



State Pollutant Discharge Elimination System (SPDES) DISCHARGE PERMIT

SIC Code:	4952	NAICS Code:	221320	SPDES Number:	NY0024414
Discharge Class (CL):	05	DEC Number:	7-0348-00007/00001		
Toxic Class (TX):	T	Effective Date (EDP):	EDP		
Major-Sub Drainage Basin:	06 - 03	Expiration Date (ExDP):	ExDP		
Water Index Number:	SR	Item No.:	930 - 4	Modification Dates (EDPM):	
Compact Area:	SRBC				

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 (CWA), as amended, (33 U.S.C. ' 1251 et.seq.)

PERMITTEE NAME AND ADDRESS					
Name:	Binghamton Johnson City Joint Sewage Treatment Board ("BJCJSB")		Attention:	Superintendent	
Street:	4480 Vestal Road				
City:	Vestal	State:	NY	Zip Code:	13850
Email:	bjcwwtp@stny.rr.com		Phone:	607-729-2975	

is authorized to discharge from the facility described below:

FACILITY NAME, ADDRESS, AND PRIMARY OUTFALL									
Name:	Binghamton-Johnson City Joint Sewage Treatment Plant ("BJCSTP")								
Address / Location:	Vestal Road				County:	Broome			
City:	Vestal			State:	NY	Zip Code:	13850		
Facility Location:	Latitude:	42 °	05 ' ,	48 " N	& Longitude:	75 °	57 ' ,	48 " W	
Primary Outfall No.:	001	Latitude:	42 °	05 ' ,	53 " N	& Longitude:	75 °	57 ' ,	48 " W
Outfall Description:	Treated Combined Sanitary & Stormwater		Receiving Water:	Susquehanna River		Class:	A	Standard:	A

and the additional outfalls listed on page 4 of this permit, in accordance with: effluent limitations; monitoring and reporting requirements; other provisions and conditions set forth in this permit; and 6 NYCRR 750-1 and 750-2. The co-permittees are listed on page 2.

This permit and the authorization to discharge shall expire on midnight of the expiration date shown above and the co-permittees 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 co-permittees shall apply for permit renewal not less than 180 days prior to the expiration date shown above.

DISTRIBUTION:

- CO BWP - Permit Coordinator
- BWP – Permit Writer
- RWE
- RPA
- EPA Region II
- SRBC

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

CO-PERMITTEES

CO-PERMITTEE NAME AND ADDRESS				
Name:	City of Binghamton ("City")	Attention:	Mayor	
Street:	City Hall, 38 Hawley Street			
City:	Binghamton	State:	NY	Zip Code: 13901
Email:	jmkraham@cityofbinghamton.gov	Phone:	607-772-7001	

CO-PERMITTEE NAME AND ADDRESS				
Name:	Village of Johnson City ("Village")	Attention:	Mayor	
Street:	Johnson City Village Office, 60 Lester Ave			
City:	Johnson City	State:	NY	Zip Code: 13790
Email:	jcmayor@villageofjc.com	Phone:	607-798-7861	

The co-permittees are responsible for the designated permit conditions specified herein and applicable portions of 6 NYCRR 750-1 and 750-2. Unless otherwise specifically identified as a permit condition applicable to a particular co-permittee, the conditions of this permit apply to all co-permittees.

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SUMMARY OF ADDITIONAL OUTFALLS

Binghamton Johnson City Joint Sewage Treatment Plant

Outfall	Wastewater Description	Outfall Latitude	Outfall Longitude
01B	Bypass of Denitrification Cells (DN BAF) Prior to Disinfection	-- ° -- ' -- " N	-- ° -- ' -- " W
Receiving Water: Susquehanna River (internal to Outfall 001)			Class: A

City of Binghamton Combined Sewer Overflows

Outfall	Combined Sewer Overflow (CSO) Location	Outfall Latitude	Outfall Longitude
B001	Crary Street	42 ° 05 ' 39 " N	75 ° 56 ' 43 " W
Receiving Water: Susquehanna River			Class: A
Outfall	CSO Location	Outfall Latitude	Outfall Longitude
B002	Fourth Ward	42 ° 05 ' 26 " N	75 ° 56 ' 22 " W
Receiving Water: Susquehanna River			Class: A
Outfall	CSO Location	Outfall Latitude	Outfall Longitude
B003	Laurel Avenue	42 ° 05 ' 19 " N	75 ° 55 ' 48 " W
Receiving Water: Susquehanna River			Class: A
Outfall	CSO Location	Outfall Latitude	Outfall Longitude
B004	Murray Street	42 ° 05 ' 23 " N	75 ° 55 ' 23 " W
Receiving Water: Susquehanna River			Class: A
Outfall	CSO Location	Outfall Latitude	Outfall Longitude
B005	Pennsylvania Avenue	42 ° 05 ' 29 " N	75 ° 55 ' 01 " W
Receiving Water: Susquehanna River			Class: A
Outfall	CSO Location	Outfall Latitude	Outfall Longitude
B006	South Washington Street	42 ° 05 ' 30 " N	75 ° 54 ' 54 " W
Receiving Water: Susquehanna River			Class: A
Outfall	CSO Location	Outfall Latitude	Outfall Longitude
B007	New Street	42 ° 05 ' 33 " N	75 ° 54 ' 43 " W
Receiving Water: Susquehanna River			Class: A
Outfall	CSO Location	Outfall Latitude	Outfall Longitude
B009	Conklin Avenue	42 ° 05 ' 36 " N	75 ° 54 ' 20 " W
Receiving Water: Susquehanna River			Class: A
Outfall	CSO Location	Outfall Latitude	Outfall Longitude
B013	Susquehanna Street	42 ° 05 ' 42 " N	75 ° 54 ' 57 " W
Receiving Water: Chenango River			Class: B

SUMMARY OF ADDITIONAL OUTFALLS (continued)

Village of Johnson City Combined Sewer Overflows

Outfall	CSO Location	Outfall Latitude	Outfall Longitude
J001	720 Riverside Drive	42 ° 06 ' 44 " N	75 ° 58 ' 39 " W
Receiving Water: Susquehanna River			Class: A
Outfall	CSO Location	Outfall Latitude	Outfall Longitude
J002	720 Riverside Drive	42 ° 06 ' 40 " N	75 ° 58 ' 39 " W
Receiving Water: Susquehanna River			Class: A

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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 <i>40 CFR Part 136 Guidelines Establishing Test Procedures for the Analysis of Pollutants</i> , or otherwise accepted by 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 DEC'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 – 001 BJCSTP

BJCJSB is responsible for monitoring and sampling at all BJCSTP outfalls and compliance points.

OUTFALL	LIMITATIONS APPLY	RECEIVING WATER	EFFECTIVE	EXPIRING
001	Year Round, unless otherwise specified	Susquehanna River	EDP	ExDP

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.	Eff.	
Flow	12 MRA	35	MGD			Continuous	Recorder	X		1
Flow	Daily Maximum	Monitor	MGD			Continuous	Recorder	X		1
pH	Daily Minimum	6.0	SU			Continuous	Recorder	X	X	1
	Daily Maximum	9.0	SU							
Temperature	Daily Maximum	Monitor	°C			6/day	Grab	X	X	1
Dissolved Oxygen (DO)	Daily Minimum	Monitor	mg/L			1/quarter	Grab		X	2
Ultimate Oxygen Demand (UOD)	Daily Maximum	Monitor	mg/L			1/quarter	Calculated		X	3
CBOD ₅	Monthly Average	18	mg/L	5300	lbs/d	1/day	24-hr. Comp.	X	X	1,4
CBOD ₅	7-Day Average	27	mg/L	7900	lbs/d	1/day	24-hr. Comp.	X	X	1
CBOD ₅	Daily Maximum	Monitor	mg/L			1/day	24-hr. Comp.	X	X	1
Total Suspended Solids (TSS)	Monthly Average	20	mg/L	5800	lbs/d	1/day	24-hr. Comp.	X	X	1,4
Total Suspended Solids (TSS)	7-Day Average	30	mg/L	8800	lbs/d	1/day	24-hr. Comp.	X	X	1
Total Suspended Solids (TSS)	Daily Maximum	Monitor	mg/L			1/day	24-hr. Comp.	X	X	1
Settleable Solids	Daily Maximum	0.3	mL/L			6/day	Grab	X	X	1
Ammonia (as N)	Monthly Average	Monitor	mg/L	Monitor	lbs/d	1/week	24-hr. Comp.	X	X	1
Nitrate (NO ₃) + Nitrite (NO ₂) (as N)	Monthly Average	Monitor	mg/L	Monitor	lbs/d	1/day	24-hr. Comp.	X	X	1
Total Kjeldahl Nitrogen (TKN) (as N)	Monthly Average	Monitor	mg/L	Monitor	lbs/d	1/day	24-hr. Comp.	X	X	1
Total Kjeldahl Nitrogen (TKN) (as N)	Daily Maximum	Monitor	mg/L	Monitor	lbs/d	1/day	24-hr. Comp.	X	X	1
Total Nitrogen (as N)	Daily Maximum	Monitor	mg/L	Monitor	lbs/d	1/day	Calculated	X	X	1,5
Total Nitrogen (as N)	Monthly Average	6.0	mg/L	Monitor	lbs/d	1/day	Calculated	X	X	1,5
Total Nitrogen (as N)	Month Total			Monitor	lbs/month	1/month	Calculated	X	X	1,5,6
Total Nitrogen (as N)	12 Month Total			639,261	lbs/year	1/month	Calculated	X	X	1,5,7
Total Phosphorus (as P)	Daily Maximum	Monitor	mg/L	Monitor	lbs/d	1/week	24-hr. Comp.	X	X	1
Total Phosphorus (as P)	Monthly Average	1.0	mg/L	Monitor	lbs/d	1/week	24-hr. Comp.	X	X	1

SEE FOOTNOTES FOR BJCSTP OUTFALLS ON PAGE 9

PERMIT LIMITS, LEVELS AND MONITORING – 001 BJCSTP (continued)

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.	Eff.	
Total Phosphorus (as P)	Month Total			Monitor	lbs/month	1/month	Calculated	X	X	1,6
Total Phosphorus (as P)	12 Month Total			106,543	lbs/year	1/month	Calculated	X	X	1,7,8
Copper, Total	Daily Maximum	Monitor	mg/L	20	lbs/d	1/month	24-hr. Comp.		X	
Cyanide, Total	Daily Maximum	Monitor	mg/L	10	lbs/d	1/month	6-hr. Comp.		X	9
Cyanide, Free	Daily Maximum	Monitor	mg/L	Monitor	lbs/d	1/month	6-hr. Comp.		X	9
Iron, Total	Daily Maximum	Monitor	mg/L	290	lbs/d	1/quarter	24-hr. Comp.		X	
Lead, Total	Daily Maximum	Monitor	mg/L	18	lbs/d	1/month	24-hr. Comp.		X	
Mercury, Total	12 MRA	12	ng/L			1/month	Calculated	X	X	1,10
Mercury, Total	Daily Maximum	50	ng/L			1/month	Grab	X	X	1
Thallium, Total	Daily Maximum	Monitor	mg/L	Monitor	lbs/d	1/month	24-hr. Comp.		X	
Phenols, Total	Daily Maximum	8.3	µg/L			1/month	Grab		X	
Biennial Pollutant Scan						1/Two Years	-		X	11
EFFLUENT DISINFECTION		Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	FN
Required All Year										
Coliform, Fecal	30-Day Geometric Mean	200	No./100 mL			1/day	Grab		X	
Coliform, Fecal	7-Day Geometric Mean	400	No./100 mL			1/day	Grab		X	
Chlorine, Total Residual	Daily Maximum	0.030	mg/L			6/day	Grab		X	12
WHOLE EFFLUENT TOXICITY (WET) TESTING		Limit	Units	Action Level	Units	Sample Frequency	Sample Type	Inf.	Eff.	FN
WET - Acute Invertebrate	See footnote			2.0	TUa	See footnote	See footnote		X	13
WET - Acute Vertebrate	See footnote			2.0	TUa	See footnote	See footnote		X	13
WET - Chronic Invertebrate	See footnote			7.2	TUc	See footnote	See footnote		X	13
WET - Chronic Vertebrate	See footnote			7.2	TUc	See footnote	See footnote		X	13

