



Department of
Environmental
Conservation

State Pollutant Discharge Elimination System (SPDES) DISCHARGE PERMIT

SIC Code:	4952	NAICS Code:	221320	SPDES Number:	NY0029971
Discharge Class (CL):	07	DEC Number:	3-5522-00007/00002		
Toxic Class (TX):	T	Effective Date (EDP):	EDP		
Major-Sub Drainage Basin:	13 - 01	Expiration Date (ExDP):	ExDP		
Water Index Number:	H	Item No.:	864 - 2	Modification Dates (EDPM):	
Compact Area:	IEC				

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:	Village of Buchanan			Attention:	Marcus Serrano
Street:	236 Tate Avenue			Village Administrator	
City:	Buchanan			State:	NY
				Zip Code:	10511
Email:	mserrano@buchananny.gov			Phone:	914-737-1033

is authorized to discharge from the facility described below:

FACILITY NAME, ADDRESS, AND PRIMARY OUTFALL									
Name:	Village of Buchanan Wastewater Treatment Plant								
Address / Location:	10 Greentown Rd					County:	Westchester		
City:	Buchanan				State:	NY	Zip Code:	10511	
Facility Location:	Latitude:	41 °	16 '	13.6 " N	& Longitude:	73 °	56 '	23.3 " W	
Primary Outfall No.:	001	Latitude:	41 °	16 '	24.8 " N	& Longitude:	73 °	56 '	36.4 " W
Outfall Description:	Treated Sanitary		Receiving Water:	Hudson River			Class:	SB	Standard: SB

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
Erik Posner; DEC Division of Water
DEC Region 3 Regional Water Engineer
Lorraine Gregor; DEC Division of Water
George Pommer; Hahn Engineering
EPA Region II
Westchester County DOH

Permit Administrator:	
Address:	
Signature	Date

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

0.5 MGD Existing Flow

OUTFALL	LIMITATIONS APPLY	RECEIVING WATER	EFFECTIVE	EXPIRING
001 0.5 MGD Existing Flow	All Year	Hudson River	EDP	Upon commencement of 0.75 MGD expansion operation

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.	Eff.	
Flow	Monthly Average	0.5	MGD	-	-	Continuous	Recorder	X		
pH	Daily Minimum	6.0	SU	-	-	1/day	Grab	X	X	
	Daily Maximum	9.0	SU	-	-					
Temperature	Daily Maximum	Monitor	°F	-	-	1/day	Grab	X	X	
BOD ₅	Monthly Average	30	mg/L	125	lbs/d	2/month	6-hr. Comp.	X	X	1,5
BOD ₅	7-Day Average	45	mg/L	188	lbs/d	2/month	6-hr. Comp.		X	1,5
BOD ₅	6-cons. hr. sample mean	50	mg/L	-	-	-	-		X	2
Total Suspended Solids (TSS)	Monthly Average	30	mg/L	125	lbs/d	2/month	6-hr. Comp.	X	X	1,5
Total Suspended Solids (TSS)	7-Day Average	45	mg/L	188	lbs/d	2/month	6-hr. Comp.		X	1,5
Total Suspended Solids (TSS)	6-cons. hr. sample mean	50	mg/L	-	-	-	-		X	2
Settleable Solids	Daily Maximum	0.3	mL/L	-	-	2/month	Grab		X	
Ammonia (as N) June 1 st – October 31 st	Monthly Average	Monitor	mg/L	-	-	2/month	6-hr. Comp.		X	5
Ammonia (as N) November 1 st – May 31 st	Monthly Average	Monitor	mg/L	-	-	2/month	6-hr. Comp.		X	5
Nitrate & Nitrite	Monthly Average	Monitor	mg/L	-	-	2/month	6-hr. Comp.		X	3,5

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	-	-	1/week	Grab		X	
Coliform, Fecal	7-Day Geometric Mean	400	No./ 100 mL	-	-	1/week	Grab		X	
Coliform, Fecal	6-hr. Geometric Mean	800	No./ 100 mL	-	-	-	Grab		X	2
Coliform, Fecal	Individual Sample	2,400	No./ 100 mL	-	-	-	-		X	2
Enterococcus	30-Day Geometric Mean	35	No./ 100 mL	-	-	1/week	Grab		X	10
Enterococcus	Daily Maximum	Monitor	No./ 100 mL	-	-	1/week	Grab		X	
Chlorine, Total Residual	Daily Maximum	0.17	mg/L	-	-	1/day	Grab		X	4
WHOLE EFFLUENT TOXICITY (WET) TESTING		Limit	Units	Action Level	Units	Sample Frequency	Sample Type	Inf.	Eff.	FN
WET - Acute Invertebrate	See footnote	-	-	23	TUa	1/quarter	See footnote		X	6,8
WET - Acute Vertebrate	See footnote	-	-	23	TUa	1/quarter	See footnote		X	6,8
WET - Chronic Invertebrate	See footnote	-	-	33	TUc	1/quarter	See footnote		X	6,8
WET - Chronic Vertebrate	See footnote	-	-	33	TUc	1/quarter	See footnote		X	6,8

0.75 MGD Expansion

OUTFALL	LIMITATIONS APPLY	RECEIVING WATER	EFFECTIVE	EXPIRING
001 0.75 MGD Expansion	All Year	Hudson River	Upon commencement of operation	ExDP

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.	Eff.	
Flow	Monthly Average	0.75	MGD	-	-	Continuous	Recorder	X		
pH	Daily Minimum	6.0	SU	-	-	1/day	Grab	X	X	
	Daily Maximum	9.0	SU	-	-					
Temperature	Daily Maximum	Monitor	°F	-	-	1/day	Grab	X	X	
BOD ₅	Monthly Average	30	mg/L	188	lbs/d	2/month	6-hr. Comp.	X	X	1,5
BOD ₅	7-Day Average	45	mg/L	281	lbs/d	2/month	6-hr. Comp.		X	1,5
BOD ₅	6-cons. hr. sample mean	50	mg/L	-	-	-	-		X	2
Total Suspended Solids (TSS)	Monthly Average	30	mg/L	188	lbs/d	2/month	6-hr. Comp.	X	X	1,5
Total Suspended Solids (TSS)	7-Day Average	45	mg/L	281	lbs/d	2/month	6-hr. Comp.		X	5
Total Suspended Solids (TSS)	6-cons. hr. sample mean	50	mg/L	-	-	-	-		X	2
Settleable Solids	Daily Maximum	0.3	mL/L	-	-	2/month	Grab		X	
Ammonia (as N) June 1 st – October 31 st	Monthly Average	Monitor	mg/L	-	-	2/month	6-hr. Comp.		X	5
Ammonia (as N) November 1 st – May 31 st	Monthly Average	Monitor	mg/L	-	-	2/month	6-hr. Comp.		X	5
Nitrate & Nitrite	Monthly Average	Monitor	mg/L	-	-	2/month	6-hr. Comp.		X	3,5
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	-	-	1/week	Grab		X	
Coliform, Fecal	7-Day Geometric Mean	400	No./100 mL	-	-	1/week	Grab		X	
Coliform, Fecal	6-hr. Geometric Mean	800	No./100 mL	-	-	-	Grab		X	2
Coliform, Fecal	Individual Sample	2,400	No./100 mL	-	-	-	-		X	2
Enterococcus	30-Day Geometric Mean	35	No./100 mL	-	-	1/week	Grab		X	
Enterococcus	Daily Maximum	Monitor	No./100 mL	-	-	1/week	Grab		X	
Chlorine, Total Residual	Daily Maximum	0.17	mg/L	-	-	1/day	Grab		X	4

WHOLE EFFLUENT TOXICITY (WET) TESTING		Limit	Units	Action Level	Units	Sample Frequency	Sample Type	Inf.	Eff.	FN
WET - Acute Invertebrate	See footnote	-	-	18	TUa	1/quarter	See footnote		X	6,8
WET - Acute Vertebrate	See footnote	-	-	18	TUa	1/quarter	See footnote		X	6,8
WET - Chronic Invertebrate	See footnote	-	-	23	TUc	1/quarter	See footnote		X	6,8
WET - Chronic Vertebrate	See footnote	-	-	23	TUc	1/quarter	See footnote		X	6,8

Emerging Contaminants Requirements: Existing Flow & Expansion

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

EMERGING CONTAMINANTS		Limit	Units	Action Level	Units	Sample Frequency	Sample Type	Inf.	Eff.	FN
OUTFALL 001										
Perfluorobutanoic Acid (PFBA) CAS No. 375-22-4 DMR Code: 51522	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
Perfluoropentanoic Acid (PFPeA) CAS No. 2706-90-3 DMR Code: 51623	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
Perfluorohexanoic Acid (PFHxA) CAS No. 307-24-4 DMR Code: 51624	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
Perfluoroheptanoic Acid (PFHpA) CAS No. 375-85-9 DMR Code: 51625	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
Perfluorooctanoic Acid (PFOA) CAS No. 335-67-1 DMR Code: 51521	Daily Maximum	-	-	10	ng/L	1/quarter	Grab		X	6,7,9
Perfluoro-nonanoic Acid (PFNA) CAS No. 375-95-1 DMR Code: 51626	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
Perfluoro-decanoic Acid (PFDA) CAS No. 335-76-2 DMR Code: 51627	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
Perfluoroundecanoic Acid (PFUnA) CAS No. 2058-94-8 DMR Code: 51628	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
Perfluorododecanoic Acid (PFDoA) CAS No. 307-55-1 DMR Code: 51629	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
Perfluorotridecanoic Acid (PFTriA) CAS No. 72629-94-8 DMR Code: 51630	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
Perfluorotetradecanoic Acid (PFTeA) CAS No. 376-06-7 DMR Code: 51631	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
Perfluorobutanesulfonic Acid (PFBS) CAS No. 375-73-5 DMR Code: 52602	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
Perfluoropentanesulfonic Acid (PFPeS) CAS No. 2706-91-4 DMR Code: 52610	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
Perfluorohexanesulfonic Acid (PFHxS) CAS No. 355-46-4 DMR Code: 52605	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
Perfluoroheptanesulfonic Acid (PFHpS) CAS No. 375-92-8 DMR Code: 52604	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9

EMERGING CONTAMINANTS		Limit	Units	Action Level	Units	Sample Frequency	Sample Type	Inf.	Eff.	FN
OUTFALL 001										
Perfluorooctanesulfonic Acid (PFOS) CAS No. 1763-23-1 DMR Code: 52606	Daily Maximum	-	-	10	ng/L	1/quarter	Grab		X	6,7,9
Perfluorononanesulfonic Acid (PFNS) CAS No. 68259-12-1 DMR Code: 52611	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
Perfluorodecanesulfonic Acid (PFDS) CAS No. 335-77-3 DMR Code: 52603	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
Perfluorododecanesulfonic Acid (PFDoS) CAS No. 79780-39-5 DMR Code: 52632	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
Perfluorooctanesulfonamide (FOSA) CAS No. 754-91-6 DMR Code: 51525	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA) CAS No. 2355-31-9 DMR Code: 51644	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA) CAS No. 2991-50-6 DMR Code: 51643	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
1H,1H,2H,2H-Fluorotelomer Sulfonic Acid (4:2 FTS) CAS No. 757124-72-4 DMR Code: 52607	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
1H,1H,2H,2H- Fluorotelomer Sulfonic Acid (6:2 FTS) CAS No. 27619-97-2 DMR Code: 52608	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
1H,1H,2H,2H- Fluorotelomer Sulfonic Acid (8:2 FTS) CAS No. 39108-34-4 DMR Code: 52609	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
N-ethyl Perfluorooctanesulfonamide (NEtFOSA) CAS No. 4151-50-2 DMR Code: 52642	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA) CAS No. 31506-32-8 DMR Code: 52641	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE) CAS No. 24448-09-7 DMR Code: 51642	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE) CAS No. 1691-99-2 DMR Code: 51641	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS) CAS No. 756426-58-1 DMR Code: PF003	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9

EMERGING CONTAMINANTS		Limit	Units	Action Level	Units	Sample Frequency	Sample Type	Inf.	Eff.	FN
OUTFALL 001										
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA or GenX) CAS No. 13252-13-6 DMR Code: 52612	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11CI-PF3OUdS) CAS No. 763051-92-9 DMR Code: PF004	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA) CAS No. 919005-14-4 DMR Code: 52636	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
3-Perfluoropropyl Propanoic Acid (3:3FTCA) CAS No. 356-02-5 DMR Code: PF001	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA) CAS No. 914637-49-3 DMR Code: PF007	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
3-Perfluoroheptyl Propanoic Acid (7:3FTCA) CAS No. 812-70-4 DMR Code: PF005	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
Nonafluoro-3,6-dioxaheptanoic Acid (NFDHA) CAS No. 151772-58-6 DMR Code: 52626	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
Perfluoro-4-Methoxybutanoic Acid (PFMBA) CAS No. 863090-89-5 DMR Code: PF006	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
Perfluoro-3-Methoxypropanoic Acid (PFMPA) CAS No. 377-73-1 DMR Code: PF002	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEEESA) CAS No. 113507-82-7 DMR Code: 52629	Daily Maximum	Monitor	ng/L	-	-	1/quarter	Grab		X	6,7,9

FOOTNOTES:

1. Effluent shall not exceed 15% and 15% of influent concentration values for BOD₅ & TSS respectively.
2. This is an Interstate Environmental Commission (IEC) requirement. The permittee is not required to perform this sampling but shall be required to meet the permit limit at all times. EPA, DEC or IEC may perform the sampling.
3. Nitrate & Nitrite shall be reported as the sum of total nitrate and total nitrite.
4. 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.
5. At least 8 individual manual grab samples must be collected over the course of 6 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.

