposes is being discontinued, given existing requirement for Ammonia monitoring and no water quality standard for TKN specifically.</p>														
Total Phosphorus	mg/L	Monthly Avg	-	0.15	1 / 0	-	-	-	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usages.			<a href="#">703.2</a>	-	No Limitation	
	<p>Total Phosphorus was detected in the effluent as reported in the NY-2A application. The projected instream concentration was calculated using the maximum reported effluent concentration of 0.15 mg/L and a negligible ambient upstream concentration. A multiplier, as recommended in EPA's Technical Support Document Chapter 3.3, of 6.1 was applied to the projected effluent to account for the number of samples. Since there are no Class A WQS, reasonable potential cannot be determined, thus no limitation or monitoring requirement is specified.</p>														
Total Mercury	ng/L	Daily Max	-	1.3	1 / 0	-	-	-	-	0.7	H(FC)	<b>50</b>	GLCA	-	DOW 1.3.10
	<p>See <a href="#">Mercury section of this fact sheet.</a></p>														

Outfall #	001	Description of Wastewater: Treated combined sewage.													
		Type of Treatment: Screening, grit removal, primary clarification, aeration, secondary clarification, chlorination.													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>10</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
Coliform, Fecal	#/100 ml	30d Geo Mean	200	8.49	60 / 0	<b>200</b>	TOGS 1.3.3	-	The monthly geometric mean, from a minimum of five examinations, shall not exceed 200.				<a href="#">703.4</a>	-	TBEL
		7d Geo Mean	400	440	60 / 0	<b>400</b>	TOGS 1.3.3	-							
Consistent with TOGS 1.3.3, effluent disinfection is required year-round due to the class of the receiving waterbody. Fecal coliform effluent limitations equal to the TBEL are specified.															
3 outliers for the 7-day geomean contributed to the increased existing effluent quality value. The actual average for 7-day Fecal Coliform is 41 No./100mL.															
Total Residual Chlorine (TRC)	mg/L	Daily Max	2.0	2.16	60 / 0	2.0	TOGS 1.3.3	-	-	0.005	A(C)	<b>0.1</b>	<a href="#">703.5</a>	0.03	WQBEL
Effluent disinfection is currently required year-round and will remain a permit requirement. The WQBEL was calculated by multiplying the WQS by the chronic dilution ratio. Due to the low dilution, the calculated WQBEL is less than the TBEL and an effluent limitation equal to the WQBEL is appropriate. A Schedule of Compliance item has been added to meet the reduced limit.															
Additional Pollutants Detected															
Nitrate	mg/L	NY-2A	-	1.45	1 / 0	-	-	0.5	0.9	10	H(WS)	No Reasonable Potential	-	No Limitation	
(as N)	The projected instream concentration was calculated using an effluent concentration of 1.45 mg/L from 1 sample available, a multiplier of 6.2, the chronic dilution ratio, and an upstream ambient concentration of 0.5 mg/L <sup>13</sup> . The multiplier was selected from EPA's Technical Support Document Chapter 3.3 to account for the number of samples. A comparison of the projected instream concentration to the WQS indicates no reasonable potential to cause or contribute to a WQS violation.														
Total Dissolved Solids (TDS)	mg/L	NY-2A	-	290	1 / 0	-	-	150	230	500	A(C)	No Reasonable Potential	-	No Limitation	
	The projected instream concentration was calculated using an effluent concentration of 290 mg/L from 1 sample available, a multiplier of 6.2, the chronic dilution ratio, and an upstream ambient concentration of 150 mg/L <sup>14</sup> . The multiplier was selected from EPA's Technical Support Document Chapter 3.3 to account for the number of samples. A comparison of the projected instream concentration to the WQS indicates no reasonable potential to cause or contribute to a WQS violation.														
Copper, Total	ug/L	NY-2A	-	11	1 / 0	-	-	2.4 (dissolved)	5.6	11	A(A)	No Reasonable Potential	-	No Limitation	
(recoverable)	The projected instream concentration was calculated using an effluent concentration of 17 ug/L from 5 samples available, a multiplier of 2.3, the acute dilution ratio, and an upstream ambient concentration of 2.4 ug/L <sup>14</sup> . The multiplier was selected from EPA's Technical Support Document Chapter 3.3 to account for the number of samples. A metals translator of 1.042 was also applied to convert between the total and dissolved form in accordance with the USEPA Document 823-B-96-007. A comparison of the projected instream concentration to the WQS indicates no reasonable potential to cause or contribute to a WQS violation.														