SEE FOOTNOTES FOR BJCSTP OUTFALLS ON PAGE 9

PERMIT LIMITS, LEVELS AND MONITORING – 01B BJCSTP

OUTFALL	LIMITATIONS APPLY	RECEIVING WATER	EFFECTIVE	EXPIRING
01B Bypass of Denitrification Cells (DN BAF)	Year Round (Discharge permitted only for flows >35 MGD)	Susquehanna River (Internal to Outfall 001)	EDP	ExDP

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS			FN	
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.		Eff.
Flow	Daily Maximum	Monitor	MGD			Continuous	Calculated		X	14,15
Nitrite (NO ₂) + Nitrate (NO ₃) (as N)	Daily Maximum	Monitor	mg/L	Monitor	lbs/d	1/month	Grab		X	16
Total Kjeldahl Nitrogen (TKN) (as N)	Daily Maximum	Monitor	mg/L	Monitor	lbs/d	1/month	Grab		X	16
Total Nitrogen (as N)	Daily Maximum	Monitor	mg/L	Monitor	lbs/d	1/month	Calculated		X	5,16
Total Phosphorus (as P)	Daily Maximum	Monitor	mg/L	Monitor	lbs/d	1/month	Grab		X	16

FOOTNOTES FOR BJCSTP OUTFALLS:

- Influent samples shall be calculated by BJCJSB as the flow weighted average of the Village of Johnson City and City of Binghamton influent.
- Sample for dissolved oxygen should be taken by BJCJSB after the outfall rip-rap cascade. If environmental conditions are unsafe for sample collection, BJCJSB shall report an appropriate NODI code.
- Ultimate Oxygen Demand (UOD) shall be computed by BJCJSB as follows: $UOD = (1.46 \times CBOD_5) + (4.57 \times TKN)$.
- For Outfall 001, effluent shall not exceed 15% of influent concentration values for CBOD₅ & TSS.
- Total Nitrogen (as N) = [Total Kjeldahl Nitrogen (TKN), as N] + [Nitrite (NO₂), as N] + [Nitrate (NO₃), as N].
- Total Nitrogen month total (lbs/month) is calculated as the individual sum of all daily loads (lbs/d) for a given month. Total Phosphorus month total (lbs/month) is calculated as the monthly avg. load (lbs/d) multiplied by the number of days in the month.
- Total Nitrogen 12-month total (lbs/yr) and Total Phosphorus 12-month total (lbs/yr) are calculated as the current month total (lbs/month) added to the monthly loads from the previous eleven months, for Total Nitrogen or Total Phosphorus, respectively.
- The Total Phosphorus 12-month total limitation of 106,543 lbs/yr becomes effective on January 1, 2025 and will remain as monitor only until then.
- 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.
- The mercury 12-month rolling average is calculated as the current month daily max (ng/L) added to the previous eleven months daily maximums and divided by 12.

FOOTNOTES FOR BJCSTP OUTFALLS (continued):

11. Biennial Pollutant Scan: BJCJSB shall perform effluent sampling every two (2) years for all applicable pollutants identified in the NY-2A Application, Tables A - D. Sampling data shall be collected according to the guidance in the NY-2A application and maintained on-site by BJCJSB. Monitoring results shall not be submitted on the DMR. Data shall be submitted with the next submission of the NY-2A form.
12. Effluent limitation and sampling for Total Residual Chlorine is only applicable if chlorine is used for disinfection or other wastewater treatment processes. Chlorine used solely for odor control and is subsequently returned to the headworks of the plant does not require sampling or monitoring of the effluent.

13. **Whole Effluent Toxicity (WET) Testing:**

Testing Requirements – Chronic WET testing is required, but report both the acute and chronic results. Testing shall be performed by BJCJSB in accordance with *40 CFR Part 136 Guidelines Establishing Test Procedures for the Analysis of Pollutants* and TOGS 1.3.2 unless prior written approval has been obtained from DEC. The test species shall be *Ceriodaphnia dubia* (water flea - invertebrate) and *Pimephales promelas* (fathead minnow - vertebrate). Receiving water collected upstream from the discharge should be used for dilution. All tests conducted should be static-renewal (two 24-hr composite samples with one renewal for Acute tests and three 24-hr composite samples with two renewals for Chronic tests). The appropriate dilution series should be used to generate a definitive test endpoint, otherwise an immediate rerun of the test may be required. WET testing shall be coordinated with the monitoring of chemical and physical parameters limited by this permit so that the resulting analyses are also representative of the sample used for WET testing. The ratio of critical receiving water flow to discharge flow (i.e. dilution ratio) is 6.9:1 for acute, and 7.2:1 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 by BJCJSB 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 by BJCJSB 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 DEC may require BJCJSB to conduct additional WET testing including Acute and/or Chronic tests. Additionally, BJCJSB may be required to perform a Toxicity Identification/Reduction Evaluation (TI/RE) in accordance with DEC guidance. Enforceable WET limits may also apply. BJCJSB 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.

14. No discharge is permitted from Outfall 01B except as caused by plant flows above 35 MGD and when the denitrification cells (DN BAF) are at peak capacity.
15. Flow at Outfall 01B may be calculated by BJCJSB as the flow from Outfall 001 minus the effluent flow from the denitrification cells (DN BAF) prior to disinfection.
16. Outfall 01B will be sampled by BJCJSB once per month when flow is being bypassed around the DN BAF for more than 1 hour. If an event does not occur in a given month, BJCJSB does not need to sample for that month.

PERMIT LIMITS, LEVELS AND MONITORING – B001, B002, B005 City of Binghamton CSOs

The City is responsible for monitoring and sampling at all City CSO outfalls and compliance points. DMRs shall be submitted on a quarterly basis.

OUTFALLS	LIMITATIONS APPLY	RECEIVING WATER	EFFECTIVE	EXPIRING
B001, B002, B005	Year Round, During Discharges	Susquehanna River	EDP	ExDP

OVERFLOW PARAMETER	EFFLUENT LIMITATION			MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Sample Frequency	Sample Type	Location		
						Inf.	Eff.	
Overflow Volume	Daily Maximum	Monitor	MG	Each Event	Meter		X	1
Precipitation	Daily Maximum	Monitor	inches	Once per shift/each day of event	Rain gauge			1,2
Floatable Material	Quarter Total	Monitor	events	Each Event	Visual Observation		X	1,3
Fecal Coliform	Daily Maximum	Monitor	No./100 mL	Quarterly	Grab		X	1
BOD ₅	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Total Suspended Solids (TSS)	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Ammonia (as N)	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Nitrate (NO ₃) (as N)	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Nitrite (NO ₂) (as N)	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Total Kjeldahl Nitrogen (TKN) (as N)	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Total Nitrogen (as N)	Daily Maximum	Monitor	mg/L	Quarterly	Calculated		X	1
Total Phosphorus (as P)	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Chromium, Total	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Copper, Total	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Iron, Total	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Lead, Total	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Zinc, Total	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Phenols, Total	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1

SEE FOOTNOTES FOR CITY OUTFALLS ON PAGE 12

PERMIT LIMITS, LEVELS AND MONITORING – B003, B004, B006, B007, B009, B013 City of Binghamton CSOs

DMRs shall be submitted on a quarterly basis.

OUTFALLS	LIMITATIONS APPLY	RECEIVING WATER	EFFECTIVE	EXPIRING
B003, B004, B006, B007, B009, B013	Year Round, During Discharges	Susquehanna River Outfall B013: Chenango River	EDP	ExDP

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.	Eff.	
Overflow Volume	Daily Maximum	Monitor	MG			Each Event	Meter		X	1
Precipitation	Daily Maximum	Monitor	inches			Once per shift per each day of event	Rain gauges			1,2
Floatable Material	Quarter Total	Monitor	events			Each Event	Visual Observation		X	1,3

FOOTNOTES FOR CITY OUTFALLS:

1. A CSO event is defined as when one or more outfalls overflow during a precipitation or snow melt event within a hydraulically connected combined sewer system (CSS). If sections of a CSS are not hydraulically connected, an event will be calculated by the City for each system individually and not the entire CSS within the municipality or sewer authority. If all overflows cease and another storm begins, additional overflows will constitute a second event.

During a 50-year flood event, CSO outfall B001 may not be accessible, and during a 10-year flood event, overflow B002 may not be accessible. In this situation, the City does not have to sample or inspect these overflows. However, overflow volume can be obtained and should be reported to DEC. The City shall notify DEC by phone within 48 hours that the outfalls are inaccessible due to high water. When an inaccessible condition persists for each discharge event in the entire reporting period, the City shall contact DEC to confirm which NODI code is appropriate for the DMR.

Outfall B005 is accessible during high water events and must be inspected and sampled by the City.

2. During overflow events, rain gauge to be monitored at Pennsylvania Ave Pump Station.
3. Visual observation required at the beginning of each overflow event. The City shall report the number of events during the reporting period where at least one visual observation indicates the presence of floatable material.

PERMIT LIMITS, LEVELS AND MONITORING – J001, J002 Village of Johnson City CSOs

The Village is responsible for monitoring and sampling at all Village CSO outfalls and compliance points. DMRs shall be submitted on a quarterly basis.

OUTFALLS	LIMITATIONS APPLY	RECEIVING WATER	EFFECTIVE	EXPIRING
J001 J002	Year Round, During Discharges	J001: Little Choconut Creek J002: Susquehanna River	EDP	ExDP

OVERFLOW PARAMETER	EFFLUENT LIMITATION			MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Sample Frequency	Sample Type	Location		
						Inf.	Eff.	
Overflow Volume	Daily Maximum	Monitor	MG	Each Event	Metered		X	1
Precipitation	Daily Maximum	Monitor	inches	Once per shift/each day of event	Rain Gauge			1,2
Floatable Material	Quarter Total	Monitor	events	Each Event	Visual Observation		X	1,3
Fecal Coliform	Daily Maximum	Monitor	No./100 mL	Quarterly	Grab		X	1
Total Suspended Solids (TSS)	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Cadmium, Total	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Chromium, Total	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Copper, Total	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Cyanide, Total	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Iron, Total	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Lead, Total	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Zinc, Total	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Phenols, Total	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Tetrachloroethane	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Toluene	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Trichloroethene	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1
Vinyl Chloride	Daily Maximum	Monitor	mg/L	Quarterly	Grab		X	1

FOOTNOTES FOR VILLAGE OUTFALLS:

1. A CSO event is defined as when one or more outfalls overflow during a precipitation or snow melt event within a hydraulically connected combined sewer system (CSS). If sections of a CSS are not hydraulically connected, an event will be calculated by the Village for each system individually and not the entire CSS within the municipality or sewer authority. If all overflows cease and another storm begins, additional overflows will constitute a second event.

During a 10-year flood event, overflows J001 and J002 may not be accessible. In this situation, the Village does not have to sample or inspect these overflows. However, overflow volume can be obtained and should be reported to DEC. The Village shall notify DEC by phone within 48 hours that the outfalls are inaccessible due to high water. When an inaccessible condition persists for each discharge event in the entire reporting period, the Village shall contact DEC to confirm which NODI code is appropriate for the DMR.

FOOTNOTES FOR VILLAGE OUTFALLS (continued):

2. The Village shall report precipitation during overflow events.
3. Visual observation required at the end of each overflow event. The Village shall report the number of events during the reporting period where at least one visual observation indicates the presence of floatable material.

DRAFT

BEST MANAGEMENT PRACTICES FOR COMBINED SEWER OVERFLOWS

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

Co-Permittee	Applicable BMPs
Binghamton Johnson City Joint Sewage Treatment Board (BJCJSB)	1, 2, 3, 4, 6, 7, 10, 11, 13, 14, 15
City of Binghamton (City)	All except 3 and 6
Village of Johnson City (Village)	All except 3 and 6

1. CSO Maintenance/Inspection (BJCJSB, City, Village) - The City and the Village shall continue to maintain and inspect all CSOs in accordance with the written maintenance and inspection program. This program shall include all regulators, sewers, and in-line screening systems tributary to these CSOs and shall be conducted during periods of both dry and wet weather. This is to ensure that no discharges occur during dry weather and that the maximum amount of wet weather flow is conveyed to BJCSTP for treatment. This program shall consist of weekly inspections with required repair, cleaning and maintenance done as needed. BJCJSB shall maintain and conduct at least semiannual inspections of pump stations under BJCJSB operation and the influent gates at BJCSTP.