6. Quarterly samples shall be collected in calendar quarters (Q1 – January 1st to March 31st; Q2 – April 1st to June 30th; Q3 – July 1st to September 30th; Q4 – October 1st to December 31st).
7. All PFAS compound sampling shall use EPA Method 1633/1633A. Note that "DMR code" corresponds to the 5-digit code displayed in the top left of each parameter line on the DMR page within NetDMR.
8. **Whole Effluent Toxicity (WET) Testing:**

Testing Requirements – Acute and if directed Chronic WET testing is required. 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 *Americamysis bahia* (mysid shrimp - invertebrate) and *Cyprinodon variegatus* (sheepshead minnow - vertebrate). Artificial salt water 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.

05. MGD Existing Flow: The ratio of critical receiving water flow to discharge flow (i.e. dilution ratio) is 23:1 for acute, and 33:1 for chronic.

0.75 MGD Expansion Flow: The ratio of critical receiving water flow to discharge flow (i.e. dilution ratio) is 18:1 for acute, and 23:1 for chronic.

Monitoring Period - WET testing shall be performed quarterly (calendar quarters) during calendar years ending in 3 and 8.

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 TU_c . For Acute results, report a TU_a of 0.3 if there is no statistically significant mortality in 100% effluent as compared to the control. Report a TU_a 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 TU_a for the Chronic prediction from the Acute data, and report a TU_c 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 email address. A summary page of the test results for the invertebrate and vertebrate species indicating TU_a , 48-hr LC50 for Acute tests and/or TU_c , 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.

9. Emerging Contaminants Action Level: The permittee must collect one (1) confirmatory sample within seven (7) days of receiving the test result(s) when an Action Level is exceeded. If confirmed exceedance, the permittee must notify DEC at emergingcontaminantsdow@dec.ny.gov and initiate minimization program and continuous

reporting as outlined in the Schedule of Additional Submittals. Upon initiation of the minimization program, confirmatory sampling is no longer required when an Action Level is exceeded. If the reporting limit (RL) exceeds the Action Level, and the laboratory method shows no detection, the permittee must provide the DEC with documentation from the laboratory supporting the RL, including the basis for any matrix interference or method limitations.

10. This is a final effluent limitation. See Schedule of Compliance for any applicable interim effluent limitations.

DRAFT

MERCURY MINIMIZATION PROGRAM (MMP) - Type IV

On January 1, 2026, the permittee submitted a Conditional Exclusion Certification, certifying that the facility does not have any of the mercury sources listed in Part III.E. of DOW 1.3.10.

1. General – To reduce mercury effluent levels with the goal of achieving the water quality standard of 0.7 ng/L, the permittee must develop, implement, and maintain a written MMP plan, which includes the elements set forth below.
2. Conditional Exclusion Certification – A certification (Appendix C of DOW 1.3.10), signed in accordance with 6 NYCRR 750-1.8, must be submitted once every 5 years to the Regional Water Engineer and to the Bureau of Water Permits, certifying that the facility is neither a mercury source nor receives flows from a mercury source. Criteria to determine if a facility has a mercury source are as follows:
 - The facility is, or receives flow from, a Combined Sewer System (CSS) or sanitary sewer system with Type II Sanitary Sewer Overflows (SSO¹);
 - One or more effluent samples exceed 12 ng/L, including samples taken as a result of the SPDES application process;
 - Internal or tributary waste stream samples exceed the GLCA effluent limitation and the final effluent samples are less than the GLCA due primarily to dilution by uncontaminated or less contaminated waste streams. Both components of this criterion may include samples taken as a result of the SPDES application process;
 - A SPDES permit application, or other information, indicates that mercury is handled on-site and could be discharged through outfalls;
 - Existence of outfalls that contain legacy mercury contamination;
 - The facility's collection system receives discharges from a dental and/or Categorical Industrial User (CIU²) that may discharge mercury;
 - The facility accepts hauled wastes; OR,
 - The facility is defined as a categorical industry that may discharge mercury. This may also include dentists, universities, hospitals, or laboratories, which have their own individual SPDES permit.
3. Control Strategy – develop and implement with the following minimum elements:
 - a. 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.
 - b. Bulk Chemical Evaluation – for chemicals used at a rate which exceeds 1,000 gallons/year or 10,000 pounds/year, the permittee must obtain:
 - i. A manufacturer's certificate of analysis;
 - ii. A chemical analysis performed by a certified laboratory; OR,
 - iii. A notarized affidavit that describes the substances' mercury concentration and the detection limit achieved.

Where practicable, the permittee must only use bulk chemicals in the wastewater treatment process which contain <10 parts per billion (ppb) of mercury.

¹ These are Overflow Retention Facilities (ORFs) and are included under the 05 and 07 permit classifications.

² CIUs include those listed under Federal Regulation in 40 CFR Parts 405–471.

MERCURY MINIMIZATION PROGRAM (MMP) – Type IV (Continued)

4. Status Report – An **annual** status report must be developed, in accordance with the [Schedule of Additional Submittals](#), summarizing:
- Review of criteria to determine if the facility has a potential mercury source;
 - All actions undertaken, pursuant to the control strategy, during the previous year; and
 - Actions planned, pursuant to the control strategy, for the upcoming year.

The first status report is due in accordance with the Schedule of Additional Submittals. The permittee must maintain a file on-site with all MMP documentation.

5. MMP Modification – the permittee must submit a permittee-initiated modification request to DEC whenever:
- Changes at the facility, or within the collection system, increase the potential for mercury discharges; OR,
 - A letter from DEC identifies inadequacies in the MMP.

The permittee may use information in the status reports, as applicable in accordance with item 3 of this MMP, as a basis for the permittee-initiated modification.

DEFINITIONS:

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.

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:

N.Y.S. PERMITTED DISCHARGE POINT

SPDES PERMIT No.: NY_____

OUTFALL No. : _____

For information about this permitted discharge contact:

Permittee Name: _____

Permittee Contact: _____

Permittee Phone: () - ### - #####

OR:

NYSDEC Division of Water Regional Office Address:

NYSDEC Division of Water Regional Phone: () - ### - #####

- (e) The permittee shall provide for public review at the business office repository of the permittee or at the off-premises location of its choice, provided the custodian of the off-premise location grants written permission, (such off-premise location shall be the village, town, city or county clerk's office, local library or other location accessible by the public) all the Discharge Monitoring Reports (DMR) prepared by the permittee to demonstrate compliance with the SPDES permit conditions. A copy of each DMR shall be placed on file at such location at the same time it is sent to the department, or within 60 days of preparation for DMRs not required to be submitted to the Department. 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).
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, 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 SIUs.
2. Enforce the local limits set forth in the POTW local sewer use law.
3. Carry out inspections and monitoring of SIUs 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 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 ³
001	<u>FINAL COMPLIANCE for ENTEROCOCCUS</u> The permittee shall meet the final effluent limit for enterococcus.	EDP+24 months or upon commencement of operation of the expanded facility, whichever is first
Unless noted otherwise, the above actions are one-time requirements.		
See the table below for Interim Effluent Limits.		

OUTFALL	EXPIRING
001	EDP+24 months or upon commencement of operation of the expanded facility, whichever is first

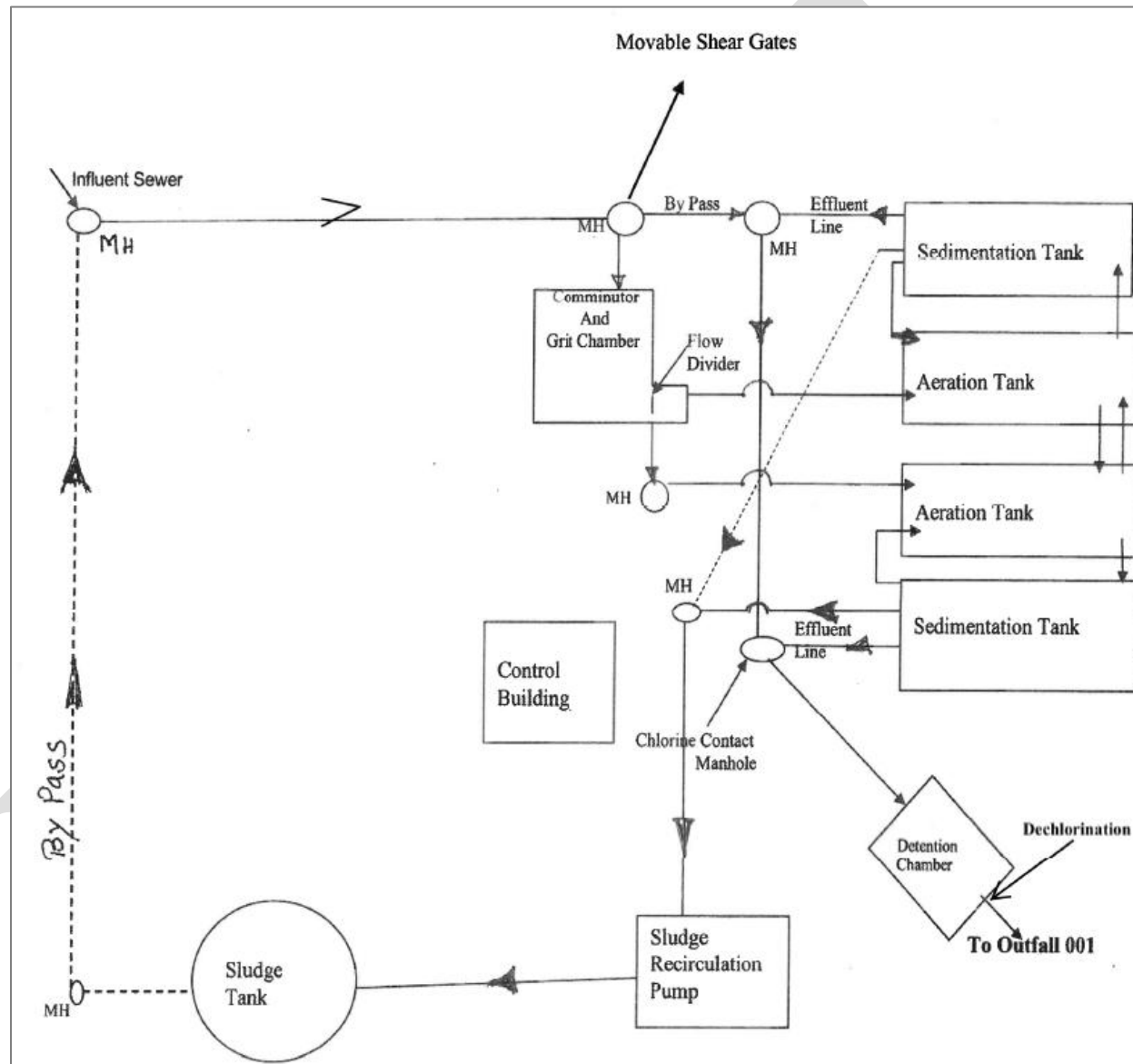
PARAMETER	INTERIM EFFLUENT LIMIT					MONITORING REQUIREMENTS				Notes
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.	Eff.	
Enterococcus	30-day Geo. Mean	Monitor	No./100 mL	-	-	1/Week	Grab	-	X	
Notes:										

- 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 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.

³ 6 NYCRR 750-1.14 (a)

MONITORING LOCATIONS

The permittee shall take samples and measurements, to comply with the monitoring requirements specified in this permit, at the locations(s) 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)(98) & 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
1. In accordance with 6 NYCRR 750-2.7, the permittee shall give notice to the DEC at least 45 days prior to planned physical alterations or additions to the permitted facility when:
 - a. 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
 - b. 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
 - c. 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 series.

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 under the current permit. 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 6 NYCRR 750-2.5(e). NYSDEC has made available the DMR Manual on the website as a reference to assist permittees with completing DMR's.

DMRs must be submitted electronically using the electronic reporting tool (NetDMR) specified by DEC. Instructions on the use of NetDMR can be found at: [How To Complete And Submit Discharge Monitoring Reports \(DMRs\) - NYSDEC](#). **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 electronically 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
SPDESApp@dec.ny.gov

Phone: (518) 402-8111

Department of Environmental Conservation
Regional Water Engineer, Region 3
220 White Plains Road, Suite 110, Tarrytown, New York, 10591,
dow.r3@dec.ny.gov

Phone: (914) 803-8157

- 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:

SCHEDULE OF ADDITIONAL SUBMITTALS		
Outfall(s)	Required Action	Due Date
	INTERIM PROGRESS REPORT ⁴ The permittee shall provide a status update on the <i>Preliminary Engineering Report</i> .	EDP + 9 Months

⁴ 6 NYCRR 750-1.14 (b)

SCHEDULE OF ADDITIONAL SUBMITTALS		
Outfall(s)	Required Action	Due Date
	COMPLETE CONSTRUCTION The permittee shall provide a Construction Completion Certification ⁵ to the DEC (send to the Regional Water Engineer and NetDMR@dec.ny.gov) that the disposal system has been fully completed in accordance with the approved Design Documents.	EDP + 54 Months
	COMMENCE OPERATION Following receipt of DEC acceptance of the Construction Completion Certification, the permittee shall comply with the final effluent limitation(s) described in this permit for <i>XYZ Pollutant</i> .	Upon Department Acceptance
	<u>WATER TREATMENT CHEMICAL (WTC) ANNUAL REPORT FORM</u> 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.	December DMR (January 28 th)
	<u>EMERGING CONTAMINANT (EC) MINIMIZATION PROGRAM</u> The permittee shall initiate track down of potential sources by utilizing the "Emerging Contaminants Investigation Checklist for POTWs" available at Emerging Contaminants In NY's Waters - NYSDEC . The permittee shall continue track down of potential sources and submit reports summarizing: - All EC monitoring results taken to date; - A list of likely EC sources; - All actions taken to reduce EC contaminants; and - Proposed next steps, including a monitoring plan to identify/confirm EC sources, and ensure continued progress towards minimization/eliminating contaminants. *Reports no longer required once effluent falls below action levels for at least 12 months or until further notified by the DEC.	Confirmation of initial Action Level exceedance 12 months after confirmation of initial Action Level exceedance, and every 6 months thereafter*
	<u>ANNUAL FLOW CERTIFICATION</u> 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.	February DMR (March 28 th)
	<u>ANNUAL EMERGENCY RESPONSE PLAN CERTIFICATION</u> The permittee shall submit a certification of compliance with the Emergency Response Plan requirements in accordance with 6 NYCRR 750-2.9(d) and (f). The form shall be submitted electronically using a NYSDEC approved form.	March 28 th , each year
	<u>ANNUAL CYBERSECURITY CONTROLS CERTIFICATION</u> The permittee shall submit a certification of compliance with the cybersecurity controls requirements in accordance with 6 NYCRR 750-2.9(e) and (f). The form shall be submitted electronically using a NYSDEC approved form.	March 28 th , each year
	<u>WHOLE EFFLUENT TOXICITY (WET) TESTING</u> 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 WET@dec.ny.gov email address.	Within 60 days following the end of each monitoring period