<sup>13</sup> Ambient Nitrate, TDS, Copper were calculated from RIBs station 13-LHUD-128.9, located ~20 miles upstream, using 23 samples (for each parameter) collected from 2001 – 2004.

Outfall #	Description of Wastewater: Treated combined sewage.														
	Type of Treatment: Screening, grit removal, primary clarification, aeration, secondary clarification, chlorination.														
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>10</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
Zinc, Total  (recoverable)	ug/L	NY-2A	-	21	1 / 0	-	-	7.8 (dissolved)	19	100	A(A)	No Reasonable Potential	-	No Limitation	
The projected instream concentration was calculated using an effluent concentration of 21 ug/L from 1 sample available, a multiplier of 6.2, the acute dilution ratio, and an upstream ambient concentration of 7.8 ug/L <sup>14</sup> . The multiplier was selected from EPA's Technical Support Document Chapter 3.3 to account for the number of samples. A metals translator of 1.022 was also applied to convert between the total and dissolved form in accordance with the USEPA Document 823-B-96-007. A comparison of the projected instream concentration to the WQS indicates no reasonable potential to cause or contribute to a WQS violation.															
Chloroform	ug/L	NY-2A	-	29	1 / 0	-	-	-	8.6	7	H(W.S)	150	<a href="#">703.5</a>	-	Action Level
The projected instream concentration was calculated using an effluent concentration of 29 ug/L from 1 sample available, a multiplier of 6.2, the chronic dilution ratio, and a negligible upstream ambient concentration <sup>15</sup> . The multiplier was selected from EPA's Technical Support Document Chapter 3.3 to account for the number of samples. A comparison of the projected instream concentration to the WQS indicates a potential to cause or contribute to a water quality violation. Since the reasonable potential is triggered by the multiplier of 6.2 for single sample, a quarterly sampling requirement and action level have been added.															

<sup>14</sup> Ambient Zinc was calculated from RIBs station 13-LHUD-128.9, located ~20 miles upstream, using 22 samples collected from 2001 – 2004.

<sup>15</sup> Ambient Chloroform was calculated from RIBs station 13-LHUD-128.9, located ~20 miles upstream, using 22 samples collected from 2001 – 2004. 11 were non-detect and the remaining samples had a maximum of 0.2 ug/L.

Outfall 002A

Outfall #	002A	Description of Wastewater: Partially Treated Combined Sewage						
		Type of Treatment: Preliminary, Primary, and High-Rate Disinfection						
Effluent Parameter	Units	Averaging Period	No Available Existing Discharge Data			TBELs		Basis for Permit Requirement
						Limit	Basis	
<b>General Notes:</b> This outfall was added during facility upgrades performed in 2012. This outfall has not been previously monitored, and existing effluent data is not available. The outfall is only utilized during wet weather when the capacity of the secondary system is exceeded. This is considered a CSO-related bypass outfall, as discharge occurs after preliminary and primary treatment at the STP. When discharge does occur, monitoring is required. The discharge from this outfall is disinfected.								
Flow, Monthly Total	MGal/mo	Monthly Avg (Estimate)	-	-	-	Monitor	750-1.13 Monitor	Monitor
Flow will be monitored for informational purposes and to calculate pollutant loadings. This requirement is new.								
5- Day Biochemical Oxygen Demand (BOD <sub>5</sub> )	mg/L	Daily Max	-	-	-	Monitor	750-1.13 Monitor	Monitor
5-Day Biochemical Oxygen Demand will be monitored for informational purposes and to calculate pollutant loadings. This requirement is new.								
Ammonia (as N)	mg/L	Daily Max	-	-	-	Monitor	750-1.13 Monitor	Monitor
Ammonia will be monitored for informational purposes and to calculate pollutant loadings. This requirement is new.								
Solids, Settleable	mg/L	Daily Max	-	-	-	Monitor	750-1.13 Monitor	Monitor
Settleable Solids will be monitored for informational purposes and to calculate pollutant loadings. This requirement is new.								
Solids, Total Suspended	mg/L	Daily Max	-	-	-	Monitor	750-1.13 Monitor	Monitor
Total Suspended Solids will be monitored for informational purposes and to calculate pollutant loadings. This requirement is new.								
Coliform, Fecal	No./ 100 mL	30-day Geometric Mean	-	-	-	200	TOGS 1.6.3	Monitor
	No./ 100 mL	7-day Geometric Mean	-	-	-	Monitor	750-1.13 Monitor	Monitor
Disinfection of partially treated sewage is required to minimize impacts to downstream water quality. Given the intermittent nature of the discharge, a 30-day geometric mean is appropriate to ensure the water quality standards are achieved. A 7-day geometric mean will also be monitored for informational purposes.								
Chlorine, Total Residual	mg/L	Daily Max	-	-	-	2.0	TOGS 1.6.3	Monitor
Disinfection of partially treated sewage is required to minimize the impacts on downstream water quality. Given the intermittent nature of the discharge, a TBEL of 2.0 mg/L is appropriate.								