Inspection reports shall be completed indicating visual inspection, any observed flow, incidence of rain or snowmelt, condition of equipment and work required. These reports shall be compiled and submitted to the Department as an attachment to the quarterly DMR.

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

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

BEST MANAGEMENT PRACTICES FOR COMBINED SEWER OVERFLOWS (continued)

4. Maximize Flow to POTW (BJCJSB, City, Village) - Factors cited in Item 2. above shall also be considered in maximizing flow to the POTW. Maximum delivery to the POTW is particularly critical in treatment of "first-flush" flows. The City and the Village collection systems shall be capable of conveying and BJCSTP shall be capable of receiving and treating the peak design hydraulic loading rates for all process units: i.e., a minimum of 60 MGD through the plant headworks, chemically enhanced primary treatment, carbonaceous removal and nitrification (CN BAF), and disinfection; and a minimum of 35 MGD through denitrification (DN BAF) system during wet weather. The City and the Village shall ensure the maximum flow rate can be delivered to BJCSTP, and BJCJSB shall ensure the maximum flow rate can be treated at BJCSTP, without causing adverse conditions in the interceptor and lateral sewer systems. If the City and the Village cannot deliver these maximum design flows, the City and the Village shall submit a plan and schedule to DEC for accomplishing this requirement within 12 months after discovery. If BJCSTP cannot treat the flows listed above, BJCJSB shall submit a plan and schedule to DEC for accomplishing this requirement within 12 months of discovery.
5. Prohibition of Dry Weather Overflow (City and Village) - Dry weather overflows from the combined sewer system are prohibited. The occurrence of any dry weather overflow shall be promptly abated and reported in accordance with 6 NYCRR 750-2.7.
6. Wet Weather Operating Plan (WWOP) (BJCJSB) - BJCSTP shall maximize treatment during wet weather events. This shall be accomplished by having a WWOP containing operating procedures so as to operate unit processes to treat maximum flows while not appreciably diminishing effluent quality or destabilizing treatment upon return to dry weather operation. The WWOP shall be developed in accordance with the DEC guidance, Wet Weather Operating Practices for POTWs With Combined Sewers, ([Wet Weather Technical Transfer \(ny.gov\)](http://www.nyc.gov/wet-weather-technical-transfer)).

A revised WWOP must be submitted by BJCJSB whenever BJCSTP or tributary sewer collection system is replaced or modified. The City and the Village must notify BJCJSB whenever any portion of their respective sewer collection systems is replaced or modified.

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

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

BEST MANAGEMENT PRACTICES FOR COMBINED SEWER OVERFLOWS (continued)

10. Sewage Backups (BJCJSB, City, Village) - If there are documented, recurrent instances of sewage backing up into house(s) or discharges of raw sewage onto the ground surface from surcharging manholes, the respective collection system owner (City or Village) shall, upon letter notification from DEC, prohibit further connections that would exacerbate the surcharging/back-up problems. The City or the Village shall provide written notification to BJCJSB of frequent instances of sewage backing up into house(s) or discharges of raw sewage onto the ground surface from surcharging manholes in their respective collection systems. In these circumstances, BJCJSB, the City, and the Village should consider if modifications to the WWOP from BMP No. 6 are necessary.
11. Septage and Hauled Waste (City and Village) - The discharge or release of septage or hauled waste upstream of a CSO is prohibited.
12. Control of Runoff (City and Village) - It is recommended that the impacts of runoff from development and redevelopment in areas served by combined sewers be reduced by requiring compliance with the New York Standards for Erosion and Sediment Control and the quantity control requirements included in the New York State Stormwater Management Design Manual. (<http://www.dec.ny.gov/chemical/8694.html>.)
13. Public Notification (BJCJSB, City, Village) – BJCJSB, the City, and the Village shall report, in accordance with 6 NYCRR 750-2.7, all known or suspected discharge events that occur not in accordance with requirements of BMP No. 4 or No. 6, including bypasses of treatment unit(s). Outfall signage requirements for each co-permittee are specified in the Discharge Notification Requirements section of this permit.
14. Characterization and Monitoring (BJCJSB, City, Village) – BJCJSB, the City, and the Village shall jointly characterize the combined sewer system, determine the frequency of overflows, and identify CSO impacts in accordance with Combined Sewer Overflows, Guidance for Nine Minimum Controls, EPA, 1995, Chapter 10. These are minimum requirements, more extensive characterization and monitoring efforts may be required as part of future revision of the Long-Term Control Plan (LTCP).
15. Annual Report (BJCJSB, City, Village) – BJCJSB, the City, and the Village shall each electronically submit a separate CSO Annual Report using nForm (<https://www.dec.ny.gov/chemical/48595.html>), which summarizes their respective implementation of the above BMPs and the approved LTCP. The CSO Annual Reports shall be submitted by January 31st of each year. The complete documentation shall be stored at a central location for each co-permittee and be made available to DEC upon request.

SPECIAL CONDITIONS: CSO CONTROL POLICY

A. Water Quality Requirements for Combined Sewer Overflows

Long-Term Control Plan (LTCP)

In accordance with Order on Consent R7-0589-90-12, the City of Binghamton and Village of Johnson City submitted a joint LTCP on February 28, 1999, consistent with the “Guidance for Long-Term Control Plan”, EPA, September 1995. The plan was approved on October 13, 2000. The approved LTCP stated the co-permittees were already attaining the presumptive approach criteria. The approved LTCP consisted of two phases: phase one incorporated requirements for collection system projects in both the City and the Village; and phase two was the BJCSTP upgrade. Implementation of the approved LTCP is completed as of 2020. Each co-permittee shall continue to effectively operate and maintain the CSO controls identified in their approved LTCP.

In accordance with the approved LTCP, the City was required to:

- Make improvements to the Pennsylvania Avenue Floatables Control Facility

In accordance with the approved LTCP, the Village was required to:

- Installation of flow meters in the collection system
- Increase the weir height on the overflow structure from CSO Outfall 001 and provide a maintenance access roadway
- Replace existing flap gates with new duckbill valves

In accordance with the approved LTCP, BJCJSB was required to:

- Expand BJCSTP capacity from 35 to 60 MGD through primary treatment and disinfection

Water Quality Criterion – Presumption Approach

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

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

The City and Village must each provide the minimum treatment specified below to any additional discharges of combined sewage flow from their respective CSO outfalls during wet weather:

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

B. Monitoring Requirements – Post Construction Compliance Monitoring Program

1. The PCCM Program shall be implemented by the City and the Village either jointly or individually, in accordance with the approved PCCMP, dated January 18, 2024, during years ending in 2 and 7. Ambient sampling must be conducted by the City and the Village, at a minimum, for the following parameters:

PARAMETER	Units	Sample Type
pH	S.U.	Grab
Temperature	°C	Grab
Conductivity	S/m	Grab
Turbidity	NTU	Grab
BOD ₅	mg/L	Grab
Solids, Settleable	mL/L	Grab
Solids, Suspended	mg/L	Composite
Dissolved Oxygen	mg/L	Grab
Total Kjeldahl Nitrogen (TKN)	mg/L	Composite
Ammonia (as N)	mg/L	Composite

SPECIAL CONDITIONS: CSO CONTROL POLICY (continued)

PARAMETER	Units	Sample Type
Nitrite + Nitrate	mg/L	Composite
Phosphorus, Total	mg/L	Composite
Oil & Grease	mg/L	Grab
Coliform, Fecal	MPN/100mL	Grab
Enterococci	MPN/100mL	Grab
Floatable Material	-	Visual Observation
Iron, Total	mg/L	Composite
Mercury, Total	ng/L	Grab
Priority Pollutant Metals	µg/L	Grab
Volatile Organic Compounds (VOCs)	mg/L	Grab

2. By March 31st of the year following PCCM sampling, the City and the Village shall submit an approvable PCCM Program Report. The PCCM Program Report can be developed either jointly or individually with consultation between the co-permittees. Upon request of the City or Village, BJCJSB shall consult with the co-permittee(s) to provide any BJCSTP operational information or data necessary to produce the PCCM Program Report. The PCCM Program Report shall include:
 - a. Analytical results of the PCCM sampling,
 - b. The number of CSO events and volume of CSO discharged during the PCCM period,
 - c. An assessment of whether CSO receiving water quality complies with applicable water quality standards,
 - d. Recommendations for potential improvements in CSO controls for when water quality standards are not attained, and
 - e. A discussion of whether the CSO controls are meeting the frequency goals of the Presumptive Approach, selected by the City and the Village in the approved LTCP, to verify the effectiveness of the CSO controls.

C. Special Conditions

1. Sensitive Area¹ Reassessment

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

2. Reopener

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

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

¹ Sensitive areas include designated Outstanding National Resource Waters, National Marine Sanctuaries, waters with threatened or endangered species and their habitat, waters with primary contact recreation, public drinking water intakes or their designated protection areas, and shellfish beds, waters listed on the DEC 303(d) list, or any other area determined by DEC.

STORMWATER POLLUTION PREVENTION REQUIREMENTS

NO EXPOSURE CERTIFICATION

BJCJSB submitted a Conditional Exclusion for No Exposure Form on September 27, 2019, certifying that all industrial activities and materials are completely sheltered from exposure to rain, snow, snowmelt, and/or stormwater runoff. BJCJSB must maintain a condition of no exposure for the exclusion to remain applicable. If conditions change resulting in the exposure of materials and activities to stormwater, BJCJSB must notify the Regional Water Engineer. BJCJSB must recertify a condition of no exposure every five years by completing the "No Exposure Certification" form found on DEC's website: <https://dec.ny.gov/regulatory/permits-licenses/wastewater-stormwater-water-withdrawal/spdes-permit-program/application-procedures-forms>

MERCURY MINIMIZATION PROGRAM (MMP) - Type I

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

Minimum required monitoring is as follows:

- i. **Sewage Treatment Plant Influent and/or Effluent** – BJCJSB must collect samples at the location(s) and frequency as specified in the SPDES permit limitations table.
- ii. **Key Locations and Potential Mercury Sources** – The permit includes reduced monitoring requirements and does not require key location sampling. See section 2.a.iv below.
- iii. **Hauled Wastes** – BJCJSB must establish procedures for the acceptance of hauled waste to ensure the hauled waste is not a potential mercury source. Loads which may exceed 500 ng/L,³ must receive approval from DEC prior to acceptance.
- iv. **Decreased Monitoring Requirements** – BJCSTP has an EEQ at or below 12 ng/L and the permit includes the following requirements:
 - 1) Reduced requirements
 - a) Conduct influent monitoring, sampling quarterly, in lieu of monitoring within the collection system, such as at *key locations*; and
 - b) Conduct effluent compliance sampling quarterly.
 - 2) If a facility with reduced requirements reports discharges above 12 ng/L for two of four consecutive effluent samples, DEC may undertake a Department-initiated modification to remove the allowance of reduced requirements.
 - 3) Under the decreased permit requirements, BJCJSB must continue to conduct a status report, as applicable in accordance with 2.c of this MMP, to determine if any waste streams have changed.
- v. Additional monitoring must be completed as required elsewhere in this permit (e.g., locations tributary to compliance points).

² Outfall monitoring must be conducted using the methods specified in Table 8 of *DOW 1.3.10*.

³A level of 0.2 mg/L (200,000 ng/L) or more is considered hazardous per 40 CFR 261.11. 500 ng/L is used here to alert BJCJSB that there is an unusual concentration of mercury and that it will need to be managed appropriately.