⁵ 6 NYCRR 750-2.10 (c)

SCHEDULE OF ADDITIONAL SUBMITTALS		
Outfall(s)	Required Action	Due Date
	<u>MERCURY - CONDITIONAL EXCLUSION CERTIFICATION</u> The permittee must submit a mercury conditional exclusion certification every five years in order to maintain MMP Type IV status. As part of the certification the permittee will be required to sample the effluent and measure <12 ng/L.	01/02/2031, and every 5 years thereafter
	<u>MERCURY MINIMIZATION PLAN</u> The permittee must complete and maintain onsite a mercury minimization plan and subsequent annual mercury minimization status reports in accordance with the requirements of this permit.	Maintained Onsite EDP + 12 months, annually thereafter
	<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.	February 28 th of each year
	<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.	February 28 th 2027 and every three years thereafter
	<u>SHORT-TERM HIGH-INTENSITY MONITORING PROGRAM: Total Copper and Free Cyanide</u> The permittee shall collect 24 samples representative of normal discharge conditions and treatment operations over 2 years for Total Copper and Free Cyanide. The permittee shall use approved EPA analytical method with the lowest possible detection limit as promulgated under 40 CFR Part 136 for the determination of the concentrations of parameters listed. The permittee shall submit a summary of the results.	EDP + 30 months

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.

Permittee: Village of Buchanan
Facility: Buchanan WWTP
SPDES Number: NY0029971
USEPA Non-Major/Class 07 Municipal

Date: **Date** v.1.41
Permit Writer: Erik Posner
Water Quality Reviewer: Erik Posner
Full Technical Review

SPDES Permit Fact Sheet

Village of Buchanan

Buchanan WWTP

NY0029971



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Permittee: Village of Buchanan
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Summary of Permit Changes

A State Pollutant Discharge Elimination System (SPDES) permittee-initiated permit modification has been drafted for the Buchanan WWTP. The changes to the permit are summarized below:

- Updated permit format, definitions, and general conditions
- Toxic Class changed from “N” (no) to “T” (toxic) due to the presence of parameters in 6 NYCRR 703.5
- Changed fecal coliform 30-day geometric mean sample frequency from 5/month to 1/week
- Corrected the units for fecal coliform 6-hr. geometric mean and individual sample to No./100 mL
- Added permit limits for enterococcus, with a compliance schedule to provide time to meet the new limits
- Added WET testing, as required for POTWs with pretreatment programs
- Added monitoring for Ammonia (As N) and Nitrate & Nitrite, as required for POTWs discharging to saline waters
- Added additional permit limits table for planned expansion to 0.75 MGD
- Added permit monitoring requirements emerging contaminants, with action levels for PFOA (10 ng/L) and PFOS (10 ng/L)
- Added type IV mercury minimization program
- Schedule of Compliance items were added for the planning, design and construction of the facility expansion to 0.75 MGD:
 - Preliminary Engineering Report
 - Design Documents
 - Complete Construction
 - Commence Operation
- Added Schedule of Additional Submittal items:
 - Water treatment chemical annual report form
 - Annual flow certification
 - Annual emergency response plan certification
 - Annual cybersecurity controls certification
 - Whole effluent toxicity testing
 - Mercury conditional exclusion certification
 - Mercury minimization plan
 - Mini-Industrial pretreatment program – FROSI
 - Mini-Industrial pretreatment program – Industrial chemical survey 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

10/1/2008 The last full technical review was performed and the SPDES permit became effective with a new five-year term and expiration date of 9/30/2013. The 2008 permit, along with all subsequent modifications, has formed the basis of this permit.

The permit was administratively renewed in 2013, 2018 and 2023. The current permit administrative renewal was effective until 10/31/2028.

12/1/2011 The permit was modified to include:

- Permittee and facility names and addresses were updated
- Footnotes for the Permit Limits, Levels and Monitoring pages were updated and reordered
- Short Term High Intensity Monitoring (STHIM) for ammonia was added
- STHIM for chromium, copper, nickel and zinc was added
- The Total Residual Chlorine limit was lowered from 0.5 mg/L to 0.17 mg/L, and included a compliance schedule to meet the new limit
- Disinfection was changed from seasonal to all year
- A mini-pretreatment program was added
- The compliance date for the ammonia STHIM was changed from 8/1/2012 to 9/15/2012

6/1/2022 The Village of Buchanan submitted a request to modify the permit to expand the design flow from 0.5 MGD to 0.75 MGD.

12/29/2025 The Village of Buchanan 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 that receives flow from domestic and significant industrial users, with effluent consisting of treated sanitary wastewater and wastewater from a sludge dewatering facility. The collection system consists of separate sewers. The facility accepts flow from significant industrial users (SIUs).

The current 0.5 MGD treatment plant consists of:

- Bar screens, comminutor
- Aeration tanks
- Final clarification tanks
- Activated sludge
- Chlorine gas disinfection and sodium bisulfite dechlorination

Sludge is hauled offsite.

The primary outfall (Outfall 001) is a fully submerged 16-inch diameter single pipe that is located approximately 60 feet offshore in the Hudson River (Lents Cove).

The facility is planning the following upgrades/improvements:

- Expanding the monthly average design flow to 0.75 MGD
- Installation of a fine bubble diffusion aeration system

The facility accepts wastewater from the following municipalities:

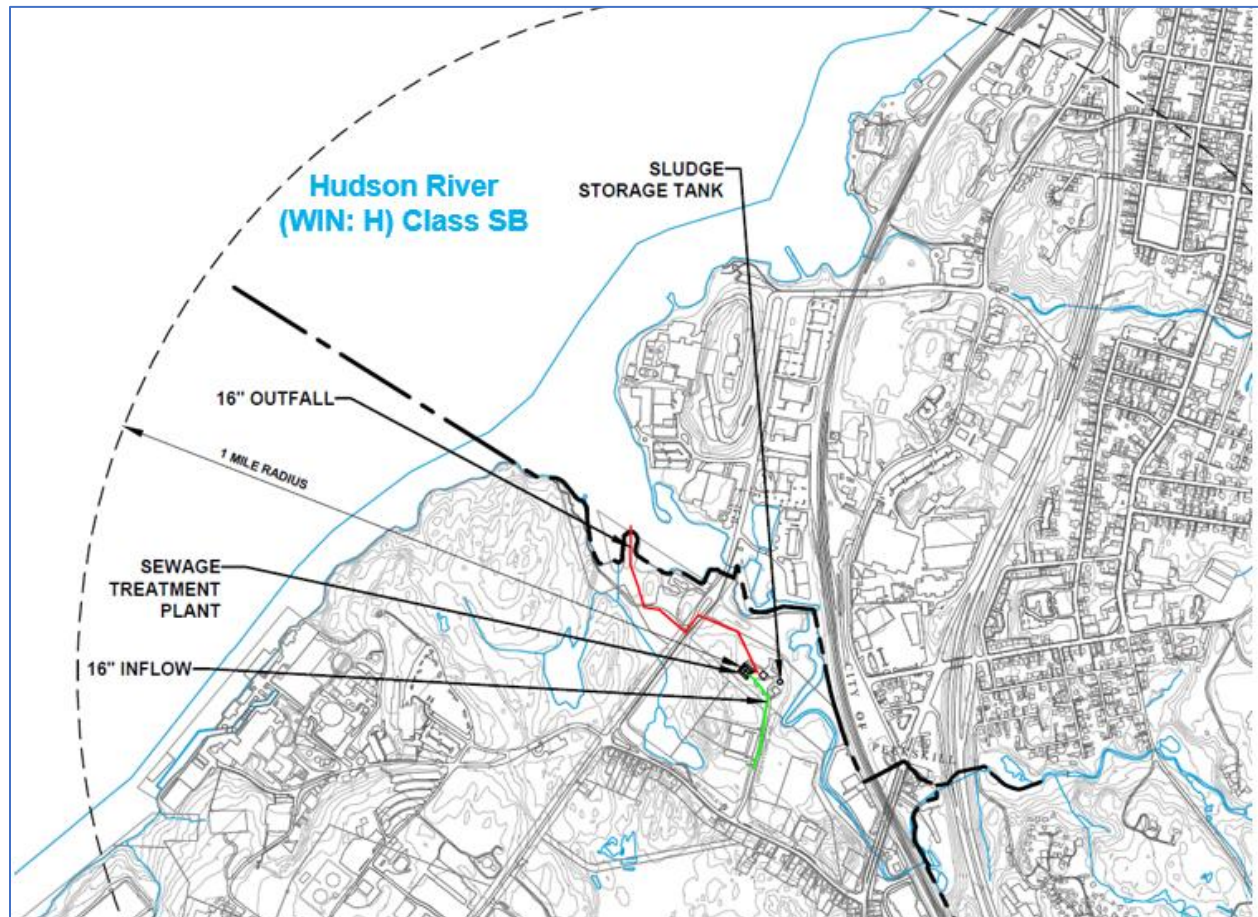
Municipality	POSS # or SPDES #	Collection System
Village of Buchanan	NY0029971	Separate

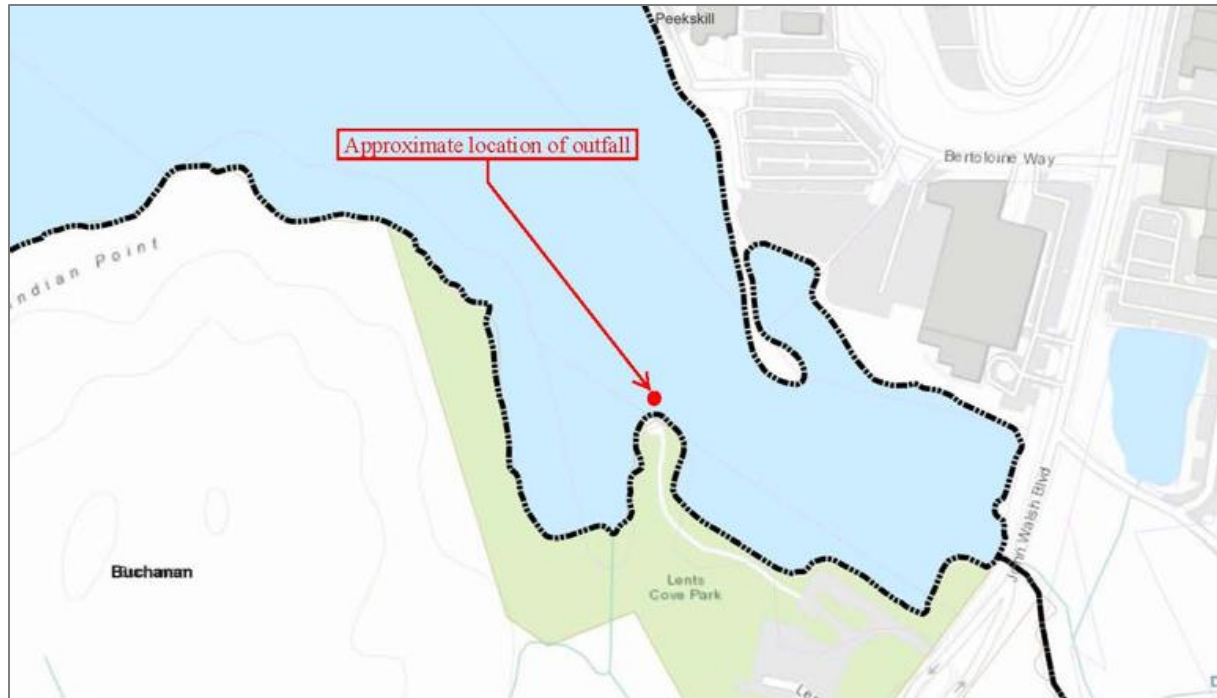
The facility accepts wastewater from the following significant industrial users (SIUs):