## Appendix: Regulatory and Technical Basis of Permit Authorizations

The Appendix is meant to supplement the fact sheet for multiple types of SPDES permits. Portions of this Appendix may not be applicable to this specific permit.

### Regulatory References

The provisions of the permit are based largely upon 40 CFR 122 subpart C and 6 NYCRR Part 750 and include monitoring, recording, reporting, and compliance requirements, as well as general conditions applicable to all SPDES permits. Below are the most common citations for the requirements included in SPDES permits:

- Clean Water Act (CWA) 33 section USC 1251 to 1387
- Environmental Conservation Law (ECL) Articles 17 and 70
- Federal Regulations
  - 40 CFR, Chapter I, subchapters D, N, and O
- State environmental regulations
  - 6 NYCRR Part 621
  - 6 NYCRR Part 750
  - 6 NYCRR Parts 700 - 704 – Best use and other requirements applicable to water classes
  - 6 NYCRR Parts 800 – 941 - Classification of individual surface waters
- NYSDEC water program policy, referred to as Technical and Operational Guidance Series (TOGS)
- USEPA Office of Water Technical Support Document for Water Quality-based Toxics Control, March 1991, Appendix E

The following is a quick guide to the references used within the fact sheet:

SPDES Permit Requirements	Regulatory Reference
Anti-backsliding	6 NYCRR 750-1.10(c)
Best Management Practices (BMPS) for CSOs	6 NYCRR 750-2.8(a)(2)
Environmental Benefits Permit Strategy (EBPS)	6 NYCRR 750-1.18, NYS ECL 17-0817(4), TOGS 1.2.2 (revised January 25,2012)
Exceptions for Type I SSO Outfalls (bypass)	6 NYCRR 750-2.8(b)(2), 40 CFR 122.41
Mercury Multiple Discharge Variance	Division of Water Program Policy 1.3.10 (DOW 1.3.10)
Mixing Zone and Critical Water Information	TOGS 1.3.1 & Amendments
PCB Minimization Program	40 CFR Part 132 Appendix F Procedure 8, 6 NYCRR 750-1.13(a) and 750-1.14(f), and TOGS 1.2.1
Pollutant Minimization Program (PMP)	6 NYCRR 750-1.13(a), 750-1.14(f), TOGS 1.2.1
Schedules of Compliance	6 NYCRR 750-1.14
Sewage Pollution Right to Know (SPRTK)	NYS ECL 17-0826-a, 6 NYCRR 750-2.7
State Administrative Procedure Act (SAPA)	State Administrative Procedure Act Section 401(2), 6 NYCRR 621.11(l)
State Environmental Quality Review (SEQR)	6 NYCRR Part 617
USEPA Effluent Limitation Guidelines (ELGs)	40 CFR Parts 405-471
USEPA National CSO Policy	33 USC Section 1342(q)
Whole Effluent Toxicity (WET) Testing	TOGS 1.3.2
General Provisions of a SPDES Permit Department Request for Additional Information	NYCRR 750-2.1(i)