MERCURY MINIMIZATION PROGRAM (MMP) - Type I (continued)

- b. Control Strategy - The control strategy must contain the following minimum elements:
- i. Pretreatment/Sewer Use Law - BJCJSB must review pretreatment program requirements, the treatment plant Rules and Regulations, and the Sewer Use Laws (SULs) of the City and the Village, to ensure they are up-to-date and enforceable with applicable permit requirements and will support efforts to achieve a dissolved mercury concentration of 0.70 ng/L in the effluent.
 - ii. Monitoring and Inventory/Inspections for Outfall -
 - 1) Monitoring shall be performed as described in 2.a above. As mercury sources are found, BJCJSB must enforce its Rules and Regulations to track down and minimize these sources.
 - 2) BJCJSB must inventory and/or inspect users of its system as necessary to support the MMP.
 - a) Dental Facilities
 1. BJCJSB must maintain an inventory of each dental facility.
 2. BJCJSB must inspect each dental facility at least once every five years to verify compliance with the wastewater treatment operation, maintenance, and notification elements of 6 NYCRR 374.4. Alternatively, BJCJSB may develop and implement an outreach program,⁴ which informs users of their responsibilities, and collect the “Amalgam Waste Compliance Report for Dental Dischargers”⁵ form, as needed, to satisfy the inspection requirements. BJCJSB must conduct the outreach program at least once every five years and ensure the “Amalgam Waste Compliance Report for Dental Dischargers” are submitted by new users, as necessary. The outreach program could be supported by a subset of site inspections.
 3. A file shall be maintained by BJCJSB containing documentation demonstrating compliance with 2.b.ii.2)a) above. This file shall be available for review by DEC representatives and copies shall be provided upon request.
 - b) Other potential mercury sources
 1. BJCJSB must maintain an inventory of other *potential mercury sources*.
 2. BJCJSB must inspect other *potential mercury sources* once every five years. Alternatively, BJCJSB may develop and implement an outreach program which informs users of their responsibilities as *potential mercury sources*. BJCJSB must conduct the outreach program at least once every five years. The outreach program should be supported by a subset of site inspections.
 3. A file shall be maintained containing documentation demonstrating compliance with 2.b.ii.2)b) above. This file shall be available for review by DEC representatives and copies shall be provided upon request.
 - iii. Systems with CSO & Type II SSO Outfalls – Permittees must prioritize *potential mercury sources* upstream of CSOs and Type II SSOs for mercury reduction activities and/or controlled-release discharge.
 - iv. Equipment and Materials – Equipment and materials (e.g., thermometers, thermostats) used by BJCJSB, which may contain mercury, must be evaluated by BJCJSB. As equipment and materials containing mercury are updated/replaced, BJCJSB must use mercury-free alternatives, if possible.
 - v. Bulk Chemical Evaluation – For chemicals, used at a rate which exceeds 1,000 gallons/year or 10,000 pounds/year, BJCJSB must obtain a manufacturer’s certificate of analysis, a chemical analysis performed by a certified laboratory, and/or a notarized affidavit which describes the substances’ mercury concentration and the detection limit achieved. If possible, BJCJSB must only use bulk chemicals utilized in the wastewater treatment process which contain <10 ppb mercury.

⁴ For example, the outreach program could include education about sources of mercury and what to do if a mercury source is found.

⁵ The form, “Amalgam Waste Compliance Report for Dental Dischargers,” can be found here:
https://www.dec.ny.gov/docs/water_pdf/dentalform.pdf

MERCURY MINIMIZATION PROGRAM (MMP) - Type I (continued)

- c. **Status Report** - An annual status report must be developed and maintained on site by BJCJSB, in accordance with the [Schedule of Additional Submittals](#), summarizing:
- i. All MMP monitoring results for the previous reporting period;
 - ii. A list of known and *potential mercury sources*
 - 1) If BJCJSB meets the criteria for MMP Type IV, BJCJSB must notify DEC for a permittee-initiated modification;
 - iii. All actions undertaken, pursuant to the control strategy, during the previous reporting period;
 - iv. Actions planned, pursuant to the control strategy, for the upcoming reporting period; and
 - v. Progress towards achieving a dissolved mercury concentration of 0.70 ng/L in the effluent (e.g., summarizing reductions in effluent concentrations as a result of the control strategy implementation and/or installation/modification of a treatment system).

BJCJSB must maintain a file with all MMP documentation. The file must be available for review by DEC representatives and copies must be provided upon request in accordance with 6 NYCRR 750-2.1(i) and 750-2.5(c)(4).

3. **MMP Modification** - The MMP must be modified whenever:
- a. Changes at the facility, or within the collection system, increase the potential for mercury discharges;
 - b. Effluent discharges exceed the current permit limitation(s); or
 - c. A letter from DEC identifies inadequacies in the MMP.

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

DEFINITIONS:

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

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

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

<p>N.Y.S. PERMITTED DISCHARGE POINT</p> <p>SPDES PERMIT No.: NY_____</p> <p>OUTFALL No.: _____</p> <p>For information about this permitted discharge contact:</p> <p>Permittee Name: _____</p> <p>Permittee Contact: _____</p> <p>Permittee Phone: () - ### - ####</p> <p>OR:</p> <p>NYSDEC Division of Water Regional Office Address:</p> <p>NYSDEC Division of Water Regional Phone: () - ### - ####</p>

On each sign, the "Permittee Name," "Permittee Contact," and "Permittee Phone," shall all reflect the respective outfall owner. BJCSTP outfall signs shall list BJCJSB contact information. The City CSO outfall signs shall list City contact information. The Village CSO outfall signs shall list Village contact information.

The CSO outfall signs installed and maintained by the City and the Village shall also include the phrase "(wet weather discharge)" in the line underneath "N.Y.S. PERMITTED DISCHARGE POINT" and before "SPDES PERMIT No."

- (e) Upon request, BJCJSB, the City, or the Village shall make available electronic or hard copies of the sampling data to the public. In accordance with the RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS page of the permit, each DMR shall be maintained (either electronically or as a hard copy) on record for a period of five years.
- (f) BJCJSB, the City, and the Village shall periodically inspect their respective 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.

INDUSTRIAL PRETREATMENT PROGRAM IMPLEMENTATION REQUIREMENTS

- A. **DEFINITIONS:** Generally, terms used in this Section shall be defined as in *40 CFR Part 403 General Pretreatment Regulations for Existing and New Sources of Pollution*. Specifically, the following definitions apply to terms used in this Section:
1. **Categorical Industrial User (CIU):** an industrial user of the POTW that is subject to Categorical Pretreatment Standards under 40 CFR 403.6 and *40 CFR Chapter I, Subchapter N Effluent Guidelines and Standards*;
 2. **Local Limits:** General Prohibitions, specific prohibitions and specific limits as set forth in 40 CFR 403.5.
 3. **The Publicly Owned Treatment Works (POTW):** as defined by 40 CFR 403.3(q) and that discharges in accordance with this permit.
 4. **Program Submission(s):** requests for approval or modification of the POTW Pretreatment Program submitted in accordance with 40 CFR 403.11 or 403.18 and approved by USEPA on September 20, 1985.
 5. **Significant Industrial User (SIU):**
 - a) CIUs;
 - b) Except as provided in 40 CFR 403.3(v)(3), any other industrial user that discharges an average of 25,000 gallons per day or more of process wastewater (excluding sanitary, non-contact cooling and boiler blowdown wastewater) to the POTW;
 - c) Except as provided in 40 CFR 403.3(v)(3), any other industrial user that contributes a process waste stream which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant;
 - d) Any other industrial user that BJCJSB designates as having a reasonable potential for adversely affecting the POTW's operation or for violating a pretreatment standard or requirement.
 6. **Substances of Concern:** Substances identified by the New York State Department of Environmental Conservation Industrial Chemical Survey as substances of concern.
- B. **IMPLEMENTATION:** BJCJSB shall continue to implement a POTW Pretreatment Program in accordance with *40 CFR Part 403 General Pretreatment Regulations for Existing and New Sources of Pollution* and as set forth in BJCJSB's approved Program Submission(s). Modifications to this program shall be made in accordance with 40 CFR 403.18. Specific program requirements are as follows:
1. **Industrial Survey:** To maintain an updated inventory of industrial dischargers to the POTW BJCJSB shall:
 - a) Identify, locate and list all industrial users who might be subject to the industrial pretreatment program from the pretreatment program submission and any other necessary, appropriate and available sources. This identification and location list will be updated, at a minimum, every five years. As part of this update BJCJSB shall collect a current and complete New York State Industrial Chemical Survey form (or equivalent) from each SIU.
 - b) Identify the character and volume of pollutants contributed to the POTW by each industrial user identified in B.1.a above that is classified as a SIU.
 - c) Identify, locate and list, from the pretreatment program submission and any other necessary, appropriate and available sources, all SIUs of the POTW.
 2. **Control Mechanisms:** To provide adequate notice to and control of industrial users of the POTW BJCJSB shall:
 - a) Inform by certified letter, hand delivery courier, overnight mail, or other means which will provide written acknowledgment of delivery, all industrial users identified in B.1.a. above of applicable pretreatment standards and requirements including the requirement to comply with the local sewer use law, regulation or ordinance and any applicable requirements under section 204(b) and 405 of the Federal CWA and Subtitles C and D of the Resource Conservation and Recovery Act.

INDUSTRIAL PRETREATMENT PROGRAM IMPLEMENTATION REQUIREMENTS (continued)

- b) Control through permit or similar means the contribution to the POTW by each SIU to ensure compliance with applicable pretreatment standards and requirements. Permits shall contain limitations, sampling frequency and type, reporting and self-monitoring requirements as described below, requirements that limitations and conditions be complied with by established deadlines, an expiration date not later than five years from the date of permit issuance, a statement of applicable civil and criminal penalties and the requirement to comply with Local Limits and any other requirements in accordance with 40 CFR 403.8(f)(1).
3. Monitoring and Inspection: To provide adequate, ongoing characterization of non-domestic users of the POTW, BJCJSB shall:
- Receive and analyze self-monitoring reports and other notices. BJCJSB shall require all SIUs to submit self-monitoring reports at least every six months unless BJCJSB collects all such information required for the report, including flow data.
 - Adequately inspect each SIU at a minimum frequency of once per year.
 - Collect and analyze samples from each SIU for all priority pollutants that can reasonably be expected to be detectable at levels greater than the levels found in domestic sewage at a minimum frequency of once per year.
 - Require, through permits, each SIU to collect at least one 24-hour, flow proportioned composite (where feasible) effluent sample every six months and analyze each of those samples for all priority pollutants that can reasonably be expected to be detectable in that discharge at levels greater than the levels found in domestic sewage. BJCJSB may perform the aforementioned monitoring in lieu of the SIU except that BJCJSB must also perform the compliance monitoring described in 3.c.
4. Enforcement: To assure adequate, equitable enforcement of the industrial pretreatment program BJCJSB shall:
- Investigate instances of noncompliance with pretreatment standards and requirements, as indicated in self-monitoring reports and notices or indicated by analysis, inspection and surveillance activities. Sample taking and analysis and the collection of other information shall be performed with sufficient care to produce evidence admissible in enforcement proceedings or in judicial actions. Enforcement activities shall be conducted in accordance with BJCJSB's Enforcement Response Plan developed and approved in accordance with *40 CFR Part 403 General Pretreatment Regulations for Existing and New Sources of Pollution*.
 - Enforce compliance with all national pretreatment standards and requirements in 40 CFR Parts 406 - 471.
 - Provide public notification of significant non-compliance as required by 40 CFR 403.8(f)(2)(viii).
 - Pursuant to 40 CFR 403.5(e), when either DEC or the USEPA determines any source contributes pollutants to the POTW in violation of Pretreatment Standards or Requirements, DEC or the USEPA shall notify BJCJSB. Failure by BJCJSB to commence an appropriate investigation and subsequent enforcement action within 30 days of this notification may result in appropriate enforcement action against the source and BJCJSB.
5. Recordkeeping: BJCJSB shall maintain and update, as necessary, records identifying the nature, character, and volume of pollutants contributed by SIUs. Records shall be maintained in accordance with 6 NYCRR 1750-2.5(c).
6. Staffing: BJCJSB shall maintain minimum staffing positions committed to implementation of the Industrial Pretreatment Program in accordance with the approved pretreatment program.
- C. SLUDGE DISPOSAL PLAN. BJCJSB shall notify DEC, and USEPA as long as USEPA remains the approval authority, 60 days prior to any major proposed change in the sludge disposal plan. DEC may require additional pretreatment measures or controls to prevent or abate an interference incident relating to sludge use or disposal.