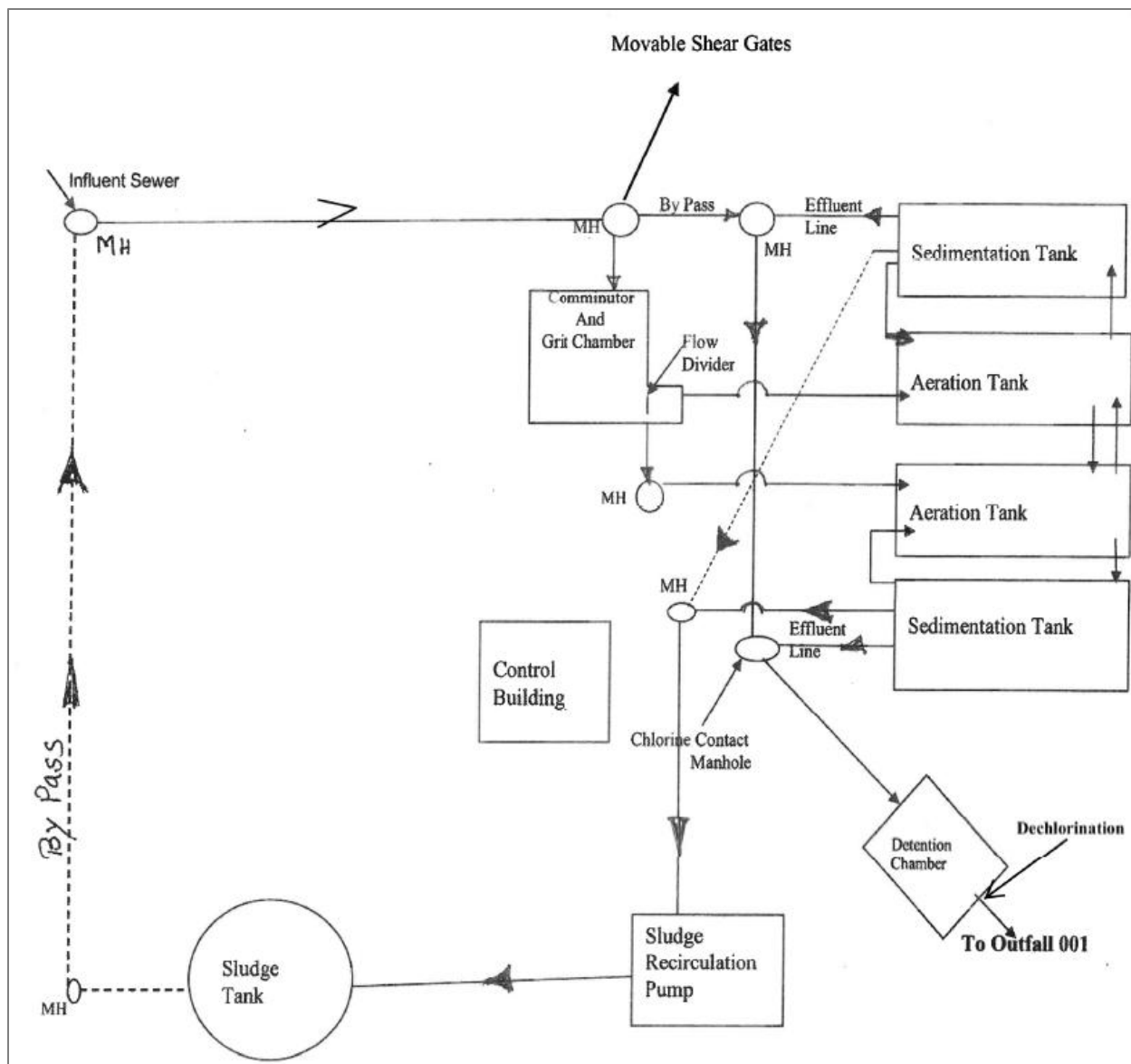
Significant Industrial User (SIU)	SIC Code	Categorical Reference (if applicable to 40 CFR)
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Fred A Cook, Jr., Inc.	4212	N/A
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Site Overview







Enforcement History

Compliance and enforcement information can be found on the EPA'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 and the application submitted by the permittee for the period 10/1/2020 to 9/30/2025. [Appendix Link](#)

Interstate Water Pollution Control Agencies

Outfall 001 is located within the Interstate Environmental Commission (IEC) compact area which places additional requirements in the SPDES permit. [Appendix Link](#)

Receiving Water Information

The facility discharges via the following outfalls:

Outfall No.	SIC Code	Wastewater Type	Receiving Water
001	4952	Treated sanitary sewage and industrial sludge supernatant	Hudson River, Class SB

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

Impaired Waterbody Information

The Hudson River segment (PWL No. 1304-0094) was first listed on the 1988 [New York State Section 303\(d\) List](#) of Impaired/TMDL Waters as impaired due to PCBs and other toxics. The segment continues to be listed as of the 2022 NYS Section 303(d) List. A TMDL has not been developed to address the impairment and, therefore, there are no applicable wasteload allocations (WLAs) for this facility.

Critical Receiving Water Data & Mixing Zone

Reach Description:

The facility discharges from Outfall 001 into Lent's Cove (Class SB, WIN H), on the east shore of the Hudson River. The cove is approximately 450 ft wide by 1,700 ft. long and has an average depth of 13 ft and is tidal. The outfall is approximately 50 ft. offshore the northern point of Lent's Cove Park. There is one SPDES discharge into the main stem of the Hudson River from Wheelabrator Westchester (NY0109690) approximately 0.1 miles above the mouth of Lent's Cove. Indian Point Energy Center (NY0004472) discharges into the main stem of the Hudson River approximately 0.5 miles downstream of Lent's Cove.

Consistent with TOGS 1.3.1, the outfall information submitted in the application and mixing zone form was used to develop a mixing zone model to establish dilution ratios for the water quality analysis. The model showed the plume becomes attached to the channel bottom, is positively buoyant, and rises toward the surface. The plume does not contact the bank within the bounded section of Lent's Cove.

Outfall No.	Acute Dilution Ratio A(A)	Chronic Dilution Ratio A(C)	Human, Aesthetic, Wildlife Dilution Ratio (HEW)	Basis
001 Existing Flow	23.1 : 1	33.4 : 1	33.4 : 1	CORMIX
001 Expansion Flow	18.0 : 1	23.1 : 1	23.1 : 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](#)

- POTWs that are managing industrial pretreatment programs or that are required to develop a pretreatment program. (#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 acute and if directed chronic WET testing.

Existing 0.5 MGD Flow: WET testing action levels of 23 TUA and 33 TUC have been included in the permit for each species. The acute action level for each species represents 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 12 months in years ending in 3 and 8.

Expansion 0.75 MGD Flow: WET testing action levels of 18 TUA and 23 TUC have been included in the permit for each species. The acute action level for each species represents 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 12 months in years ending in 3 and 8.

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)¹ determination.

[Appendix Link](#)

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 has been continued from the previous permit.

Additionally, the permit contains a requirement to make the DMR sampling data available to the public upon request. This requirement has been continued from the previous permit.

Mercury

The DOW 1.3.10 Mercury – Multiple Discharge Variance (MDV), dated December 31, 2025, provides the framework for DEC to require mercury monitoring and mercury minimization

¹ As prescribed by 6 NYCRR Part 617

programs (MMPs), through SPDES permitting. All of the following permit conditions are consistent with the MDV. [Appendix Link](#)

The facility is located outside of the Great Lakes Basin and is a SPDES Class 07. The permittee submitted a Conditional Exclusion Form on January 2, 2026, certifying the facility does not have a mercury source as listed in Part III.E. of the MDV. Therefore, consistent with the MDV, the permit includes requirements for the implementation of MMP Type IV. The [Schedule of Additional Submittals](#) includes a mercury minimization plan annual status report (maintained onsite), and re-certification of the exclusion every five years. This requirement is new.

Mini Industrial Pretreatment Program

The permittee is required to continue implementation of a Mini-Pretreatment Program because it serves Significant Industrial Users (SIUs). 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 has been included² for the following items ([Appendix Link](#)):

- Submittal of approvable preliminary engineering report and design documents for the construction related to the expansion to 0.75 MGD were added.
- Submittal of a construction completion certificate for the expansion to 0.75 MGD was added
- Submittal of interim progress reports was added
- A compliance schedule has been added to provide the facility time to meet the new enterococcus limit.

Emerging Contaminant Monitoring

The SPDES permit includes [Action Levels](#) for PFOA and PFOS, and minimization programs when exceedances of those Action Levels are confirmed, due to the emerging nature of PFOA and PFOS; the USEPA's addition of PFOA and PFOS to the hazardous substance list under CERCLA; the USEPA's addition of PFOA and PFOS to the recommended contaminant monitoring list for state fish advisory programs; and the need to protect the best usages of the receiving water and downstream waterbodies pursuant to 6 NYCRR 701.1. The use of minimization programs is also supported by 6 NYCRR 750-1.14(f). [Appendix Link](#)

Based on the available data at Outfall(s) 001, the permit includes Action Levels for PFOA and PFOS. The Actions Levels are set at the NYS Department of Health (DOH) Maximum Contaminant Level (MCL) of 10 ng/L for drinking water as a proxy for background concentrations in the facility's influent. Discharges above the MCL indicate the potential presence of a controllable source beyond drinking water and the need to implement track down measures. Pursuant to 6 NYCRR 750-1.13(b), the SPDES permit also requires monitoring for the remaining 38 PFAS compounds. Those monitoring requirements are consistent with guidance released in EPA memos dated April 28, 2022, and December 5, 2022. Please see the [Pollutant Summary Table](#) below for more information. [Appendix Link](#)

Schedule of Additional Submittals

Emerging Contaminant Minimization Program

Pursuant to 6 NYCRR 750-1.14(f), the permit includes an Emerging Contaminant Minimization Program. Upon confirmation of action level exceedance, the permittee must initiate track down of potential sources and submit reports summarizing all emerging

² Pursuant to 6 NYCRR 750-1.14

contaminant monitoring data, likely sources, actions taken to reduce emerging contaminants, and proposed next steps to minimize/eliminate emerging contaminants. Please see [Emerging Contaminant Monitoring](#) above for more information.

WTC Annual Report

In accordance with 6 NYCRR 750-2.1(i), the permit requires submission of an annual report each year that the permittee uses and discharges WTCs. The permittee must summarize all WTC use for the prior calendar year, January 1 through December 31, and attach it either to the December DMR or annual monitoring report required by the permit. More information is located on the DEC's website under [SPDES Permitting of Water Treatment Chemicals](#).

Annual Flow Certification

In accordance with 6 NYCRR 750-2.9(c)(4), the chief fiscal officer of the municipality shall submit an Annual Flow Certification form, located on DEC's website at [Wastewater forms](#), as an attachment to its February DMR or through nForm. The municipal chief fiscal officer may also submit an explanation for a deviation, where compliance certification cannot be provided.

Annual Emergency Response Plan Certification

In accordance with 6 NYCRR 750-2.9(d), the principal executive officer or ranking elected official of the municipality or a duly authorized representative of that person (as defined in 6 NYCRR 750-2.9(f)) shall submit an Annual Emergency Response Plan Certification form electronically using a NYSDEC approved form.

Annual Cybersecurity Controls Certification

In accordance with 6 NYCRR 750-2.9(e), the principal executive officer or ranking elected official of the municipality or a duly authorized representative of that person (as defined in 6 NYCRR 750-2.9(f)) shall submit an Annual Cybersecurity Controls Certification form electronically using a NYSDEC approved form.

Short-Term, High Intensity Monitoring Program – Total Copper and Free Cyanide

In accordance with 6 NYCRR 750-1.13(a), the permittee shall be subject to monitoring requirements to determine compliance with water quality standards. Consistent with TOGS 1.2.1, where limited data is available to confirm the presence or absence of a parameter in an outfall, a short-term, high intensity monitoring program may be used. Please see the [Pollutant Summary Table](#) below for more information.

Whole Effluent Toxicity (WET) Testing

Consistent with TOGS 1.3.2, the permittee is required to perform WET testing. A report of all testing activity and results is to be sent to the Department and should contain the specific data outlined in TOGS 1.3.2, Appendix I.

Mercury Conditional Exclusion Certification

Please see [above discussion](#) of mercury. Consistent with DOW 1.3.10 and 6 NYCRR 750-1.14(f), the permittee must submit the [form](#), signed in accordance with 6 NYCRR 750-1.8, every five years certifying that the facility is neither a mercury source nor receives flow from a mercury source.

Mercury Minimization Plan (MMP) and Status Report

Please see [above discussion](#) of MMP and the required annual Status Report., in accordance with 6 NYCRR 750-1.14(f).

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Facility: Buchanan WWTP
SPDES Number: NY0029971
USEPA Non-Major/Class 07 Municipal

Date: **Date** v.1.41
Permit Writer: Erik Posner
Water Quality Reviewer: Erik Posner
Full Technical Review

Mini Industrial Pretreatment Program - FROSI

with TOGS 1.3.3, as part of the program, the permittee must annually submit completed Fast Report on Significant Industries forms (FROSI) for each SIU to the DEC, or notification letter that no new significant industrial users have been added.

Mini Industrial Pretreatment Program – Industrial Chemical Survey

with TOGS 1.3.3, as part of the program, the permittee must submit industrial chemical survey forms by all SIUs to the DEC and notify DEC of any proposed significant changes to its implementing procedures or local sewer use law.

Please see [Mini Industrial Pretreatment Program](#) above.

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 Facility: Buchanan WWTP
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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 Existing	41° 16' 24.8" N	73° 56' 36.4" W	Hudson River	SB	H PWL: 1301-0094	13/01	-		CORMIX		0.5	23.1 : 1	33.4 : 1	33.4 : 1
001 Expansion											0.75	18:1	23.1 : 1	23.1 : 1

POLLUTANT SUMMARY TABLE

Outfall 001: Existing 0.5 MGD Design Flow

Effluent Parameter	Units	Averaging Period	Existing Discharge Data				TBELs		Water Quality Data and WQBELs						ML	Permit Limit	Basis for Permit Requirement	
			Current Permit Limit	Existing Effluent Quality	# Detects	# Non detects	Limit	Basis	Ambient Background Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL				
Flow	MGD	MO AVG	0.5	0.3 Actual Average	60	0	0.5	Design Flow	Narrative: No alterations that will impair the waters for their best usages.						703.2	-	0.50	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.																		
pH	SU	Minimum	6	6 Actual Min	60	0	6.0	40 CFR 133.102	8.2	-	6.5 - 8.5	Range	-	703.3	-	6.0 - 9.0	TBEL	
	SU	Maximum	9	8 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 TBEL is protective of the WQS. Ambient pH obtained from RIBS Site 13-LHUD-14.7.																		
Temperature	deg F	DAILY MX	Monitor	78 Actual Max	60	0	-	-	-	Narrative (Estuary): The water temperature at the surface of an estuary shall not be raised to more than 90F at any point				704.2	-	Monitor	WQBEL	
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	mg/L	DAILY MIN	-	7.60	1	0	-	-	-	7.47	5.0 mg/L (IEC)	-	-	703.3	-	-	No limitation	
The facility discharges into the main stem of the Hudson River, which is also required to meet the Interstate Environmental Commission water quality standard of 5.0 mg/L daily minimum. There is sufficient dilution and ambient dissolved oxygen that there is no reasonable potential to violate the WQS for dissolved oxygen. Secondary standards are sufficient to be protective of the WQS.																		