### Outfall and Receiving Water Information

#### Impaired Waters

The [NYS 303\(d\) List of Impaired/TMDL Waters](#) identifies waters where specific best usages are not fully supported. The state must consider the development of a Total Maximum Daily Load (TMDL) or other strategy to reduce the input of the specific pollutant(s) that restrict waterbody uses, in order to restore and protect such uses. SPDES permits must include effluent limitations necessary to implement a waste load allocation (WLA) of an EPA-approved TMDL (6 NYCRR 750-1.11(a)(5)(ii)), if applicable. In accordance with 6 NYCRR 750-1.13(a), permittees discharging to waters which are on the list but do not yet have a TMDL developed may be required to perform additional monitoring for the parameters causing the impairment. Accurate monitoring data is needed

to determine the existing capabilities of the wastewater treatment plants and to assure that WLAs are allocated equitably.

### Interstate Water Pollution Control Agencies

Some POTWs may be subject to regulations of interstate basin/compact agencies including: Interstate Sanitation Commission (ISC), International Joint Commission (IJC), Delaware River Basin Commission (DRBC), Ohio River Valley Water Sanitation Commission (ORSANCO), and the Susquehanna River Basin Commission (SRBC). Generally, basin commission requirements focus principally on water quality and not treatment technology. However, interstate/compact agency regulations for the ISC, IJC, DRBC and NYC Watershed contain explicit effluent limits which must be addressed during permit drafting. 6 NYCRR 750-2.1(d) requires SPDES permits for discharges that originate within the jurisdiction of an interstate water pollution control agency, to include any applicable effluent standards or water quality standards (WQS) promulgated by that interstate agency.

### Existing Effluent Quality

The existing effluent quality is determined from a statistical evaluation of effluent data in accordance with TOGS 1.2.1 and the USEPA Office of Water, Technical Support Document for Water Quality-based Toxics Control, March 1991, Appendix E (TSD). The existing effluent quality is equal to the 95<sup>th</sup> (monthly average) and 99<sup>th</sup> (daily maximum) percentiles of the lognormal distribution of existing effluent data. When there are greater than three non-detects, a delta-lognormal distribution is assumed, and delta-lognormal calculations are used to determine the monthly average and daily maximum pollutant concentrations. Statistical calculations are not performed for parameters where there are less than ten data points. If additional data is needed, a monitoring requirement may be specified either through routine monitoring or a short-term high intensity monitoring program. The [Pollutant Summary Table](#) identifies the number of sample data points available.

### Permit Requirements

#### Basis for Effluent Limitations

Sections 101, 301, 304, 308, 401, 402, and 405 of the CWA and Titles 5, 7, and 8 of Article 17 ECL, as well as their implementing federal and state regulations, and related guidance, provide the basis for the effluent limitations and other conditions in the permit.

When conducting a full technical review of an existing permit, the previous effluent limitations form the basis for the next permit. Existing effluent quality is evaluated against the existing effluent limitations to determine if these should be continued, revised, or deleted. Generally, existing limitations are continued unless there are changed conditions at the facility, the facility demonstrates an ability to meet more stringent limitations, or in response to updated regulatory requirements. Pollutant monitoring data is also reviewed to determine the presence of additional contaminants that should be included in the permit based on a reasonable potential analysis to cause or contribute to a water quality standards violation.

#### Anti-backsliding

Anti-backsliding requirements are specified in the CWA sections 402(o) and 303(d)(4), ECL 17-0809, and regulations at 40 CFR 122.44(l) and 6 NYCRR 750-1.10(c) and (d). Generally, the relaxation of effluent limitations in permits is prohibited unless one of the specified exceptions applies, which will be cited on a case-by-case basis in this fact sheet. Consistent with current case law<sup>16</sup> and USEPA interpretation<sup>17</sup> anti-backsliding requirements do not apply should a revision to the final effluent limitation take effect before the scheduled date of compliance for that final effluent limitation.