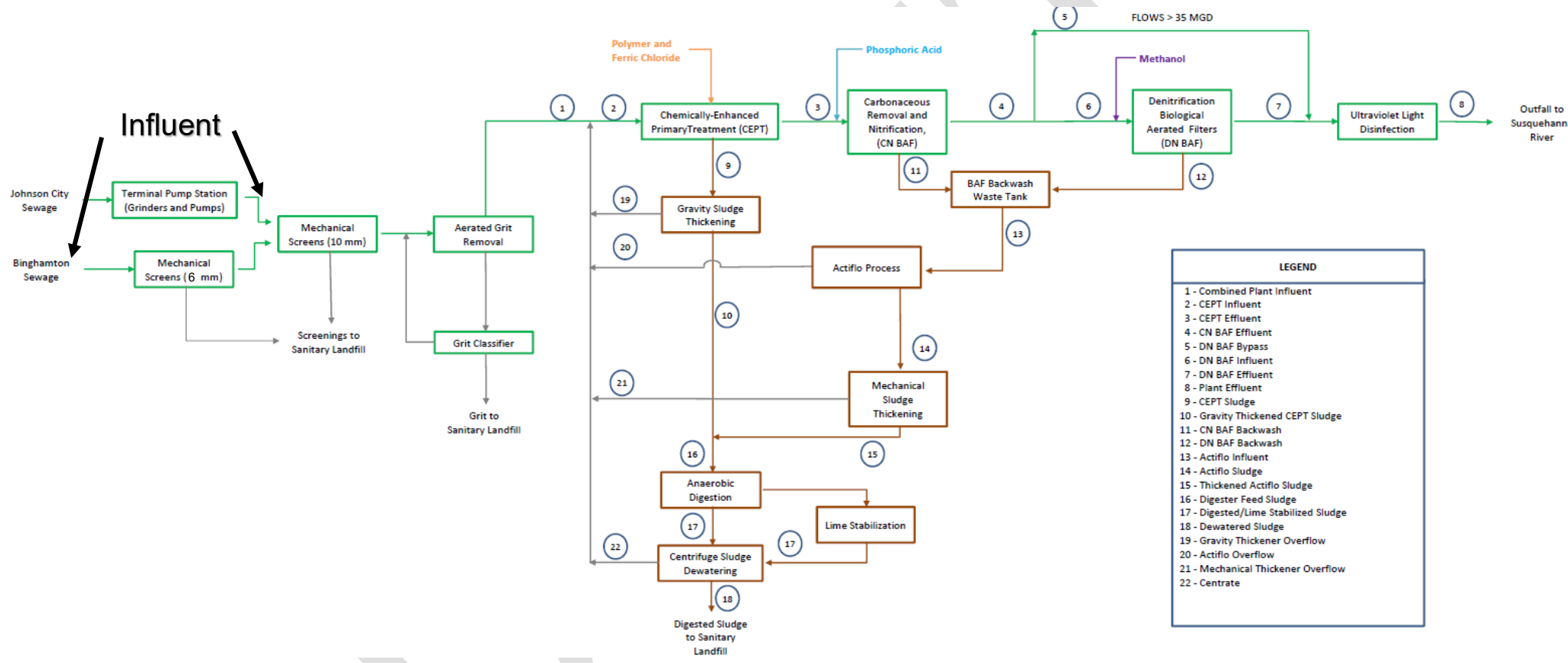
INDUSTRIAL PRETREATMENT PROGRAM IMPLEMENTATION REQUIREMENTS (continued)

- D. **REPORTING:** BJCJSB shall provide to the offices listed on the Monitoring, Reporting and Recording page of this permit and to the Chief-Water Compliance Branch, USEPA Region II, 290 Broadway, New York, NY 10007, a periodic report that briefly describes BJCJSB's program activities over the previous year. This report shall be submitted in accordance with the Schedule of Submittals to the above noted offices within 60 days of the end of the reporting period. The periodic report shall include:
1. **Industrial Survey:** Updated industrial survey information in accordance with 40 CFR 403.12(i)(1) (including any NYS Industrial Chemical Survey forms updated during the reporting period).
 2. **Implementation Status:** Status of Program Implementation, to include:
 - a) Any interference, upset or permit violations experienced at the POTW directly attributable to industrial users.
 - b) Listing of SIUs issued permits.
 - c) Listing of SIUs inspected and/or monitored during the previous reporting period and summary of results.
 - d) Listing of SIUs notified of promulgated pretreatment standards or applicable local standards who are on compliance schedules. The listing should include for each facility the final date of compliance.
 - e) Summary of POTW monitoring results not already submitted on Discharge Monitoring Reports and toxic loadings from SIU's organized by parameter.
 - f) A summary of additions or deletions to the list of SIUs, with a brief explanation for each deletion.
 3. **Enforcement Status:** Status of enforcement activities to include:
 - a) Listing of SIUs in significant non-compliance (as defined by 40 CFR 403.8(f)(2)(viii) with federal or local pretreatment standards at end of the reporting period.
 - b) Summary of enforcement activities taken against non-complying SIUs. BJCJSB shall provide a copy of the public notice of significant violators as specified in 40 CFR 403.8(f)(2)(viii).
- E. **ADDITIONAL PRETREATMENT CONDITIONS:**
1. **Notification of Material Change:** BJCJSB shall notify the DEC prior to the addition of any SIUs or CIUs which may materially change the nature of the discharge from the POTW or increase the discharge of one or more substances authorized in this permit or discharge a substance not currently authorized in this permit (6 NYCRR 750-2.9(a)(1)). The noticed act is prohibited until DEC determines whether a permit modification is necessary pursuant to 750-2.9(a)(2).

BJCSTP MONITORING LOCATIONS

BJCJSB shall take samples and measurements, to comply with the monitoring requirements specified in this permit, at the location(s) specified below:

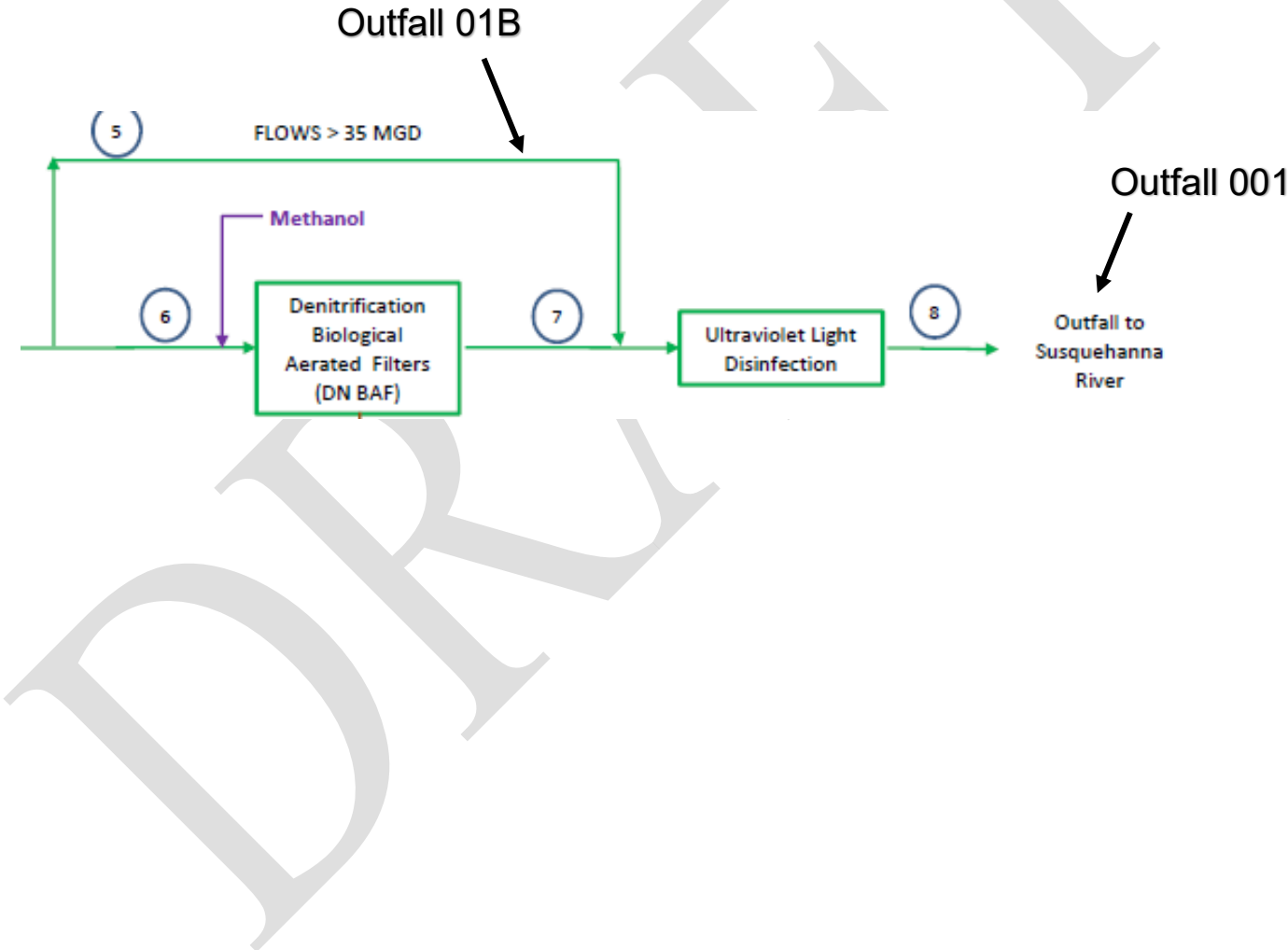
Influent samples shall be collected by BJCJSB at two locations, one for the influent of the Johnson City Sewage and the other for the influent of Binghamton Sewage. The reported values shall be a flow weighted average of both samples.



BJCSTP MONITORING LOCATIONS (continued)

Outfall 001: Effluent from Outfall 001 shall be collected by BJCJSB after disinfection but before the influence of any other flows, including the receiving waterbody.

Outfall 01B: Effluent from Outfall 01B shall be collected by BJCJSB after carbonaceous removal and nitrification (CN BAF) but before denitrification. Calculated flow measurements of Outfall 01B shall be of the bypassed flow around denitrification.



CITY OF BINGHAMTON CSO MAP



VILLAGE OF JOHNSON CITY CSO MAP



GENERAL REQUIREMENTS

- A. The regulations in *6 NYCRR Part 750 State Pollutant Discharge Elimination System (SPDES) Permits* are hereby incorporated by reference and the conditions are enforceable requirements under this permit. BJCJSB, the City of Binghamton, and the Village of Johnson City shall comply with all requirements set forth in this permit and with all the applicable requirements of *6 NYCRR Part 750 State Pollutant Discharge Elimination System (SPDES) Permits* incorporated into this permit by reference, including but not limited to the regulations in paragraphs B through I as follows:
- B. General Conditions
- | | |
|--|---|
| 1. Duty to comply | 6 NYCRR 750-2.1(e) & 2.4 |
| 2. Duty to reapply | 6 NYCRR 750-1.16(a) |
| 3. Need to halt or reduce activity not a defense | 6 NYCRR 750-2.1(g) |
| 4. Duty to mitigate | 6 NYCRR 750-2.7(f) |
| 5. Permit actions | 6 NYCRR 750-1.1(c), 1.18, 1.20 & 2.1(h) |
| 6. Property rights | 6 NYCRR 750-2.2(b) |
| 7. Duty to provide information | 6 NYCRR 750-2.1(i) |
| 8. Inspection and entry | 6 NYCRR 750-2.1(a) & 2.3 |
- C. Operation and Maintenance
- | | |
|-----------------------------------|--------------------------------------|
| 1. Proper Operation & Maintenance | 6 NYCRR 750-2.8 |
| 2. Bypass | 6 NYCRR 750-1.2(a)(17), 2.8(b) & 2.7 |
| 3. Upset | 6 NYCRR 750-1.2(a)(94) & 2.8(c) |
- D. Monitoring and Records
- | | |
|---------------------------|--|
| 1. Monitoring and records | 6 NYCRR 750-2.5(a)(2), 2.5(a)(6), 2.5(c)(1), 2.5(c)(2), & 2.5(d) |
| 2. Signatory requirements | 6 NYCRR 750-1.8 & 2.5(b) |
- E. Reporting Requirements
- | | |
|---|-----------------------------|
| 1. Reporting requirements | 6 NYCRR 750-2.5, 2.7 & 1.17 |
| 2. Anticipated noncompliance | 6 NYCRR 750-2.7(a) |
| 3. Transfers | 6 NYCRR 750-1.17 |
| 4. Monitoring reports | 6 NYCRR 750-2.5(e) |
| 5. Compliance schedules | 6 NYCRR 750-1.14(d) |
| 6. 24-hour reporting | 6 NYCRR 750-2.7(c) & (d) |
| 7. Other noncompliance | 6 NYCRR 750-2.7(e) |
| 8. Other information | 6 NYCRR 750-2.1(f) |
| 9. Additional conditions applicable to a POTW | 6 NYCRR 750-2.9 |
- F. Planned Changes
1. BJCJSB, the City of Binghamton, or Village of Johnson City shall give notice to DEC as soon as possible of planned physical alterations or additions to their respective permitted facility (treatment plant or collection system) 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 treatment plant'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 DEC, a copy of this notice shall be submitted 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

BJCJSB, the City, and the Village shall provide adequate notice to DEC 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 the 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.