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Effluent Parameter	Units	Averaging Period	Existing Discharge Data				TBELs		Water Quality Data and WQBELs						ML	Permit Limit	Basis for Permit Requirement
			Current Permit Limit	Existing Effluent Quality	# Detects	# Non detects	Limit	Basis	Ambient Background Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL			
5-Day	mg/L	MO AVG	30	9	18	42	30	40 CFR 133.102	-	See Dissolved Oxygen	No Reasonable Potential	703.3	-	30	TBEL		
	mg/L	7 DA AVG	45	17	26	34	45	40 CFR 133.102						45			
Biochemical	lb/d	MO AVG	125	17.1	60	0	125	TOGS 1.3.3						125			
Oxygen Demand	lb/d	7 DA AVG	188	32.5	60	0	188	TOGS 1.3.3						188			
(BOD5)	%	MO AV MN	85	93 Actual Min	60	0	85	40 CFR 133.102						85			
	mg/L	6 Consecutive Hr. Avg	50	-	-	-	50	550.2(e)(3)						50	IEC		
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 6-Consecutive Hour Average is an Interstate Environmental Commission (IEC) requirement. The permittee is not required to perform this sampling but shall be required to meet the permit limit at all times. EPA, DEC or IEC may perform the sampling.																	
Total Suspended Solids (TSS)	mg/L	MO AVG	30	9	46	14	30	40 CFR 133.102	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages.	703.2	-	30	TBEL			
	mg/L	7 DA AVG	45	19	51	9	45	40 CFR 133.102					45				
	lb/d	MO AVG	125	20	60	0	125	TOGS 1.3.3					125				
	lb/d	7 DA AVG	188	47	60	0	188	TOGS 1.3.3					188				
	%	MO AV MN	85	92 Actual Min	60	0	85	40 CFR 133.102					85				
	mg/L	6 Consecutive Hr. Avg	50	-	-	-	50	550.2(e)(3)					50				
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.																	
The 6-Consecutive Hour Average is an Interstate Environmental Commission (IEC) requirement. The permittee is not required to perform this sampling but shall be required to meet the permit limit at all times. EPA, DEC or IEC may perform the sampling.																	
Settleable Solids	mL/L	DAILY MX	0.3	0.1 Actual Average	1	59	0.3	TOGS 1.3.3	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages			703.3	-	0.3	TBEL	
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.																	
Nitrogen, Ammonia (as N), Summer 6/1 - 10/31	mg/L	MO AVG	-	3.57	9	0	-	-	0.082	0.27	1.9	A(C)	61	703.3	-	-	Monitor
Nitrogen, Ammonia (as N), Winter 11/1 - 5/31	mg/L	MO AVG	-	3.57	9	0	-	-	0.082	0.27	6.1	A(C)	201	703.3	-	-	Monitor
The saline WQS for ammonia was calculated using: salinity 3.64 g/kg (summer), 0.78 g/kg (winter); temperature = 23.17 (summer), 7.30 (winter); pH 7.50 (all year). There is no reasonable potential to exceed the WQS, therefore, no WQBEL is applied in this draft permit. Monitoring for informational purposes is added in accordance with TOGS 1.3.3.																	

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			Existing Discharge Data				TBELs		Water Quality Data and WQBELS										
Effluent Parameter	Units	Averaging Period	Current Permit Limit	Existing Effluent Quality	# Detects	# Non detects	Limit	Basis	Ambient Background Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	ML	Permit Limit	Basis for Permit Requirement		
Nitrate & Nitrite	mg/L	DAILY MX	-	22.20	1	0	-	-	-	4.1	-	-	-	-	-	-	Monitor		
Nitrate & Nitrite do not have any water quality standards for this receiving waterbody class or TBELs. Monitoring is being added to this draft permit for monitoring purposes in accordance with TOGS 1.3.3 for POTWs discharging to saline waters.																			
Total Phosphorus	mg/L	MO AVG	-	4.04	1	0	-	-	-	Narrative: None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usages.				703.2	-	-	No limitation		
Phosphorus monitoring is not required for POTWs discharging < 1.0 MGD to saline waters. There is no impairment in the receiving water caused by phosphorus listed in the 2022 303(d) list. No limitation is applied in this draft permit.																			
Total Mercury	ng/L	DAILY MX	-	6.70	1	0	-	-	-	1.20	0.7	H(FC)	25	GLCA	-	No Limitation	DOW 1.3.10		
See Mercury Section of this fact sheet.																			
Coliform, Fecal	#/100mL	30DA GEO	200	65.29	53	7	200	TOGS 1.3.3	-	The monthly geometric mean, from a minimum of five examinations, shall not exceed 200.				703.4	-	200	TBEL		
	#/100mL	7 DA GEO	400	387.38	55	5	400	TOGS 1.3.3	-						-	400	TBEL		
	#/100mL	6 hr. GEO	800	#N/A	-	-	800	550.2(e)(3)	-						-	800	IEC		
	#/100mL	DAILY MX	2400	#N/A	-	-	2400	550.2(e)(3)	-						-	2400	IEC		
Year-round disinfection is continued in this permit. Fecal coliform limits equal to the TBEL are specified. The 6-Hour Geometric Mean and Individual Sample limits are an Interstate Environmental Commission (IEC) requirement. The permittee is not required to perform this sampling but shall be required to meet the permit limit at all times. EPA, DEC or IEC may perform the sampling.																			
Chlorine, total residual (TRC)	mg/L	DAILY MX	0.17	0.15	60	0	2.0	TOGS 1.3.3	0.00	0.0051	0.0075	A(C)	0.26	703.5	0.030	0.17	WQBEL		
Effluent disinfection is required year-round and will remain in the permit. The WQBEL is calculated by multiplying the WQS by the chronic dilution ratio. The WQBEL is less than the TBEL; however, the existing permit is more protective than the WQBEL, therefore, the existing limit is maintained in this permit to prevent backsliding.																			
Enterococcus	#/100mL	30DA GEO	-	-	-	-	-	-	-	The geometric mean of samples collected over any consecutive 30-day period shall not exceed 35, and no more than 10 percent of the samples collected in the same 30-day period shall exceed 130.				703.4	-	35	WQBEL		
	#/100mL	Daily Max	-	-	-	-	-	-	-						-	-	Monitor	Monitor	
A final WQBEL equal to the 30-day geometric mean water quality standard has been included in the permit. A schedule of compliance has been added to the permit to provide the permittee time to comply with this new limit. Daily maximum monitoring has been to the permit.																			

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Effluent Parameter	Units	Averaging Period	Existing Discharge Data				TBELs		Water Quality Data and WQBELs						ML	Permit Limit	Basis for Permit Requirement
			Current Permit Limit	Existing Effluent Quality	# Detects	# Non detects	Limit	Basis	Ambient Background Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL			
Total Kjeldahl Nitrogen (TKN)	mg/L	DAILY MX	-	3.24	1	0	-	-	-	0.60	-	-	-	-	-	-	No limitation
TKN was reported in Table B of the SPDES application. There are no water quality standards or TBELs for this parameter. No limitation is added in this draft permit.																	
Total Nitrogen	mg/L	DAILY MX	-	25.50	1	0	-	-	-	4.7	-	-	-	-	-	-	No limitation
Total nitrogen was reported in Table B of the SPDES application. There are no water quality standards or TBELs for this parameter. No limitation is added in this draft permit.																	
Arsenic, Dissolved	ug/L	DAILY MX	-	2.0	1	0	-	-	-	0.37	63	A(C)	2104	703.5	-	-	No limitation
Arsenic, Dissolved	ug/L	MO AVG	-	2.0	-	-	-	-	-	0.37	-	-	-	-	-	-	No limitation
Arsenic was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL and the projected instream concentration is below the water quality standard, therefore, no limitation is included in this draft permit.																	
Cadmium, Total [as Cd]	ug/L	DAILY MX	-	1.0	1	0	-	-	-	0.19	7.7	A(C)	257	703.5	-	-	No limitation
Cadmium, Total [as Cd]	ug/L	MO AVG	-	1.0	-	-	-	-	-	0.19	-	-	-	-	-	-	No limitation
Total cadmium was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL and the projected instream concentration is below the water quality standard, therefore, no limitation is included in this draft permit.																	
Chromium, Total [as Cr]	ug/L	DAILY MX	-	22	9	0	-	-	-	1.19	-	-	-	-	-	-	No limitation
Chromium, Total [as Cr]	ug/L	MO AVG	-	22	-	-	-	-	-	1.19	-	-	-	-	-	-	No limitation
Total chromium was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL or water quality standard, therefore, no limitation is included in this draft permit.																	
Copper, Total [as Cu]	ug/L	DAILY MX	-	56	9	0	-	-	-	3.02	3.4	A(C)	114	703.5	-	-	No limitation
Copper, Total [as Cu]	ug/L	MO AVG	-	56	-	-	-	-	-	3.02	-	-	-	-	-	-	No limitation
Total copper was identified as present in the analytical sample included with the SPDES NY-2C application and short-term monitoring results submitted in 2011. There is no applicable TBEL and the projected instream concentration is below the water quality standard, therefore, no limitation is included in this draft permit.																	
Lead, Total [as Pb]	ug/L	DAILY MX	-	1.0	1	0	-	-	-	0.19	8.0	A(C)	267	703.5	-	-	No limitation
Lead, Total [as Pb]	ug/L	MO AVG	-	1.0	-	-	-	-	-	0.19	-	-	-	-	-	-	No limitation
Total lead was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL and the projected instream concentration is below the water quality standard, therefore, no limitation is included in this draft permit.																	
Nickel, Total [as Ni]	ug/L	DAILY MX	-	5.4	9	0	-	-	-	0.29	8.2	A(C)	274	703.5	-	-	No limitation
Nickel, Total [as Ni]	ug/L	MO AVG	-	5.4	-	-	-	-	-	0.29	-	-	-	-	-	-	No limitation
Total nickel was identified as present in the analytical sample included with the SPDES NY-2C application and short-term monitoring results submitted in 2011. There is no applicable TBEL and the projected instream concentration is below the water quality standard, therefore, no limitation is included in this draft permit.																	
Silver, Total [as Ag]	ug/L	DAILY MX	-	1.0	1	0	-	-	-	0.19	2.3	A(A)	63	703.5	-	-	No limitation
Silver, Total [as Ag]	ug/L	MO AVG	-	1.0	-	-	-	-	-	0.19	-	-	-	-	-	-	No limitation
Total silver was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL and the projected instream concentration is below the water quality standard, therefore, no limitation is included in this draft permit.																	

Permittee: Village of Buchanan
 Facility: Buchanan WWTP
 SPDES Number: NY0029971
 USEPA Non-Major/Class 07 Municipal

Date: **Date** v.1.41
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 Water Quality Reviewer: Erik Posner
 Full Technical Review

			Existing Discharge Data				TBELs		Water Quality Data and WQBELs										
Effluent Parameter	Units	Averaging Period	Current Permit Limit	Existing Effluent Quality	# Detects	# Non detects	Limit	Basis	Ambient Background Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	ML	Permit Limit	Basis for Permit Requirement		
Zinc, Total [as Zn]	ug/L	DAILY MX	-	101	9	0	-	-	-	5.44	66	A(C)	2204	703.5	-	-	No limitation		
Total zinc was identified as present in the analytical sample included with the SPDES NY-2C application and short-term monitoring results submitted in 2011. There is no applicable TBEL and the projected instream concentration is below the water quality standard, therefore, no limitation is included in this draft permit.																			
Oil and Grease	mg/L	DAILY MX	-	1.4	1	0	15	TOGS 1.2.1	-	0.26	No residue attributable to sewage, industrial wastes or other wastes, nor visible oil film nor globules of grease.			703.2	-	-	No limitation		
Oil and grease was identified as present in the analytical sample included with the SPDES NY-2C application. The projected in-stream concentration does not have reasonable potential to violate the narrative water quality standard or the TBEL, therefore, no limitation is included in this draft permit.																			
Total Dissolved Solids	mg/L	DAILY MX	-	520	1	0	-	-	-	97	500	A(C)	16700.0	703.3	-	-	No limitation		
Total dissolved solids was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL and the projected instream concentration is below the water quality standard, therefore, no limitation is included in this draft permit.																			
Antimony, Total Recoverable	ug/L	DAILY MX	-	3.0	1	0	-	-	-	0.56	-	-	-	-	-	-	No limitation		
Total recoverable antimony was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL or water quality standard, therefore, no limitation is included in this draft permit.																			
Beryllium, Total Recoverable	ug/L	DAILY MX	-	1.0	1	0	-	-	-	0.19	-	-	-	-	-	-	No limitation		
Beryllium, Total Recoverable	ug/L	MO AVG	-	1.0	-	-	-	-	-	0.19	-	-	-	-	-	-	No limitation		
Total beryllium was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL or water quality standard, therefore, no limitation is included in this draft permit.																			
Selenium, Total Recoverable	ug/L	DAILY MX	-	5.0	1	0	-	-	-	0.93	-	-	-	-	-	-	No limitation		
Total recoverable selenium was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL or water quality standard, therefore, no limitation is included in this draft permit.																			
Thallium, Total Recoverable	ug/L	DAILY MX	-	5.0	1	0	-	-	-	0.93	-	-	-	-	-	-	No limitation		
Total recoverable thallium was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL or water quality standard, therefore, no limitation is included in this draft permit.																			
Cyanide, Total	ug/L	MO AVG	-	18	1	0	-	-	-	3.34	9000	H(FC)	300600.0	703.5	-	-	No limitation		
Total cyanide was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL and the projected instream concentration is below the water quality standard, therefore, no limitation is included in this draft permit.																			
Cyanide, Free	ug/L	DAILY MX	-	18	1	0	-	-	-	0.97	1.0	A(C)	33.4	703.5	-	-	No limitation		
Total cyanide was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL. A multiplier of 6.2 was factored into the projected instream concentration to account for the ststistical uncertainty of the single sample. The projected instream concentration is lower than the WQS, therefore, no limitation is included in this draft permit.																			
Total Phenolic Compounds	ug/L	DAILY MX	-	70	1	0	1000	TOGS 1.2.1	-	12.99	-	-	-	-	-	-	No limitation		
Total phenolic compounds were identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable water quality standard for this receiving water. The projected instream concentration is less than the TBEL, therefore, no limitation is included in this draft permit.																			