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<sup>16</sup> American Iron and Steel Institute v. Environmental Protection Agency, 115 F.3d 979, 993 n.6 (D.C. Cir. 1997)

<sup>17</sup> U.S. EPA, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; 65 Fed. Reg. 31682, 31704 (May 18, 2000); Proposed Water Quality Guidance for the Great Lakes System, 58 Fed. Reg. 20802, 20837 & 20981 (April 16, 1993)

## Antidegradation Policy

New York State implements the antidegradation portion of the CWA based upon two documents: (1) Organization and Delegation Memorandum #85-40, "Water Quality Antidegradation Policy" (September 9, 1985); and, (2) TOGS 1.3.9, "Implementation of the NYSDEC Antidegradation Policy – Great Lakes Basin (Supplement to Antidegradation Policy dated September 9, 1985) (undated)." The permit for the facility contains effluent limitations which ensure that the existing best usage of the receiving waters will be maintained. To further support the antidegradation policy, SPDES applications have been reviewed in accordance with the State Environmental Quality Review Act (SEQR) as prescribed by 6 NYCRR Part 617.

## Effluent Limitations

In developing a permit, the Department determines the technology-based effluent limitations (TBELs) and then evaluates the water quality expected to result from technology controls to determine if any exceedances of water quality criteria in the receiving water might result. If there is a reasonable potential for exceedances of water quality criteria to occur, water quality-based effluent limitations (WQBELs) are developed. A WQBEL is designed to ensure that the water quality standards of receiving waters are met. In general, the CWA requires that the effluent limitations for a particular pollutant are the more stringent of either the TBEL or WQBEL.

### *Technology-based Effluent Limitations (TBELs)*

CWA sections 301(b)(1)(B) and 304(d)(1), 40 CFR 133.102, ECL section 17-0509, and 6 NYCRR 750-1.11 require technology-based controls, known as secondary treatment. These and other requirements are summarized in TOGS 1.3.3. Where the TBEL is more stringent than the WQBEL, the TBEL is applied as a limit in accordance with TOGS 1.3.3. Equivalent secondary treatment, as defined in 40 CFR 133.105, allow for effluent limitations of the more stringent of the consistently achievable concentrations or monthly/weekly averages of 45/65 mg/L, and the minimum monthly average of at least 65% removal. Consistently achievable concentrations are defined in 40 CFR 133.101(f) as the 95th percentile value for the 30-day (monthly) average effluent quality achieved by the facility in a period of two years. The achievable 7-day (weekly) average value is equal to 1.5 times the 30-day average value calculated above. Equivalent secondary treatment applies to those facilities where the principal treatment process is either a trickling filter or a waste stabilization pond; the treatment works provides significant biological treatment of municipal wastewater; and, the effluent concentrations consistently achievable through proper operation and maintenance of the facility cannot meet traditional secondary treatment requirements. There are no federal technology-based standards for toxic pollutants from POTWs. A statistical analysis of existing effluent data, as described in TOGS 1.2.1, may be used to establish other performance-based TBELs.

### *Water Quality-Based Effluent Limitations (WQBELs)*

In addition to the TBELs, permits must include additional or more stringent effluent limitations and conditions, including those necessary to protect water quality. CWA sections 101 and 301(b)(1)(C), 40 CFR 122.44(d)(1), and 6 NYCRR Parts 750-1.11 require that permits include limitations for all pollutants or parameters which are or may be discharged at a level which may cause or contribute to an exceedance of any State water quality standard adopted pursuant to NYS ECL 17-0301. Additionally, 6 NYCRR Part 701.1 prohibits the discharge of pollutants that will cause impairment of the best usages of the receiving water as specified by the water classifications at the location of discharge and at other locations that may be affected by such discharge. Water quality standards can be found under 6 NYCRR Parts 700-704. The limitations must be stringent enough to ensure that water quality standards are met at the point of discharge and in downstream waters and must be consistent with any applicable WLA which may be in effect through a TMDL for the receiving water. These and other requirements are summarized in TOGS 1.1.1, 1.3.1, 1.3.2, 1.3.5 and 1.3.6. The NYSDEC considers a mixing zone analysis, critical flows, and reasonable potential analysis when developing a WQBEL.