A copy of this notice shall be submitted 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

BJCJSB shall comply with all applicable requirements of *6 NYCRR Part 360 Solid Waste Management Facilities General Requirements*.

H. SPDES Permit Program Fee

The co-permittees shall pay to DEC an annual SPDES permit program fee within 30 days of the date of the first invoice, unless otherwise directed by DEC, and shall comply with all applicable requirements of ECL 72-0602 and *6 NYCRR Part 480 Environmental Regulatory Program Fees, Part 481 Program Fees: In General, and Part 485 SPDES Program Fees*. Note that if there is inconsistency between the fees specified in ECL 72-0602 and *6 NYCRR Part 485 SPDES Program Fees*, 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, each co-permittee must notify DEC in writing of its intent to change WTC use by submitting a completed *WTC Notification Form* for each proposed WTC. DEC will review that submittal and determine if a SPDES permit modification is necessary or whether WTC review and authorization may proceed outside of the formal permit administrative process. The majority of WTC authorizations do not require SPDES permit modification. In any event, use and discharge of a WTC shall not proceed without prior authorization from 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 DEC.
2. BJCJSB 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. BJCJSB 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 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 DEC or its designated agent.
- B. Discharge Monitoring Reports (DMRs): Completed DMR forms shall be submitted by BJCJSB, the City, and the Village for each **one (1) month** reporting period in accordance with the DMR Manual available on DEC's website.

DMRs must be submitted electronically using the electronic reporting tool (NetDMR) specified by DEC. Instructions on the use of NetDMR can be found at <https://www.dec.ny.gov/chemical/8461.html>.

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

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

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

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

Department of Environmental Conservation
Regional Water Engineer, Region 7
5786 Widewaters Parkway, Syracuse, NY 13214-1867 Phone: (315) 426-7500

- 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 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:

BJCJSB, the City, and the Village 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)	Responsible Party	Required Action	Due Date
001	BJCJSB	<u>WATER TREATMENT CHEMICAL (WTC) ANNUAL REPORT FORM</u> BJCJSB 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.	1/28/2025, annually thereafter

SCHEDULE OF ADDITIONAL SUBMITTALS			
Outfall(s)	Responsible Party	Required Action	Due Date
001	BJCJSB	<p><u>EMERGING CONTAMINANT SHORT-TERM MONITORING PROGRAM</u> BJCJSB shall collect grab samples of both the influent and effluent from BJCSTP's treatment system associated with the identified outfall for Per-and Polyfluoroalkyl Substances (PFAS) and 1,4-Dioxane (1,4-D), unless BJCJSB receives written notification from the DEC during this time that sampling can be discontinued. Samples must be analyzed utilizing EPA analytical method 1633 and EPA Method 8270D SIM or 8270E SIM, respectively. The samples must represent normal discharge conditions and treatment operations and shall be obtained on a quarterly basis for at least 4 consecutive quarters, unless written notification from the DEC indicates otherwise. The results shall be reported through the "Emerging Contaminants Survey for POTWs" found at: https://www.dec.ny.gov/chemical/127939.html.</p> <p>BJCJSB shall initiate track down of potential sources by completing the "Emerging Contaminants Investigation Checklist for POTWs" available at the above link. The DEC may periodically request updates or additional monitoring to check progress on track down investigations. Elements of the checklist may be used as permit conditions in future permit modifications.</p>	<p>EDP + 18 months</p> <p>Within 90 days of DEC written notification</p>
001	BJCJSB	<p><u>ANNUAL FLOW CERTIFICATION</u> BJCJSB shall submit an Annual Flow Certification form each year in accordance with 750-2.9(C)(4). The form shall be attached to the February DMR or submitted through nForm.</p>	<p>February DMR (March 28th)</p>
001	BJCJSB	<p><u>BIENNIAL POLLUTANT SCAN</u> BJCJSB shall implement an ongoing monitoring program and perform effluent sampling every two years as specified in footnote of the permit limits table.</p>	<p>Retain and submit with next NY-2A Application</p>
001	BJCJSB	<p><u>WHOLE EFFLUENT TOXICITY (WET) TESTING</u> WET testing shall be performed by BJCJSB 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.</p>	<p>Within 60 days following the end of each monitoring period</p>
001	BJCJSB	<p><u>STORMWATER NO EXPOSURE CERTIFICATION</u> BJCJSB must recertify every five years a condition of no exposure to stormwater in order to continue to qualify for the no exposure exclusion. The No Exposure Certification Form can be found on DEC's website.</p>	<p>9/27/2024, and every 5 years thereafter</p>
001	BJCJSB	<p><u>MERCURY MINIMIZATION PROGRAM STATUS REPORT</u> BJCJSB must complete and maintain onsite an annual mercury minimization status report in accordance with the requirements of this permit.</p>	<p>Maintained Onsite 4/1/2025, annually thereafter</p>

SCHEDULE OF ADDITIONAL SUBMITTALS			
Outfall(s)	Responsible Party	Required Action	Due Date
001	BJCJSB	<u>INDUSTRIAL PRETREATMENT PROGRAM REPORT</u> Submit an annual report that briefly describes BJCJSB's program activities over the previous year. The report shall follow the guidelines contained in this permit and be submitted to the Regional Water Engineer and the Bureau of Water permits as well as the USEPA Region II office.	March 31 st Each Year
001 B001, B002, B003-B007, B009, B013 J001, J002	BJCJSB City of Binghamton Village of Johnson City	<u>CSO ANNUAL REPORT</u> BJCJSB, the City, and the Village shall each submit a CSO Annual Report, which summarizes the implementation of BMPs and the approved LTCP (if applicable) via nForm (https://www.dec.ny.gov/pubs/95925.html). Additional information regarding CSO Annual Report is available on-line at https://www.dec.ny.gov/chemical/48595.html .	January 31 st Each Year
B001, B002, B003-B007, B009, B013 J001, J002	City of Binghamton Village of Johnson City	<u>POST-CONSTRUCTION COMPLIANCE MONITORING (PCCM) PROGRAM REPORT</u> The City and the Village shall submit a PCCM Program Report as detailed in the SPECIAL CONDITIONS: CSO CONTROL POLICY section of this permit. The initial reports shall be due by March 31 st in the year following the initial 2-year sampling period. Subsequent PCCM Program Reports shall be submitted by March 31 st in years ending in 3 and 8).	March 31 st in years ending in 3 and 8
B001, B002, B003-B007, B009, B013 J001, J002	City of Binghamton Village of Johnson City	<u>SENSITIVE AREA REASSESSMENT REPORT</u> The City and the Village shall each submit a report, separately from the PCCM Program Report, that presents the results of the sensitive area reassessment, feasible improvements to eliminate or minimize overflows to sensitive areas, and the co-permittee's recommendation regarding the elimination or relocation of these outfalls. The City and the Village shall each submit such reports by December 31 st in the same year the PCCM Program Report is submitted.	December 31 st in years ending in 3 and 8
B001, B002, B003-B007, B009, B013 J001, J002	City of Binghamton Village of Johnson City	<u>PUBLIC NOTIFICATION</u> The City and the Village shall install new or modify existing identification signs at all CSO outfalls owned and operated by the co-permittees. The signs shall be placed at or near the outfalls and be easily readable by the public and follow the guidelines contained in this permit.	EDP + 3 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 Guidelines Establishing Test Procedures for the Analysis of Pollutants* 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.

DRAFT

SPDES Permit Fact Sheet Binghamton Johnson City Joint Sewage Treatment Board

Binghamton Johnson City Joint Sewage Treatment Plant NY0024414

**Co-Permittees:
City of Binghamton
Village of Johnson City**



Department of
Environmental
Conservation

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Summary of Permit Changes

A State Pollutant Discharge Elimination System (SPDES) EBPS permit renewal has been drafted for the Binghamton Johnson City Joint Sewage Treatment Plant (BJCSTP). The changes to this permit are summarized below:

- The requirements of the City of Binghamton (“City”) and the Village of Johnson City (“Village”) combined sewer overflow (CSO) permits (NY0024406 and NY0023981 respectively) have been incorporated into the BJCSTP permit (NY0024414)
- Updated permit format, definitions, and general conditions
- BJCSTP Outfall 001
 - Corrected longitude on the permit cover page
 - Added monitoring for dissolved oxygen and ultimate oxygen demand (UOD)
 - Added footnotes for dissolved oxygen sampling and UOD calculation
 - Removed the monthly average ammonia load limit and added monitoring
 - Removed individual nitrate and nitrite monitoring (maintained nitrate + nitrite monitoring)
 - Removed the daily max total Kjeldahl nitrogen concentration and load limits and added monitoring
 - Added a monthly average total nitrogen limit of 6.0 mg/L
 - Added a monthly average total phosphorus limit of 1.0 mg/L
 - Added daily maximum free cyanide monitoring
 - Reduced iron sampling frequency from monthly to quarterly
 - Reduced the 12-month rolling average mercury limit from 24 ng/L to 12 ng/L
 - Added a daily maximum total phenols limit of 8.3 µg/L
 - Added precipitation monitoring requirement
 - Added a biennial pollutant scan requirement
 - Removed monitoring for total beryllium, chloroform, methyl bromide, methyl chloride, and toluene
 - Increased the Whole Effluent Toxicity (WET) action levels from 1.2 TUa and 6.8 TUC to 2.0 and 7.2 for acute and chronic, respectively
 - Changed WET testing requirement from years ending in 1 and 6 to years ending in 3 and 8
- Removed BJCSTP Outfall 01A and associated footnotes
- Binghamton CSO Outfalls
 - Added “B” to beginning of each CSO Outfall number (e.g., 001 becomes B001, 002 becomes B002, etc.)
 - Corrected lat/long coordinates for Outfalls B005, B006, and B009
 - Changed floatable material units from N/A to events
 - Changed each “Once Every 3 months” sample frequency to “Quarterly”
 - Changed the footnote for the floatable materials parameter to require observation at the beginning of each overflow event instead of at the end of each overflow event
 - Changed the footnote for the floatable materials parameter to require reporting of the number of events per reporting period instead of days per month
 - Reorganized and renumbered footnotes
 - Changed floatable materials visual observation from end to beginning of CSO events
 - Clarified the precipitation monitoring requirement

- Johnson City CSO Outfalls
 - Added “J” to beginning of each CSO Outfall number (e.g., 001 becomes J001, 002 becomes J002)
 - Corrected lat/long coordinates for both Outfalls J001 and J002
 - Corrected the receiving waterbody for Outfall J001 from the Little Choconut Creek to Susquehanna River
 - Added outfall descriptions
 - Updated receiving waterbody class for Susquehanna River from C to A
 - Added effluent limitation types
 - Changed overflow volume sample type from instantaneous to metered
 - Changed floatable material units from N/A to events
 - Added fecal coliform and total suspended solids (TSS) monitoring
 - Corrected typo from “Phenol” to “Phenols, Total”
 - Changed each “1 / 3 months” sample frequency to “Quarterly”
 - Changed the footnote for the floatable materials parameter to require observation at the beginning of each overflow event (previously at the end), and to report number of events per reporting period (previously days per month)
 - Reorganized and renumbered footnotes
 - Removed footnotes #4 and #5
 - Changed floatable materials visual observation from end to beginning of CSO events
 - Clarified the precipitation monitoring requirement
- Reorganized the special conditions from the two former CSO permits (NY0024406 and NY0023981) into this permit
- Updated the Best Management Practices for Combined Sewer Overflows and added an applicability table
- Updated the “Combined Sewer Overflow Long Term Control Plan” section, now titled “Special Conditions: CSO Control Policy”
- Added BOD₅ and settleable solids to Post Construction Compliance Monitoring requirements
- Updated Mercury Minimization Program from High Priority POTWs to Type I
- Added clarification regarding signage requirements to Discharge Notification Requirements (requirements unchanged)
- Added Village of Johnson City CSO Map
- Added a column to the Schedule of Additional Submittals clarifying the responsible co-permittee(s) for each item