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Outfall 001: Proposed 0.75 MGD Design Flow

* Note: The data displayed in the Existing Discharge Data columns is from the SPDES NY-2C application and reported discharge monitoring report data and represents the existing facility flow.

Effluent Parameter	Units	Averaging Period	Existing Discharge Data				TBELs		Water Quality Data and WQBELs						ML	Permit Limit	Basis for Permit Requirement	
			Current Permit Limit	Existing Effluent Quality	# Detects	# Non detects	Limit	Basis	Ambient Background Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL				
Flow	MGD	MO AVG	0.5	-	-	0	0.75	Design Flow	Narrative: No alterations that will impair the waters for their best usages.						703.2	-	0.75	Design Flow
The new design flow for the expansion will be 0.75 MGD. 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.																		
pH	SU	Minimum	6	6 Actual Min	60	0	6.0	40 CFR 133.102	8.2	-	6.5 - 8.5	Range	-	703.3	-	6.0 - 9.0	TBEL	
	SU	Maximum	9	8 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 TBEL is protective of the WQS. Ambient pH obtained from RIBS Site 13-LHUD-14.7.																		
Temperature	deg F	DAILY MX	Monitor	78 Actual Max	60	0	-	-	-	Narrative (Estuary): The water temperature at the surface of an estuary shall not be raised to more than 90F at any point				704.2	-	Monitor	WQBEL	
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	mg/L	DAILY MIN	-	7.60	1	0	-	-	-	7.47	5.0 mg/L (IEC)	-	-	703.3	-	-	No limitation	
The facility discharges into the main stem of the Hudson River, which is also required to meet the Interstate Environmental Commission water quality standard of 5.0 mg/L daily minimum. There is sufficient dilution and ambient dissolved oxygen that there is no reasonable potential to violate the WQS for dissolved oxygen. Secondary standards are sufficient to be protective of the WQS.																		
5-Day	mg/L	MO AVG	30	9	18	42	30	40 CFR 133.102	-	See Dissolved Oxygen	No Reasonable Potential	703.3	-	30	TBEL			
	mg/L	7 DA AVG	45	17	26	34	45	40 CFR 133.102						45				
Biochemical	lb/d	MO AVG	188	17.1	60	0	188	TOGS 1.3.3						188				
Oxygen Demand	lb/d	7 DA AVG	281	32.5	60	0	281	TOGS 1.3.3						281				
(BOD5)	%	MO AV MN	85	93 Actual Min	60	0	85	40 CFR 133.102						85				
	mg/L	6 Consecutive Hr. Avg	50	-	-	-	50	550.2(e)(3)						50	IEC			
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 6-Consecutive Hour Average is an Interstate Environmental Commission (IEC) requirement. The permittee is not required to perform this sampling but shall be required to meet the permit limit at all times. EPA, DEC or IEC may perform the sampling.																		

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			Existing Discharge Data				TBELs		Water Quality Data and WQBELS										
Effluent Parameter	Units	Averaging Period	Current Permit Limit	Existing Effluent Quality	# Detects	# Non detects	Limit	Basis	Ambient Background Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	ML	Permit Limit	Basis for Permit Requirement		
Total Suspended Solids (TSS)	mg/L	MO AVG	30	9	46	14	30	40 CFR 133.102	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages.			703.2	-		30	TBEL		
	mg/L	7 DA AVG	45	19	51	9	45	40 CFR 133.102								45			
	lb/d	MO AVG	188	20	60	0	188	TOGS 1.3.3								188			
	lb/d	7 DA AVG	281	47	60	0	281	TOGS 1.3.3								281			
	%	MO AV MN	85	92 Actual Min	60	0	85	40 CFR 133.102								85			
	mg/L	6 Consecutive Hr. Avg	50	-	-	-	50	550.2(e)(3)								50			
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. The 6-Consecutive Hour Average is an Interstate Environmental Commission (IEC) requirement. The permittee is not required to perform this sampling but shall be required to meet the permit limit at all times. EPA, DEC or IEC may perform the sampling.																			
Settleable Solids	mL/L	DAILY MX	0.3	0.1 Actual Average actual	1	59	0.3	TOGS 1.3.3	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages				703.3	-	0.3	TBEL		
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.																			
Nitrogen, Ammonia (as N), Summer 6/1 - 10/31	mg/L	MO AVG	-	3.57	9	0	-	-	0.082	0.36	1.9	A(C)	42	703.5	-	-	Monitor		
Nitrogen, Ammonia (as N), Winter 11/1 - 5/31	mg/L	MO AVG	-	3.57	9	0	-	-	0.082	0.36	6.1	A(C)	139	703.5	-	-	Monitor		
The saline WQS for ammonia was calculated using: salinity 3.64 g/kg (summer), 0.78 g/kg (winter); temperature = 23.17 (summer), 7.30 (winter); pH 7.50 (all year). There is no reasonable potential to exceed the WQS, therefore, no WQBEL is applied in this draft permit. Monitoring for informational purposes is added in accordance with TOGS 1.3.3.																			
Nitrate & Nitrite	mg/L	DAILY MX	-	22.2	1	0	-	-	-	6.0	-	-	-	-	-	-	Monitor		
Nitrate & Nitrite do not have any water quality standards for this receiving waterbody class or TBELs. Monitoring is being added to this draft permit for monitoring purposes in accordance with TOGS 1.3.3 for POTWs discharging to saline waters.																			
Total Phosphorus	mg/L	MO AVG	-	4.04	1	0	-	-	-	Narrative: None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usages.				703.2	-	-	No limitation		
Phosphorus monitoring is not required for POTWs discharging < 1.0 MGD to saline waters. There is no impairment in the receiving water caused by phosphorus listed in the 2022 303(d) list. No limitation is applied in this draft permit.																			

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Effluent Parameter	Units	Averaging Period	Existing Discharge Data				TBELs		Water Quality Data and WQBELS							ML	Permit Limit	Basis for Permit Requirement
			Current Permit Limit	Existing Effluent Quality	# Detects	# Non detects	Limit	Basis	Ambient Background Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL				
Total Mercury	ng/L	DAILY MX	-	6.70	1	0	-	-	-	1.8	0.7	H(FC)	25	GLCA	-	No Limitation	DOW 1.3.10	
See Mercury Section of this fact sheet.																		
Coliform, Fecal	#/100mL	30DA GEO	200	65.29	53	7	200	TOGS 1.3.3	-	The monthly geometric mean, from a minimum of five examinations, shall not exceed 200.				703.4	-	200	TBEL	
	#/100mL	7 DA GEO	400	387.38	55	5	400	TOGS 1.3.3	-						-	400	TBEL	
	#/100mL	6 hr. GEO	800	#N/A	-	-	800	550.2(e)(3)	-						-	800	IEC	
	#/100mL	DAILY MX	2400	#N/A	-	-	2400	550.2(e)(3)	-						-	2400	IEC	
Year-round disinfection is continued in this permit. Fecal coliform limits equal to the TBEL are specified. The 6-Hour Geometric Mean and Individual Sample limits are an Interstate Environmental Commission (IEC) requirement. The permittee is not required to perform this sampling but shall be required to meet the permit limit at all times. EPA, DEC or IEC may perform the sampling.																		
Chlorine, total residual (TRC)	mg/L	DAILY MX	0.17	0.15	60	0	2.0	TOGS 1.3.3	0.00	0.0074	0.0075	A(C)	0.17	703.5	0.030	0.17	WQBEL	
Effluent disinfection is required year-round and will remain in the permit. The WQBEL is calculated by multiplying the WQS by the chronic dilution ratio. The WQBEL is less than the TBEL and an effluent limitation equal to the WQBEL is appropriate.																		
Enterococcus	#/100mL	30DA GEO	-	-	-	-	-	-	-	The geometric mean of samples collected over any consecutive 30-day period shall not exceed 35, and no more than 10 percent of the samples collected in the same 30-day period shall exceed 130.				703.4	-	35	WQBEL	
	#/100mL	Daily Max	-	-	-	-	-	-	-						-	Monitor	Monitor	
A final WQBEL equal to the 30-day geometric mean water quality standard has been included in the permit. A schedule of compliance has been added to the permit to provide the permittee time to comply with this new limit. Daily maximum monitoring has been to the permit.																		
Total Kjeldahl Nitrogen (TKN)	mg/L	DAILY MX	-	3.24	1	0	-	-	-	0.87	-	-	-	-	-	-	No limitation	
TKN was reported in Table B of the SPDES application. There are no water quality standards or TBELs for this parameter. No limitation is added in this draft permit.																		
Total Nitrogen	mg/L	DAILY MX	-	25.5	1	0	-	-	-	6.4	-	-	-	-	-	-	No limitation	
Total nitrogen was reported in Table B of the SPDES application. There are no water quality standards or TBELs for this parameter. No limitation is added in this draft permit.																		

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			Existing Discharge Data				TBELs		Water Quality Data and WQBELS										
Effluent Parameter	Units	Averaging Period	Current Permit Limit	Existing Effluent Quality	# Detects	# Nondetects	Limit	Basis	Ambient Background Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	ML	Permit Limit	Basis for Permit Requirement		
Arsenic, Dissolved	ug/L	DAILY MX	-	2.0	1	0	-	-	-	0.54	63	A(C)	1455	703.5	-	-	No limitation		
Arsenic was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL and the projected instream concentration is below the water quality standard, therefore, no limitation is included in this draft permit.																			
Cadmium, Total [as Cd]	ug/L	DAILY MX	-	1.0	1	0	-	-	-	0.27	7.7	A(C)	178	703.5	-	-	No limitation		
Total cadmium was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL and the projected instream concentration is below the water quality standard, therefore, no limitation is included in this draft permit.																			
Chromium, Total [as Cr]	ug/L	DAILY MX	-	22	9	0	-	-	-	1.72	-	-	-	-	-	-	No limitation		
Total chromium was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL or water quality standard, therefore, no limitation is included in this draft permit.																			
Copper, Total [as Cu]	ug/L	DAILY MX	-	56	9	0	-	-	-	4.36	3.4	A(C)	79	703.5	-	-	STHIM		
Total copper was identified as present in the analytical sample included with the SPDES NY-2C application and short-term monitoring results submitted in 2011. There is no applicable TBEL. A multiplier of 1.8 was applied to the PIC due to the low number of sample, which indicates a possible exceedance of the WQS; however the EEQ is less than the WQBEL. Additional monitoring for copper will be added to this draft permit in order to determine if a permit limit is necessary.																			
Lead, Total [as Pb]	ug/L	DAILY MX	-	1.0	1	0	-	-	-	0.27	8.0	A(C)	185	703.5	-	-	No limitation		
Total lead was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL and the projected instream concentration is below the water quality standard, therefore, no limitation is included in this draft permit.																			
Nickel, Total [as Ni]	ug/L	DAILY MX	-	5.4	9	0	-	-	-	0.42	8.2	A(C)	189	703.5	-	-	No limitation		
Total nickel was identified as present in the analytical sample included with the SPDES NY-2C application and short-term monitoring results submitted in 2011. There is no applicable TBEL and the projected instream concentration is below the water quality standard, therefore, no limitation is included in this draft permit.																			
Silver, Total [as Ag]	ug/L	DAILY MX	-	1.0	1	0	-	-	-	0.27	2.3	A(A)	49	703.5	-	-	No limitation		
Total silver was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL and the projected instream concentration is below the water quality standard, therefore, no limitation is included in this draft permit.																			
Zinc, Total [as Zn]	ug/L	DAILY MX	-	101	9	0	-	-	-	7.87	66	A(C)	1525	703.5	-	-	No limitation		
Total zinc was identified as present in the analytical sample included with the SPDES NY-2C application and short-term monitoring results submitted in 2011. There is no applicable TBEL and the projected instream concentration is below the water quality standard, therefore, no limitation is included in this draft permit.																			
Oil and Grease	mg/L	DAILY MX	-	1.4	1	0	15	TOGS 1.2.1	-	0.38	No residue attributable to sewage, industrial wastes or other wastes, nor visible oil film nor globules of grease.	-	703.2	-	-	No limitation			
	mg/L	MO AVG	-	#N/A	-	-	-	-	#N/A	#N/A		-	-	-	-	No limitation			
Oil and grease was identified as present in the analytical sample included with the SPDES NY-2C application. The projected in-stream concentration does not have reasonable potential to violate the narrative water quality standard or the TBEL, therefore, no limitation is included in this draft permit.																			
Total Dissolved Solids	mg/L	DAILY MX	-	520	1	0	-	-	-	140	500	A(C)	11550	703.3	-	-	No limitation		
Total dissolved solids was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL and the projected instream concentration is below the water quality standard, therefore, no limitation is included in this draft permit.																			