### *Mixing Zone Analyses*

In accordance with TOGS 1.3.1., the NYSDEC may perform additional analysis of the mixing condition between the effluent and the receiving waterbody. Mixing zone analyses using plume dispersion modeling are conducted in accordance with the following:

“USEPA Technical Support Document for Water Quality-Based Toxics Control” (March 1991); USEPA Region VIII’s “Mixing Zones and Dilution Policy” (December 1994); NYSDEC TOGS 1.3.1, “Total Maximum Daily Loads and Water Quality-Based Effluent Limitations” (July 1996); “CORMIX v11.0” (2019).

#### Critical Flows

In accordance with TOGS 1.2.1 and 1.3.1, WQBELs are developed using dilution ratios that relate the critical low flow condition of the receiving waterbody to the critical effluent flow. The critical low flow condition used in the dilution ratio will be different depending on whether the limitations are for aquatic or human health protection. For chronic aquatic protection, the critical low flow condition of the waterbody is typically represented by the 7Q10 flow and is calculated as the lowest average flow over a 7-day consecutive period within 10 years. For acute aquatic protection, the critical low flow condition is typically represented by the 1Q10 and is calculated as the lowest 1-day flow within 10 years. However, NYSDEC considers using 50% of the 7Q10 to be equivalent to the 1Q10 flow. For the protection of human health, the critical low flow condition is typically represented by the 30Q10 flow and is calculated as the lowest average flow over a 30-day consecutive period within 10 years. However, NYSDEC considers using 1.2 x 7Q10 to be equivalent to the 30Q10. The 7Q10 or 30Q10 flow is used with the critical effluent flow to calculate the dilution ratio. The critical effluent flow can be the maximum daily flow reported on the permit application, the maximum of the monthly average flows from discharge monitoring reports for the past three years, or the facility design flow. When more than one applicable standard exists for aquatic or human health protection for a specific pollutant, a reasonable potential analysis is conducted for each applicable standard and corresponding critical flow to ensure effluent limitations are sufficiently stringent to ensure all applicable water quality standards are met as required by 40 CFR 122.44(d)(1)(i). For brevity, the pollutant summary table reports the results of the most conservative scenario.

#### Reasonable Potential Analysis (RPA)

The Reasonable Potential Analysis (RPA) is a statistical estimation process, outlined in the 1991 USEPA Technical Support Document for Water Quality-based Toxics Control (TSD), Appendix E. This process uses existing effluent quality data and statistical variation methodology to project the maximum amounts of pollutants that could be discharged by the facility. This projected instream concentration (PIC) is calculated using the appropriate ratio and compared to the water quality standard (WQS). When the RPA process determines the WQS may be exceeded, a WQBEL is required. The procedure for developing WQBELs includes the following steps:

- 1) identify the pollutants present in the discharge(s) based upon existing data, sampling data collected by the permittee as part of the permit application or a short-term high intensity monitoring program, or data gathered by NYSDEC;
- 2) identify water quality criteria applicable to these pollutants;
- 3) determine if WQBELs are necessary (i.e. reasonable potential analysis (RPA)). The RPA will utilize the procedure outlined in Chapter 3.3.2 of EPA’s Technical Support Document (TSD). As outlined in the TSD, for parameters with limited effluent data the RPA may include multipliers to account for effluent variability; and,
- 4) calculate WQBELs (if necessary). Factors considered in calculating WQBELs include available dilution of effluent in the receiving water, receiving water chemistry, and other pollutant sources.

NYSDEC uses modeling tools to estimate the expected concentrations of the pollutant in the receiving water and develop WQBELs. These tools were developed in part using the methodology referenced above. If the estimated concentration of the pollutant in the receiving water is expected to exceed the ambient water quality standard or guidance value (i.e. numeric interpretation of a narrative water quality standard), then there is a reasonable potential that the discharge may cause or contribute to an exceedance of any State water quality standard adopted pursuant to

NYS ECL 17-0301. If a TMDL is in place, the facility's WLA for that pollutant is applied as the WQBEL.

For carbonaceous and nitrogenous oxygen demanding pollutants, NYSDEC uses a model which incorporates the Streeter-Phelps equation. The equation relates the decomposition of inorganic and organic materials along with oxygen reaeration rates to compute the downstream dissolved oxygen concentration for comparison to water quality standards.