This fact sheet summarizes the information used to determine the effluent limitations (limits) and other conditions contained in this 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

Date	Co-permittee	Action
1/1/1991	Village	The last full technical review was performed and the Johnson City CSO permit became effective with a new five-year term and expiration date of 1/1/1996. The 1991 permit, along with all subsequent modifications, has formed the basis of this permit. The permit was administratively renewed in 1996, 2001, 2010, 2015, and again in 2020. The current permit administrative renewal is effective until 7/31/2025.
10/31/1991	Village	The Johnson City CSO permit was modified to require the Village to participate in a combined sewer overflow study with the City and the Binghamton Johnson City Joint Sewage Treatment Board (BJCJSB).
2/13/2004	Village	The Johnson City CSO permit was amended to require compliance with updates to 6 NYCRR 750-2.
10/1/2005	Village	The Johnson City CSO permit was modified to update the best management practices for CSOs.
4/1/2014	City	The last full technical review was performed, and the Binghamton CSO permit became effective with a new five-year term and expiration date of 3/31/2019. The 2014 permit has formed the basis of this permit.
9/1/2015	Village	The Johnson City CSO permit was modified to update to require additional sampling for phosphorus and nitrogen.
3/31/2019	City	The current Binghamton CSO permit was allowed to stay in effect pursuant to SAPA ¹ .
4/1/2020	BJCJSB	The last full technical review was performed and the permit for BJCSTP became effective with a new five-year term and expiration date of 3/31/2025. The 2020 permit, along with all subsequent modifications, has formed the basis of this permit.
7/1/2020	BJCJSB	The BJCSTP permit was modified to correct various sampling requirements.
4/1/2023	BJCJSB	BJCJSB submitted a NY-2A permit application as required by the 2020 permit.
8/10/2023	City & Village	DEC issued Requests for Information (RFIs) for the City of Binghamton and the Village of Johnson City CSO permits to ensure consistency between permits.
9/19/2023	City	The City submitted a NY-2A permit application.

¹ State Administrative Procedures Act Section 401(2) and 6 NYCRR 621.11(f)

Date	Co-permittee	Action
9/29/2023	City	DEC requested additional information to complete the City's NY-2A permit application.
10/4/2023	Village	The Village submitted a NY-2A permit application.
11/2/2023	City	The City submitted the requested additional application materials.

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

Facility Information

BJCSTP is a publicly owned treatment works that receives flow from several municipalities listed below, with effluent consisting of treated sanitary sewage, stormwater, and industrial wastewater. The collection systems consist of both separate and combined sewers and accept flow from significant industrial users (SIUs), also listed below. The City and the Village each send sanitary sewage, stormwater, and industrial wastewater to BJCSTP.

The current 35 MGD BJCSTP consists of:

- Fine screens, aerated grit removal (preliminary treatment)
- Chemically enhanced primary treatment (CEPT)
- Secondary treatment – biological aerated filters (CN BAF)
- Denitrification – biological filters (DN BAF)
- UV disinfection

Wet weather flows above 35 MGD will bypass the denitrification cells and combine with the DN BAF effluent prior to UV disinfection. The preliminary treatment, CEPT, CN BAF, and disinfection are designed to handle wet weather flows up to 60 MGD. The most recent Wet Weather Operating Plan (WWOP) for BJCSTP was approved February 18, 2021.

Sludge is digested anaerobically, thickened via centrifuge, with optional lime stabilization, and hauled to Broome County Landfill.

BJCSTP's primary outfall (Outfall 001) is a 12-foot-wide concrete channel that discharges to a concrete apron and rock outlet protection adjacent to the confluence of Fuller Hollow Creek and the Susquehanna River, Class A, constructed in 2018. See Figure 2: Outfall 001 at BJCSTP.

The BJCSTP permit also contains two internal outfalls: Outfall 01A for the effluent from the DN BAF cells prior to disinfection, and Outfall 01B for the bypass of the DN BAF cells. Internal Outfall 01A is being removed from this permit as it is no longer necessary for the protection of water quality. Monthly average limitations of 6.0 mg/L and 1.0 mg/L are being moved from Outfall 01A to Outfall 001 for total nitrogen and total phosphorus respectively. See [Outfall 01A](#) Pollutant Summary Table for more information.

BJCSTP does not have any planned improvements.

BJCSTP accepts sanitary sewage, stormwater, and industrial wastewater from the following municipalities:

Municipality	POSS # or SPDES #	Collection System
City of Binghamton	NY0024406	Combined
Village of Johnson City	NY0023981	Combined
Village of Port Dickinson	NYS700033	Separate
Town of Binghamton	NYS700052	Separate
Town of Conklin	NYS700028	Separate
Town of Fenton	NYS700081	Separate
Town of Dickinson	NYS700034	Separate
Town of Kirkwood	NYS700031	Separate
Town of Union	NYS700030	Separate
Town of Vestal	NYS700032	Separate

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

Significant Industrial User (SIU)	Location	SIC Code	Categorical Reference (if applicable to 40 CFR)
All Spec Finishing	Binghamton	3479	40 CFR 433
Ametek Inc.	Binghamton	3728	-
Bates Troy Inc.	Binghamton	7213	-
SUNY Broome Community College	Binghamton	8221	-
Binghamton General Hospital	Binghamton	8062	-
Binghamton Water Filtration	Binghamton	4941	-
Binghamton University	Binghamton	8221	-
Buckeye Terminals	Vestal	4226	-
CH Thompson	Binghamton	3471	40 CFR 433
Crysta-Lyn Chemical Inc.	Binghamton	2865	40 CFR 414
e-Systems Group	Conklin	2522	40 CFR 433
Elliott Manufacturing	Binghamton	3568	-
Frito Lay Inc.	Binghamton	2096	-
Greater Binghamton Health	Binghamton	8062	-
i3 Assembly LLC	Binghamton	3672	-
Lourdes Hospital	Binghamton	8062	-
Norfolk Southern	Binghamton	4013	-
Town of Conklin Landfill	Conklin	4952	-
Triple Cities Metal Finishing	Binghamton	3471	40 CFR 433
Wilson Medical Center	Johnson City	8062	-

Combined Sewer Overflows

DEC recognizes that the co-permittees of this permit, BJCJSB, the City, and the Village, are responsible for different components of the collection system and treatment works. For management of the CSOs, all three entities have collaborated under a joint CSO Long Term Control Plan (LTCP). The LTCP was approved as the combination of three reports (listed below), one for each entity. Each of these reports was separately approved by DEC.

BJCJSB – Facility Plan Report, submitted June 29, 2000, approved October 13, 2000

The CSO outfalls in the City and the Village are covered under separate permits, NY0024406 and NY0023981 respectively. The contents and conditions of all three permits are being incorporated under one permit number, NY0024414, for the following reasons:

1. To ensure that the permit requirements for all three entities will be reviewed and updated simultaneously, in the full context of the system-wide interrelation.
2. To provide clarity regarding each entity's responsibilities in meeting the discharge requirements of the overall system enacted through the permit and the approved LTCP.
3. To ensure permit limits and requirements are implemented consistently and effectively for long-term water quality improvement.

Following the issuance of this permit, the separate individual SPDES permits for the City of Binghamton CSOs, NY0024406, and the Village of Johnson City CSOs, NY0023981, will be discontinued.

See the [Receiving Water Information](#) section for a list of all outfalls.

Site Overview



Figure 1: Aerial view of BJCSTP showing Outfall 001 and the Susquehanna River, Class A.



Figure 2: Outfall 001 at BJCSTP.

Enforcement History

On January 9, 2012, DEC, the City, the Village, and BJCJSB entered into administrative Consent Order R7-20110628-59 (Order) after a portion of the treatment plant collapsed in May 2011 and the remainder of the facility was flooded by the Susquehanna River in September 2011. The Order required the parties to complete work to return the facility to full operations in compliance with the BJCSTP permit.² Modifications were made to the Order in May 2013, June 2013, July 2014, May 2016, November 2016, March 2017, June 2017, and February 2019. By April 1, 2020, the treatment plant had returned to full operations and was in compliance with the BJCSTP permit.

On February 18, 2022, BJCJSB notified DEC about a catastrophic failure of a sight port which rendered the secondary treatment system inoperable. DEC, the City, the Village, and the Board subsequently entered into Order on Consent R7-20220617-33 dated October 12, 2022. The Order required the following compliance actions:

² As identified in the Order, “Respondent Binghamton and Respondent Johnson City jointly own the Binghamton-Johnson City Joint Sewage Treatment Plant.” Additionally, “[t]he Binghamton-Johnson City Joint Sewage Board is a joint agency of and for Respondent Binghamton and Respondent Johnson City and is the operator and manager of the Facility.”

- Submission and implementation of an approvable Work Plan addressing non-compliance due to the catastrophic failure which rendered the secondary treatment system inoperable, a corrective actions Implementation Schedule, and an Interim Operation Plan while repairs are ongoing (completed)
- Monthly updates to the Interim Operations Plan and Implementation Schedule until completion of construction (completed)
- Daily updates on plant performance until completion of construction (completed)
- Submission of a Form NY-2A application by April 1, 2023 (completed)
- One year of quarterly WET testing beginning April 1, 2023 (ongoing)

Compliance and enforcement information can be found on the EPA's [Enforcement and Compliance History Online \(ECHO\)](#) website. Additional information related to CSO discharges can be found at DEC's [Sewage Pollution Right to Know](#) webpage.

Existing Effluent Quality

The [Pollutant Summary Table](#) presents the existing effluent quality and effluent limitations for BJCSTP. The existing effluent quality was determined from Discharge Monitoring Reports and the application submitted by BJCSTP for the period October 2022 to May 2023. This date range was applied as it represents the resumption of normal plant operations and representative effluent quality after the structural failure of a CN BAF cell. [Appendix Link](#)

Interstate Water Pollution Control Agencies

All outfalls are located within the Chesapeake Bay watershed and Susquehanna River Basin Commission (SRBC) compact area which places additional requirements in this permit for nutrient removal. See [Chesapeake Bay TMDL Watershed Information](#) below. [Appendix Link](#)

Additional Site-Specific Concerns

BJCSTP is located in a sole source aquifer. As required by ECL 17-0828, the facility submitted a completed *Application Supplement B: Discharges within Sole Source Aquifers* form identifying the following water purveyors within a three-mile radius of the facility: Town of Vestal Water Department and Village of Johnson City Water Department.

Receiving Water Information

BJCSTP discharges via the following outfalls:

Outfall No.	SIC Code	Wastewater Type	Receiving Water
001	4952	Treated sanitary sewage, stormwater, and process wastewater	Susquehanna River, Class A
01A		Effluent from Denitrification Cells (DN BAF) Prior to Disinfection Internal to Outfall 001 ***Being removed from permit***	
01B		Bypass of Denitrification Cells (DN BAF) Prior to Disinfection Internal to Outfall 001	

Reach Description: The Susquehanna River is located within the Chesapeake Bay Watershed and receives flows from the Chenango River just upstream of the BJCSTP. The Susquehanna

River is class A at BJCSTP's Outfall 001 and receives discharges from multiple wastewater treatment facilities including Northgate Chenango Wastewater Treatment Plant (1 MGD, NY0213781) located upstream on the Chenango River, and the Village of Endicott Wastewater Treatment Plant (10 MGD, NY0027669) and the Town of Owego Sewage Treatment Plant # 2 (2 MGD, NY0025798) located downstream of BJCSTP.

In-stream hardness was calculated to be 83 mg/L (as CaCO₃), as the average of 15 samples taken from RIBS station 06-SUSQ-31.4 from 2017 to 2020. The station is approximately 6.5 miles downstream of BJCSTP.