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Effluent Parameter	Units	Averaging Period	Existing Discharge Data				TBELs		Water Quality Data and WQBELS						ML	Permit Limit	Basis for Permit Requirement
			Current Permit Limit	Existing Effluent Quality	# Detects	# Nondetects	Limit	Basis	Ambient Background Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL			
Antimony, Total Recoverable	ug/L	DAILY MX	-	3.0	1	0	-	-	-	0.81	-	-	-	-	-	-	No limitation
Total recoverable antimony was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL or water quality standard, therefore, no limitation is included in this draft permit.																	
Beryllium, Total Recoverable	ug/L	DAILY MX	-	1.0	1	0	-	-	-	0.27	-	-	-	-	-	-	No limitation
Total beryllium was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL or water quality standard, therefore, no limitation is included in this draft permit.																	
Selenium, Total Recoverable	ug/L	DAILY MX	-	5.0	1	0	-	-	-	1.34	-	-	-	-	-	-	No limitation
Total recoverable selenium was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL or water quality standard, therefore, no limitation is included in this draft permit.																	
Thallium, Total Recoverable	ug/L	DAILY MX	-	5.0	1	0	-	-	-	1.34	-	-	-	-	-	-	No limitation
Total recoverable thallium was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL or water quality standard, therefore, no limitation is included in this draft permit.																	
Cyanide, Total	ug/L	MO AVG	-	18	1	0	-	-	-	4.83	9000	H(FC)	207900	703.5	-	-	No limitation
Total cyanide was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL and the projected instream concentration is below the water quality standard, therefore, no limitation is included in this draft permit.																	
Cyanide, Free	ug/L	DAILY MX	-	18	1	0	-	-	-	4.83	1.0	A(C)	23.1	703.5	-	-	STHIM
Total cyanide was identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable TBEL. A multiplier of 6.2 was factored into the projected instream concentration to account for the statistical uncertainty of the single sample, causing the PIC to exceed the water quality standard. Short-term high intensity monitoring is added to this draft permit to determine whether a limitation is required.																	
Total Phenolic Compounds	ug/L	DAILY MX	-	70	1	0	1000	TOGS 1.2.1	-	18.79	-	-	-	-	-	-	No limitation
	ug/L	MO AVG	-	#N/A	-	-	-	-	#N/A	#N/A	-	-	-	-	-	-	No limitation
Total phenolic compounds were identified as present in the analytical sample included with the SPDES NY-2C application. There is no applicable water quality standard for this receiving water. The EEQ is less than the TBEL, therefore, no limitation is included in this draft permit.																	

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Outfall 001: Current and Expansion Flows - Emerging Contaminants

Emerging Contaminants Outfall 001																	
Effluent Parameter	Units	Averaging Period	Existing Discharge Data				TBELs		Water Quality Data and WQBELS						ML	Permit Limit	Basis for Permit Requirement
			Current Permit Limit	Existing Effluent Quality	# Detects	# Nondetects	Limit	Basis	Ambient Background Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL			
Perfluoro-butanoic Acid (PFBA)	ng/L	DAILY MX	-	6	1	0	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
Perfluoro-pentanoic Acid (PFPeA)	ng/L	DAILY MX	-	17	1	0	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
Perfluoro-hexanoic Acid (PFHxA)	ng/L	DAILY MX	-	18	1	0	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
Perfluoro-heptanoic Acid (PFHpA)	ng/L	DAILY MX	-	15	1	0	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
Perfluoro-octanoic Acid (PFOA)	ng/L	DAILY MX	-	12	1	0	-	-	-	-	-	-	-	-	-	10	Action Level
Due to the presence of PFOA, the permit includes an action level equal to the NYSDOH MCL of 10 ng/L. See the Emerging Contaminant Monitoring and Action Level sections for more information.																	
Perfluoro-nonanoic Acid (PFNA)	ng/L	DAILY MX	-	3	1	0	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
Perfluoro-decanoic Acid (PFDA)	ng/L	DAILY MX	-	1	1	0	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
Perfluoro-undecanoic Acid (PFUnA)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	

Permittee: Village of Buchanan
 Facility: Buchanan WWTP
 SPDES Number: NY0029971
 USEPA Non-Major/Class 07 Municipal

Date: Date v.1.41
 Permit Writer: Erik Posner
 Water Quality Reviewer: Erik Posner
 Full Technical Review

Emerging Contaminants Outfall 001																	
			Existing Discharge Data				TBELs		Water Quality Data and WQBELS								
Effluent Parameter	Units	Averaging Period	Current Permit Limit	Existing Effluent Quality	# Detects	# Nondetects	Limit	Basis	Ambient Background Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	ML	Permit Limit	Basis for Permit Requirement
Perfluoro-dodecanoic Acid (PFDoA)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
Perfluoro-tridecanoic Acid (PETriA)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
Perfluoro-tetradecanoic Acid (PFTeA)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
Perfluoro-butanesulfonic Acid (PFBS)	ng/L	DAILY MX	-	4	1	0	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
Perfluoro-pentanesulfonic Acid (PFPeS)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
Perfluoro-hexanesulfonic Acid (PFHxS)	ng/L	DAILY MX	-	1	1	0	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
Perfluoro-heptanesulfonic Acid (PFHpS)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
Perfluoro-octanesulfonic Acid (PFOS)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	41	A(C)	947	TOGS 1.1.1	-	10	Action Level
Due to the presence of PFOA, the permit includes an action level equal to the NYSDOH MCL of 10 ng/L. See the Emerging Contaminant Monitoring and Action Level sections for more information.																	
Perfluoro-nonanesulfonic Acid (PFNS)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	

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Emerging Contaminants Outfall 001																	
			Existing Discharge Data				TBELs		Water Quality Data and WQBELS								
Effluent Parameter	Units	Averaging Period	Current Permit Limit	Existing Effluent Quality	# Detects	# Nondetects	Limit	Basis	Ambient Background Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	ML	Permit Limit	Basis for Permit Requirement
Perfluoro-decanesulfonic Acid (PFDS)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
Perfluoro-dodecane-sulfonic Acid (PFDoS)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
Perfluoro-octane-sulfonamide (FOSA)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
N-methyl Perfluoro-octanesulfon-amidoacetic Acid (NMeFOSAA)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
N-ethyl Perfluoro-octanesulfon-amidoacetic Acid (NEtFOSAA)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
4:2 Fluorotelomer Sulfonic Acid (FTS)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	

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Emerging Contaminants Outfall 001																	
			Existing Discharge Data				TBELs		Water Quality Data and WQBELs								
Effluent Parameter	Units	Averaging Period	Current Permit Limit	Existing Effluent Quality	# Detects	# Nondetects	Limit	Basis	Ambient Background Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	ML	Permit Limit	Basis for Permit Requirement
6:2 Fluorotelomer Sulfonic Acid (FTS)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
8:2 Fluorotelomer Sulfonic Acid (FTS)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
N-ethyl Perfluoro-octanesulfonamide (NEtFOSA)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
N-methyl Perfluoro-octanesulfonamide (NMeFOSA)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
N-methyl Perfluoro-octanesulfonamidoethanol (NMeFOSE)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic Acid (9Cl-PF3ONS)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	

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Emerging Contaminants Outfall 001																	
			Existing Discharge Data				TBELs		Water Quality Data and WQBELs								
Effluent Parameter	Units	Averaging Period	Current Permit Limit	Existing Effluent Quality	# Detects	# Nondetects	Limit	Basis	Ambient Background Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	ML	Permit Limit	Basis for Permit Requirement
Hexafluoro-propylene Oxide Dimer Acid (HFPO-DA or GenX)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic Acid (11Cl-PF3OUdS)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
4,8-Dioxa-3H-perfluorononanoic Acid (ADONA)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
3-Perfluoropropyl Propanoic Acid (3:3 FTCA)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
2H,2H,3H,3H-Perfluoro-octanoic Acid (5:3 FTCA)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
3-Perfluoroheptyl Propanoic Acid (7:3 FTCA)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
Nonafluoro-3,6-dioxaheptanoic Acid (NFDHA)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
Perfluoro-4-methoxy-butanoic Acid (PFMBA)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
Perfluoro-3-methoxy-propanoic Acid (PFMPA)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	

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Emerging Contaminants Outfall 001																	
			Existing Discharge Data				TBELs		Water Quality Data and WQBELS								
Effluent Parameter	Units	Averaging Period	Current Permit Limit	Existing Effluent Quality	# Detects	# Nondetects	Limit	Basis	Ambient Background Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	ML	Permit Limit	Basis for Permit Requirement
Perfluoro(2-ethoxyethane)sulfonic Acid (PFEEESA)	ng/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	Monitor
Based on available data, no additional monitoring is required at this time.																	
1,4-Dioxane	µg/L	DAILY MX	-	ND	0	1	-	-	-	-	-	-	-	-	-	-	No limitation
Based on available data, no additional monitoring is required at this time.																	

Appendix A: Mixing Zone Model (CORMIX)

Consistent with TOGS 1.3.1, the outfall and receiving water information submitted in the application, mixing zone form, and USGS tidal gauge HUR0401 (Haverstraw) was used to develop a mixing zone model to establish dilution ratios for the water quality analysis. The parameters for the CORMIX model used for this draft permit is consistent with the model used for the thermal mixing model used for the 2025 permittee-initiated expansion.

Low Flow Conditions

The Hudson River below Troy Dam is a tidal waterbody. Below the Bear Mountain Bridge, the Hudson River is saline. The critical low flow conditions in a tidal waterbody occur approximately one hour after slack tide. Ambient conditions were placed in the permit consist with findings presented in various mixing and biota studies occurring since the 1960s and verified most recently in a 2010 report.^{3,4,5,6}

Description of Outfall

Outfall 001 is a 16" diameter, single port pipe that extends approximately 50' offshore the northern point of Lent's Cove Park into Lent's Cove, an embayment on the east shore of the Hudson River. Lent's Cove is tidal, and approximately 450' wide and 1,700' long, with an average depth of 13'.

Existing Flow (0.5 MGD): Model Design

EXISTING FLOW – 0.5 MGD

Tab	CORMIX Input	Permittee	CORMIX	Notes
Effluent	<i>Conservative Pollutant</i>	-	X	
	<i>Non-Conservative Pollutant</i>	-	-	-
	<i>Heated Discharge</i>	-	-	-
	<i>Brine Discharge (Conservative Pollutant; Non-Conservative Pollutant)</i>	-	-	-
	<i>Sediment Discharge</i>	-	-	-
	<i>Discharge concentration excess</i>		100%	
	<i>Effluent Flow Rate/Velocity</i>	0.5 MGD	0.5 MGD	CORMIX calculated velocity = 0.17 m/s
	<i>Effluent Temperature/Density</i>	70 °F	70 °F	
Ambient	<i>Average Depth</i>	13'	9.48'	<i>Actual depth at discharge can't differ from Avg. depth by more than 30%. Reduced Avg depth to maintain the vertical water column for mixing.</i>
	<i>Depth at Discharge</i>	7.3'	7.3'	
	<i>Wind Speed</i>	-	2 m/s	
	<i>Bounded/Unbounded</i>	200'	200'	

³ Ibid.

⁴ *The Ecology of Thermal Additions, Lower Hudson River Cooperative Fishery Study in the Vicinity of Indian Point, Buchanan, N.Y.*; Raytheon Company Environmental Research Laboratory, October 1971

⁵ *A Synthesis of Available Data Pertaining to Major Physicochemical Variable Within the Hudson River Estuary 1972-1975*; Texas Instruments Incorporated Ecological Services, November 1976

⁶ *Hydrothermal Modeling of the Cooling Water Discharge from the Indian Point Energy Center to the Hudson River*; Applied Science Associates, Inc., March 2010

	<i>Steady (Flowrate, Velocity)</i>	0.07 fps	-	Modeled as Unsteady. N/A
	<i>Unsteady (Period (hr))</i>	-	12.4	
	<i>Unsteady (Max Velocity)</i>	-	0.792 m/s	NOAA Gage HUR0401 (Haverstraw), Same data used for Indian Point NY0004472
	<i>Unsteady (Tidal Velocity)</i>	-	0.174 m/s	1 hr. after slack
	<i>Manning's n</i>	-	0.03	
	<i>Darcy-Weisbach f</i>	-	-	
	<i>Fresh Water (Uniform, Temperature; Uniform, Density; Stratified)</i>	1000 kg/m3	1000 kg/m3	Non-fresh, Uniform
Discharge (Single Port)	<i>Nearest bank is on the</i>	-	Left	
	<i>Distance to nearest bank</i>	50'	50'	
	<i>Port Area</i>	16" dia.	1.33' dia.	
	<i>Vertical Angle THETA</i>	0°	0°	
	<i>Horizontal Angle SIGMA</i>	90° *	270°	*MZ form asks for angle bet. Bank and outfall
	<i>Submerged (Port Height Above Channel Btm.)</i>	0' *	0.6667' **	* Bottom of pipe on immediate bottom of channel. ** 1/2 of port diameter.
Mixing Zone	<i>Non-Toxic Effluent (No WQ Standard)</i>	-	X	
	<i>No Mixing Zone Specified</i>	-	X	
	<i>Region of Interest</i>	-	1,000 m	
	<i>Output Steps Per Module</i>	-	25	

Existing Flow (0.5 MGD): Results of Mixing Analysis

The CORMIX model shows the effluent density is less than the surrounding ambient water density at the discharge level; therefore, the effluent is positively buoyant and will tend to rise towards the surface. The discharge plume becomes attached to the channel bottom within the NFR immediately following the efflux. The Plume does not contact the bank within the bounded section of Lent's Cove. The CORMIX model defines the end of the near-field region as the point where buoyant ambient spreading occurs.

Dilution

The CORMIX prediction file has the results of the model that provides dilution at intervals across the region of interest. Three methods were used to identify the acute mixing zone length, which is used to obtain the dilution from the CORMIX model prediction file. The length of the chronic mixing zone is calculated as 3-5 times the acute mixing zone length. For this permit, the more conservative factor of 3 was used to take into consideration the tidal reversal in the receiving water and the discharge into an embayment of the Hudson River.

50 * Distance Length Scale (DLS)

The EPA *Technical Support Document for Water Quality-Based Toxics Control* defines the DLS as the square root of the cross-sectional area of any discharge pipe. The 50*DLS method is recommended for high velocity discharges (> 3 m/s); however, this discharge velocity is only 0.17 m/s. This method is not appropriate for this discharge.

5 * Local Water Depth (LWD)

Local water depth is the average local water depth under design (low flow) conditions. The 5*LWD method is recommended for discharges >3 m; however, the average depth at discharge used in the CORMIX model is only 2.89 m. This method is not appropriate for this discharge.