The Division of Water has been using the TMDL approach in permit limit development for the control of toxic substances. Since the early 1980's, the loading capacity for specific pollutants has been determined for each drainage basin. Water quality-limiting segments and pollutants have been identified, TMDLs, wasteload allocations and load allocations have been developed, and permits with water quality-based effluent limits have been issued. In accordance with TOGS 1.3.1, the Division of Water implements a Toxics Reduction Strategy which is committed to the application of the TMDL process using numeric, pollutant-specific water quality standards through the Watershed Approach. The Watershed Approach accounts for the cumulative effect of multiple discharges of conservative toxic pollutants to ensure water quality standards are met in downstream segments.

#### *Whole Effluent Toxicity (WET) Testing:*

WET tests use small vertebrate and invertebrate species to measure the aggregate toxicity of an effluent. There are two different durations of toxicity tests: acute and chronic. Acute toxicity tests measure survival over a 96-hour test exposure period. Chronic toxicity tests measure reductions in survival, growth, and reproduction over a 7-day exposure. TOGS 1.3.1 includes guidance for determining when aquatic toxicity testing should be included in SPDES permits. The authority to require toxicity testing is in 6NYCRR 702.9. TOGS 1.3.2 describes the procedures which should be followed when determining whether to include toxicity testing in a SPDES permit and how to implement a toxicity testing program. Per TOGS 1.3.2, WET testing may be required when any one of the following seven criteria are applicable:

1. There is the presence of substances in the effluent for which ambient water quality criteria do not exist.
2. There are uncertainties in the development of TMDLs, WLAs, and WQBELs, caused by inadequate ambient and/or discharge data, high natural background concentrations of pollutants, available treatment technology, and other such factors.
3. There is the presence of substances for which WQBELs are below analytical detectability.
4. There is the possibility of complex synergistic or additive effects of chemicals, typically when the number of metals or organic compounds discharged by the permittee equals or exceeds five.
5. There are observed detrimental effects on the receiving water biota.
6. Previous WET testing indicated a problem.
7. POTWs which exceed a discharge of 1 MGD. Facilities of less than 1 MGD may be required to test, e.g., POTWs <1 MGD which are managing industrial pretreatment programs.

#### *Minimum Level of Detection*

Pursuant to 40 CFR 122.44(i)(1)(iv) and 6 NYCRR 750-2.5(d), SPDES permits must contain monitoring requirements using sufficiently sensitive test procedures approved under 40 CFR Part 136. A method is "sufficiently sensitive" when the method's minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant parameter; or the lowest ML of the analytical methods approved under 40 CFR Part 136. The ML represents the lowest level that can be measured within specified limitations of precision and accuracy during routine laboratory operations on most effluent matrices. When establishing effluent limitations for a specific parameter (based on technology or water quality requirements), it is possible that the calculated limitation will fall below the ML established by the approved analytical method(s). In these instances, the calculated limitation is included in the permit with a compliance level set equal to the ML of the most sensitive method.

## Monitoring Requirements

CWA section 308, 40 CFR 122.44(i), 6 NYCRR 750-1.13, and 750-2.5 require that monitoring be included in permits to determine compliance with effluent limitations. Additional effluent monitoring may also be required to gather data to determine if effluent limitations may be required. The permittee is responsible for conducting the monitoring and reporting results on Discharge Monitoring Reports (DMRs). The permit contains the monitoring requirements for the facility. Monitoring frequency is based on the minimum sampling necessary to adequately monitor the facility's performance and characterize the nature of the discharge of the monitored flow or pollutant. Variable effluent flows and pollutant levels may be required to be monitored at more frequent intervals than relatively constant effluent flow and pollutant levels (6 NYCRR 750-1.13). For industrial facilities, sampling frequency is based on guidance provided in TOGS 1.2.1. For municipal facilities, sampling frequency is based on guidance provided in TOGS 1.3.3.

## Requirements for Combined Sewer Overflows (CSOs)

Pollution from combined sewer overflows is controlled with implementation of SPDES permit conditions in accordance with the Division of Water CSO Control strategy (TOGS 1.6.3) and the USEPA CSO Control Policy issued April 11, 1994.