End of Near Field Mixing Region

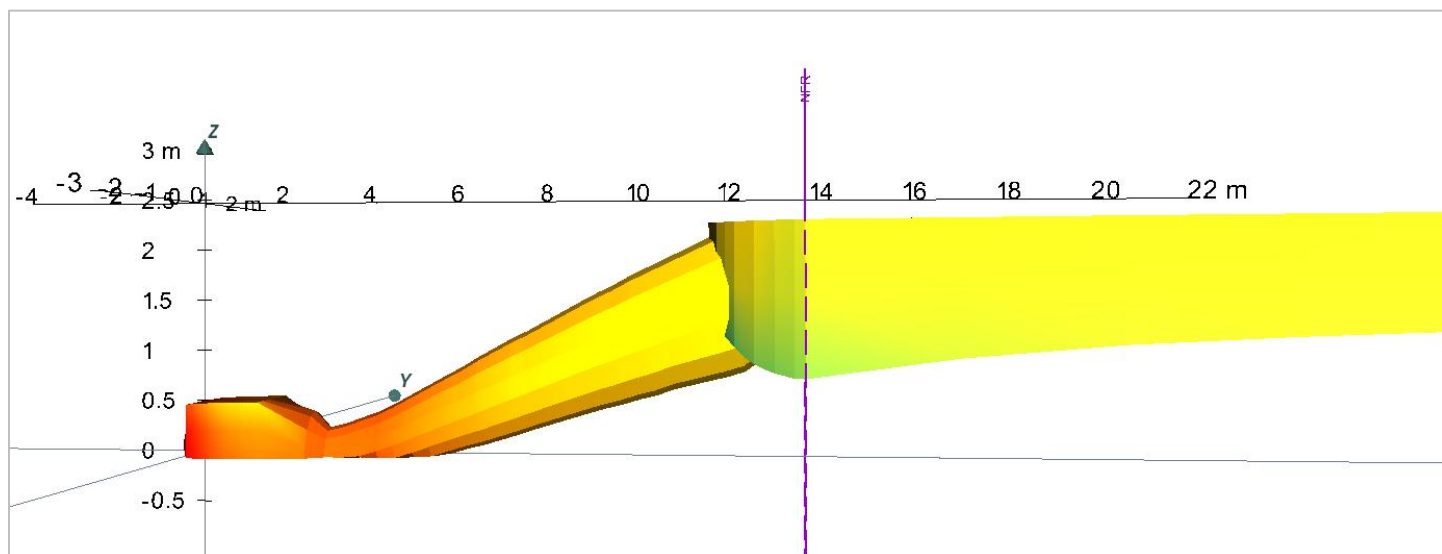
CORMIX defines the near field mixing region as the region where mixing is driven primarily by the energy of the discharge plume, and also identifies the end of this region as the acute mixing zone.

The prediction file calculated the end of the NFR at 11.4m downstream of the outfall.

- Acute mixing zone length 13.69m; Dilution 23.1 : 1
- Chronic mixing zone length 41.1m; Dilution 33.4 : 1

The mixing zones and dilution from the End of Near Field Mixing Region were used for the development of this draft permit.

Figure 1. Plan view of discharge plume



Existing Flow (0.5 MGD): Model Design

EXISTING FLOW – 0.5 MGD

Tab	CORMIX Input	Permittee	CORMIX	Notes
Effluent	Conservative Pollutant	-	X	
	Non-Conservative Pollutant	-	-	-
	Heated Discharge	-	-	-
	Brine Discharge (Conservative Pollutant; Non-Conservative Pollutant)	-	-	-
	Sediment Discharge	-	-	-
	Discharge concentration excess		100%	
	Effluent Flow Rate/Velocity	0.5 MGD	0.5 MGD	CORMIX calculated velocity = 0.17 m/s

	<i>Effluent Temperature/Density</i>	70 °F	70 °F	
Ambient	<i>Average Depth</i>	13'	9.48'	<i>Actual depth at discharge can't differ from Avg. depth by more than 30%. Reduced Avg depth to maintain the vertical water column for mixing.</i>
	<i>Depth at Discharge</i>	7.3'	7.3'	
	<i>Wind Speed</i>	-	2 m/s	
	<i>Bounded/Unbounded</i>	200'	200'	
	<i>Steady (Flowrate, Velocity)</i>	0.07 fps	-	Modeled as Unsteady. N/A
	<i>Unsteady (Period (hr))</i>	-	12.4	
	<i>Unsteady (Max Velocity)</i>	-	0.792 m/s	NOAA Gage HUR0401 (Haverstraw), Same data used for Indian Point NY0004472
	<i>Unsteady (Tidal Velocity)</i>	-	0.174 m/s	1 hr. after slack
	<i>Manning's n</i>	-	0.03	
	<i>Darcy-Weisbach f</i>	-	-	
	<i>Fresh Water (Uniform, Temperature; Uniform, Density; Stratified)</i>	1000 kg/m3	1000 kg/m3	Non-fresh, Uniform
Discharge (Single Port)	<i>Nearest bank is on the</i>	-	Left	
	<i>Distance to nearest bank</i>	50'	50'	
	<i>Port Area</i>	16" dia.	1.33' dia.	
	<i>Vertical Angle THETA</i>	0°	0°	
	<i>Horizontal Angle SIGMA</i>	90° *	270°	*MZ form asks for angle bet. Bank and outfall
	<i>Submerged (Port Height Above Channel Btm.)</i>	0' *	0.6667' **	* Bottom of pipe on immediate bottom of channel. ** ½ of port diameter.
Mixing Zone	<i>Non-Toxic Effluent (No WQ Standard)</i>	-	X	
	<i>No Mixing Zone Specified</i>	-	X	
	<i>Region of Interest</i>	-	1,000 m	
	<i>Output Steps Per Module</i>	-	25	

Future Expansion Flow (0.75 MGD): Results of Mixing Analysis

The CORMIX model shows the effluent density is less than the surrounding ambient water density at the discharge level; therefore, the effluent is positively buoyant and will tend to rise towards the surface. The discharge plume becomes attached to the channel bottom within the NFR immediately following the efflux. The Plume does not contact the bank within the bounded section of Lent's Cove. The CORMIX model defines the end of the near-field region as the point where buoyant ambient spreading occurs.

Dilution

The CORMIX prediction file has the results of the model that provides dilution at intervals across the region of interest. Three methods were used to identify the acute mixing zone length, which is used to obtain the dilution from the CORMIX model prediction file. The length of the chronic mixing zone is calculated as 3-5 times the

acute mixing zone length. For this permit, the more conservative factor of 3 was used to take into consideration the tidal reversal in the receiving water and the discharge into an embayment of the Hudson River.

*50 * Distance Length Scale (DLS)*

The EPA *Technical Support Document for Water Quality-Based Toxics Control* defines the DLS as the square root of the cross-sectional area of any discharge pipe. The 50*DLS method is recommended for high velocity discharges (> 3 m/s); however, this discharge velocity is only 0.17 m/s. This method is not appropriate for this discharge.

*5 * Local Water Depth (LWD)*

Local water depth is the average local water depth under design (low flow) conditions. The 5*LWD method is recommended for discharges > 3 m; however, the average depth at discharge used in the CORMIX model is only 2.89 m. This method is not appropriate for this discharge.

End of Near Field Mixing Region

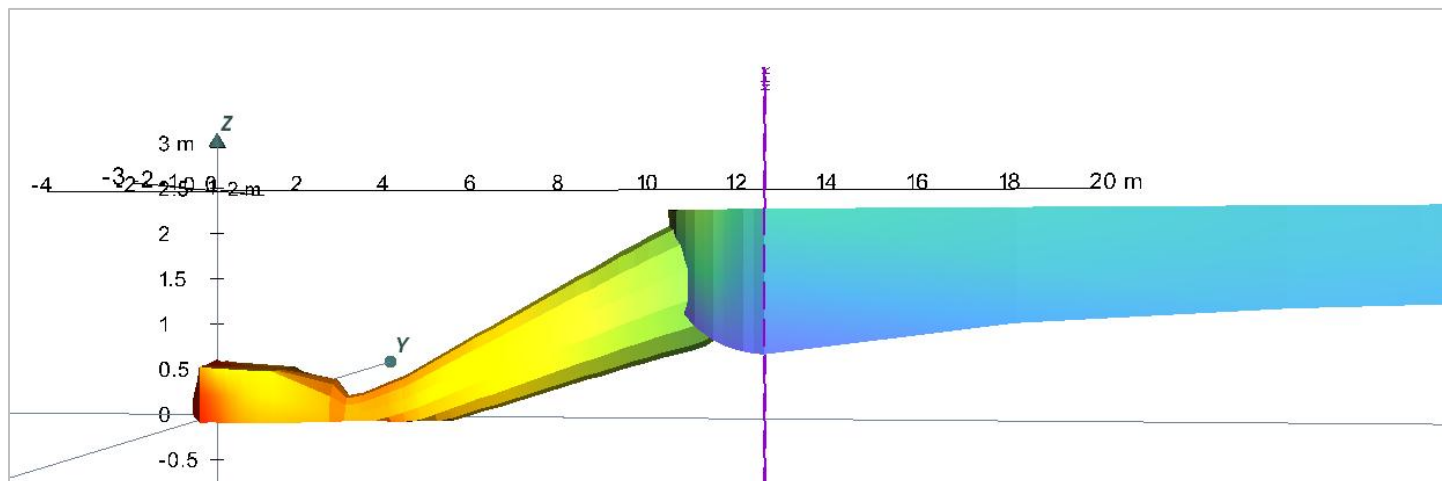
CORMIX defines the near field mixing region as the region where mixing is driven primarily by the energy of the discharge plume, and also identifies the end of this region as the acute mixing zone.

The prediction file calculated the end of the NFR at 11.4m downstream of the outfall.

- Acute mixing zone length 12.67m; Dilution 18.0 : 1
- Chronic mixing zone length 38.01m; Dilution 23.1 : 1

The mixing zones and dilution from the End of Near Field Mixing Region were used for the development of this draft permit.

Figure 2. Plan view of discharge plume



Appendix B: 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) and 750-1.10(d), CWA sections 402(o), 303(d)(4), ECL 17-0809, 40 CFR 122.44(l)
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 95th (monthly average) and 99th (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 law⁷ and USEPA interpretation⁸ 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.

⁷ American Iron and Steel Institute v. Environmental Protection Agency, 115 F.3d 979, 993 n.6 (D.C. Cir. 1997)

⁸ 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 DEC 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 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 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 DEC 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 DEC 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:

"EPA Technical Support Document for Water Quality-Based Toxics Control" (March 1991); EPA 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 $1.2 \times 7Q10$ 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 the DEC;
- 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.

The DEC 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, the DEC 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 6 NYCRR 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.

Action Levels

As defined in 6 NYCRR 750-1.2(a)(2), when used in a SPDES permit, an Action Level means a monitoring requirement characterized by a numerical value that, when exceeded, triggers additional permittee monitoring and DEC review to determine if numerical effluent limitations should be imposed.

The application of an Action Level is provided in TOGS 1.2.1. If the Action Level is exceeded, the permittee is required to conduct confirmatory monitoring. If Action Levels are routinely or excessively exceeded, they will be reconsidered and adjusted or replaced by limits in accordance with the Environmental Benefit Permit Strategy (EBPS). An Action Level is not a limit, and an exceedance does not constitute a permit violation unless the confirmatory sampling is not performed in accordance with the permit requirements.

Other Conditions

Mercury

Mercury is widespread in New York State (NYS) waters at levels above the most stringent dissolved mercury water quality standard (WQS) of 0.7 ng/L. SPDES permittees cannot comply with a Water Quality-Based Effluent Limitation (WQBEL) for mercury. Therefore, an MDV is appropriate, 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, 2020, and 2025. Each iteration of the MDV builds off the previous version supporting the State's effort to reduce mercury pollution and make reasonable progress toward achieving the WQBEL for mercury. This iteration of the MDV refines the content and application of the MDV for mercury.

The MDV does not change the WQS of 0.7 ng/L; it establishes a variance of the WQBEL which is based on the WQS. SPDES permits which include this variance comply with 40 CFR 122.44.

DOW 1.3.10 explains which surface water permittees are eligible for the MDV.

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.

Emerging Contaminants

Emerging Contaminants, such as Perfluorooctanoic acid (PFOA), Perfluorooctanesulfonic acid (PFOS), and 1,4-Dioxane (1,4-D), have been used in a wide variety of consumer and industrial products as well as in manufacturing processes for decades. Based on available research, water quality assessments for 1,4-D will follow existing WQBEL development. PFOA and PFOS do not break down easily; therefore, their presence in wastewater can remain a concern for years following their discontinued use. As the science surrounding these

Permittee: Village of Buchanan
Facility: Buchanan WWTP
SPDES Number: NY0029971
USEPA Non-Major/Class 07 Municipal

Date: **Date** v.1.41
Permit Writer: Erik Posner
Water Quality Reviewer: Erik Posner
Full Technical Review

contaminants is still evolving, additional monitoring is needed to better understand potential sources and background levels. For more information on emerging contaminants, please see the DEC Division of Water web page: [Emerging Contaminants In NY's Waters - NYSDEC](#).

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.

Mini Industrial Pretreatment Program

Pretreatment requirements are intended to protect a WWTP from receiving pollutants that cause pass through or interference to the operations of the POTW receiving such wastes. When necessary, the DEC, in accordance with TOGS 1.3.3. and through issued SPDES permits, requires WWTPs to develop and implement mini or partial pretreatment programs. These requirements are consistent with regulations in 6 NYCRR 750-2.9(b)(1), ECL 17-0811, ECL 17-0825, and 40 CFR §403.5.

As part of the mini pretreatment program, a WWTP must identify industrial users; determine whether legal authority controls (e.g. sewer use laws) are adequate; require, issue, and enforce industrial user permits; and, implement the program.