CWA Section 402(q) requires that each permit for a discharge from a municipal combined storm and sanitary sewer shall conform to EPA's Combined Sewer Overflow Control Policy.<sup>[1]</sup> The CSO Control Policy identifies specific requirements for Phase I and Phase II permits. Phase I permits must include requirements for the implementation of the Nine Minimum Controls (NMCs) and development of the Long-Term CSO Control Plan (LTCP).

The 15 CSO Best Management Practices (BMPs) required by NYS under TOGS 1.6.2 are equivalent to the "Nine Minimum Control Measures" required under the USEPA National Combined Sewer Overflow policy (33 USC section 1342(q)). BMPs are technology-based requirements developed in accordance with best professional judgement. These are largely non-structural measures which are designed to maximize pollutant capture and removal from the combined sewer system and the POTW as a whole.

Phase II permits must include requirements to implement the technology-based controls including the NMCs determined on a BPJ basis, as well as requirements which ensure that the selected CSO controls are implemented, operated, and maintained as described in the long-term CSO control plan (LTCP). These requirements are critical to meeting the objectives of the Policy, including to bring all CSO discharge points into compliance with the technology-based and water quality-based requirements of the CWA, and to minimize the water quality, aquatic biota, and human health impacts from CSOs.

Additionally, the 1994 CSO Control Policy requires permits include a requirement for CSO communities who have developed an approved LTCP to reassess overflows to sensitive areas in those cases where elimination or relocation of the overflows is not physically possible and economically achievable. The reassessment should be based on consideration of new or improved techniques to eliminate or relocate overflows or changed circumstance that influence economic achievability.

## Other Conditions

### Mercury

The multiple discharge variance (MDV) for mercury was developed in accordance with 6 NYCRR 702.17(h) "to address widespread standard or guidance value attainment issues including the presence of a ubiquitous pollutant or naturally high levels of a pollutant in a watershed." The first MDV was issued in October 2010, and subsequently revised and reissued in 2015; each subsequent iteration of the MDV is designed to build off the previous version, to make reasonable progress towards the water quality standard (WQS) of 0.7 ng/L dissolved mercury. The MDV is necessary because human-caused conditions or sources of mercury prevent attainment of the WQS and cannot be remedied (i.e., mercury is ubiquitous in New York waters at levels above the WQS and compliance with a water quality based effluent limitation (WQBEL) for mercury cannot be achieved with

<sup>[1]</sup> Available at <https://www.epa.gov/sites/production/files/2015-10/documents/owm0111.pdf>

demonstrated effluent treatment technologies). The NYSDEC has determined that the MDV is consistent with the protection of public health, safety, and welfare. During the effective period of this MDV, any increased risks to human health are mitigated by fish consumption advisories issued periodically by the NYSDOH.

All surface water SPDES permittees are eligible for authorization by the MDV provided they meet the requirements specified in DOW 1.3.10.

### Schedules of Compliance

Schedules of compliance are included in accordance with 40 CFR Part 132 Attachment F, Procedure 9, 40 CFR 122.47 and 6 NYCRR 750-1.14. Schedules of compliance are intended to, in the shortest reasonable time, achieve compliance with applicable effluent standards and limitations, water quality standards, and other applicable requirements. Where the time for compliance is more than nine months, the schedule of compliance must include interim requirements and dates for their achievement. If the time necessary to complete the interim milestones is more than nine months, and not readily divisible into stages for completion, progress reports must be required.

### Schedule(s) of Additional Submittals

Schedules of Additional Submittals are used to summarize the deliverables required by the permit not identified in a separate Schedule of Compliance.

### Pollutant Minimization Programs

Pollutant Minimization Programs are included when a pollutant is being discharged from the facility at detectable levels and the ML for the most sensitive method is greater than the calculated WQBEL. These programs typically include an on-going potential source identification, evaluation, and prioritization program to demonstrate progress towards meeting the goal of the WQBEL. Pollutant Minimization Plan requirements are based on 40 CFR Part 132 Appendix F Procedure 8, 6 NYCRR 750-1.13(a) and 750-1.14(f), and TOGS 1.2.1.