The City discharges via the following combined sewer overflows (CSOs):

Outfall No.	SIC Code	Wastewater Type	Receiving Water
B001	4952	Raw sanitary sewage, stormwater, and process wastewater (Formerly Binghamton Outfall 001)	Susquehanna River, Class A
B002	4952	Raw sanitary sewage, stormwater, and process wastewater (Formerly Binghamton Outfall 002)	Susquehanna River, Class A
B003	4952	Raw sanitary sewage, stormwater, and process wastewater (Formerly Binghamton Outfall 003)	Susquehanna River, Class A
B004	4952	Raw sanitary sewage, stormwater, and process wastewater (Formerly Binghamton Outfall 004)	Susquehanna River, Class A
B005	4952	Raw sanitary sewage, stormwater, and process wastewater (Formerly Binghamton Outfall 005)	Susquehanna River, Class A
B006	4952	Raw sanitary sewage, stormwater, and process wastewater (Formerly Binghamton Outfall 006)	Susquehanna River, Class A
B007	4952	Raw sanitary sewage, stormwater, and process wastewater (Formerly Binghamton Outfall 007)	Susquehanna River, Class A
B009	4952	Raw sanitary sewage, stormwater, and process wastewater (Formerly Binghamton Outfall 009)	Susquehanna River, Class A
B013	4952	Raw sanitary sewage, stormwater, and process wastewater (Formerly Binghamton Outfall 013)	Chenango River, Class B

The Village discharges via the following combined sewer overflows (CSOs):

Outfall No.	SIC Code	Wastewater Type	Receiving Water
J001	4952	Raw sanitary sewage, stormwater, and process wastewater (Formerly Johnson City Outfall 001)	Susquehanna River, Class A
J002	4952	Raw sanitary sewage, stormwater, and process wastewater (Formerly Johnson City Outfall 002)	Susquehanna River, Class A

The receiving water for Outfall J001 was previously listed as Little Choconut Creek. Outfall J001 discharges at the confluence of Little Choconut Creek and the Susquehanna River. The location of J001 was re-evaluated during the permit development process and in discussions following the 2023 [Post-Construction Compliance Monitoring \(PCCM\)](#) Report. The outfall has not been

Facility: Binghamton Johnson City Joint Sewage Treatment Plant
SPDES Number: NY0024414
USEPA Major/Class 05 Municipal
relocated or modified; however, its location was determined to discharge to the Susquehanna
River and not Little Choconut Creek.

Full Technical Review
Permit Writer: Evan Walters
Water Quality Reviewer: Ethan Sullivan

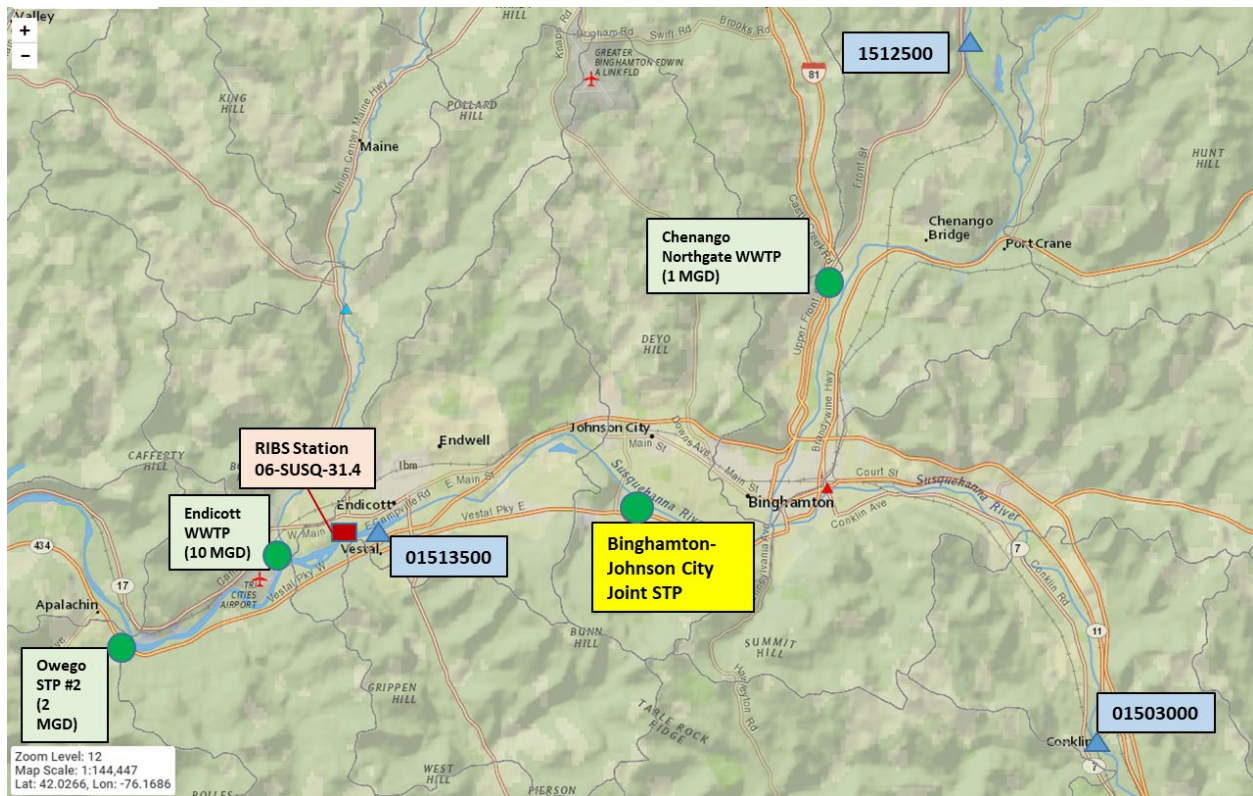


Figure 3: Map showing Susquehanna River and significant facilities including: BJCSTP (point of discharge), Village of Endicott Wastewater Treatment Plant (approximately 7.5 miles downstream), the Town of Owego Sewage Treatment Plant # 2 (approximately 13.5 miles downstream), Chenango Northgate Wastewater Treatment Plant (approximately 7.5 miles upstream on the Chenango River), USGS gage 01503000 (approximately 12 miles upstream), USGS gage 01513500 (approximately 5 miles downstream), USGS gage 01512500 (approximately 14.5 miles upstream on the Chenango River), and RIBS station 06-SUSQ-31.4, (approximately 6.5 miles downstream).

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

Toxics Reduction Strategy

DEC conducted a watershed analysis for the Susquehanna River in 2022. The analysis is used in addition to the DEC's individual facility review to ensure that the cumulative impacts from various point source discharges do not exceed the waste assimilative capacity (WAC) of the critical reach. The critical reach for evaluation of the Susquehanna River is located downstream from BJCSTP near the Endicott Wastewater Treatment Plant (WWTP). This is the furthest downstream Class A reach. This analysis supports continuation of the existing limitations or monitoring requirements for total cyanide, iron, lead, copper, and thallium. This analysis also supports removal of the monitoring requirements for chloroform, toluene, beryllium, methyl bromide, and methyl chloride since no water quality impact was predicted.

[Appendix](#)

Impaired Waterbody Information

This waterbody segment is located within the Chesapeake Bay Watershed and is subject to the applicable requirements of the [Chesapeake Bay TMDL](#) and New York’s Phase III Watershed Implementation Plan (Phase III WIP) for the TMDL³, as discussed below.

Chesapeake Bay TMDL Watershed Information

BJCSTP is considered a “Bay-Significant” municipal facility because its design flow is equal to or greater than 400,000 gallons per day. In accordance with the Phase III WIP, the nitrogen and phosphorus loads warrant discharge limits and effluent monitoring for these parameters.

BJCJSB is required to continue to sample and report total phosphorus as P, total Kjeldahl nitrogen (TKN) as N, nitrate (NO₃) + nitrite (NO₂) as N, and to calculate total nitrogen as N. The total nitrogen and total phosphorus 12-month loads (TN 12-ML and TP 12-ML respectively) are defined as the sum of the current month loads added to the month loads from the eleven previous months for nitrogen and phosphorus, respectively. See the [Pollutant Summary Table](#) for a discussion on the derivation of total nitrogen and total phosphorus effluent limits.

The Water Quality Based Effluent Limits (WQBELs) below are set by DEC in accordance with the Phase II and III WIP.

Final Limits at BJCSTP Outfall 001

Total Phosphorus (as P) 12-month Load (TP 12-ML): 106,543 lb/year effective 1/1/2025

Total Nitrogen (as N) 12-month Load (TN 12-ML): 639,261 lb/year effective 4/1/2020

Critical Receiving Water Data

The low flow condition for the Susquehanna River at BJCSTP was obtained from a drainage basin ratio analysis with USGS gage station at Vestal (01513500), located on the Susquehanna River approximately 5.0 miles downstream of the facility. Additionally, low flow data from USGS gage station Susquehanna River at Conklin (01503000), located approximately 12 miles upstream of the facility, and USGS gage station near Chenango Forks (01512500), located on the Chenango River approximately 14.5 miles upstream of the facility were reviewed and were consistent with the drainage basin analysis. The 1Q10, 7Q10 and 30Q10 flows at the gages were found from Hydrologic Toolbox and an analysis of data from 1938 to 2022.

DRAINAGE BASIN RATIO	1Q10	7Q10	30Q10
Gage Name	Susquehanna River at Vestal		
Gage ID Number	1513500		
Low Flow at Gage (cfs)	322	340	399
Drainage Area at Gage (mi ²)	3950	3950	3950
Drainage Area at Facility (mi ²)	3900	3900	3900
Drainage Basin Ratio (facility / gage)	0.99	0.99	0.99
Calculated Flow at Facility (cfs)	318	336	394

The 1Q10, 7Q10, and 30Q10 flows were used to calculate the acute, chronic, and human, aesthetic, wildlife (HEW) dilution ratios, respectively. The dilution ratios have been adjusted from the previous permit review as reported low flow values are now available through USGS Hydrologic Toolbox.

$$\text{Dilution Ratio} = (\text{Facility Flow} + \text{Low Flow}) / \text{Facility Flow}$$

³ See <https://www.dec.ny.gov/lands/33279.html>

Outfall No.	Acute Dilution Ratio A(A)	Chronic Dilution Ratio A(C)	Human, Aesthetic, Wildlife Dilution Ratio (HEW)	Basis
001	6.9	7.2	8.3	TOGS 1.3.1
01B	Internal to Outfall 001			

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

The requirement for WET testing at BJCSTP is continued from the previous permit. Due to multiple catastrophic flooding and other structural failures, as well as most recently invalidated WET lab data (which was not the fault of the treatment plant operator), no previous WET data were 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, this permit will continue to require chronic WET testing. Corresponding to the increase in the calculated dilution ratio at this facility – as discussed in the section above – WET testing action levels have been increased from 1.2 TUA and 6.8 TUC to 2.0 TUA and 7.2 TUC for each species. The acute action level for each species represent the acute dilution ratio times a factor of 0.3. The chronic action levels represent the chronic dilution ratio. Samples will be collected quarterly for a period of one year in years ending in 3 and 8.

Anti-backsliding

The monthly average loading limit for ammonia (as N) and the daily maximum concentration and loading limits for total Kjeldahl nitrogen (TKN, as N) at BJCSTP Outfall 001 are being discontinued. These limits predate the Chesapeake Bay TMDL nitrogen limits. As a result of the limits imposed under the TMDL, BJCSTP was upgraded to achieve full nitrification. Due to the changes made to the facility to achieve full nitrification, limits for ammonia and TKN are no longer necessary for the protection of water quality. Backsliding is allowed for ammonia under 6NYCRR 750-1.10(c)(1), “material and substantial alterations or additions to the permitted facility occurred after permit issuance, which justify the application of a less stringent effluent limitation”.

[Appendix Link](#)

Antidegradation

This 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)⁴ determination.

[Appendix Link](#)

⁴ As prescribed by 6 NYCRR 617

Discharge Notification Act Requirements

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

Additionally, this permit contains a requirement to make the DMR sampling data available to the public upon request. This requirement is being continued from the previous permits.

Requirements for Combined Sewer Overflows (CSOs)

[Appendix Link](#)

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

The BMPs for CSOs, included in this permit, require BJCJSB, the City, and the Village to: implement operation and maintenance procedures⁵; use the existing treatment plant and collection system to the maximum extent practicable; effect sewer design replacement and drainage planning; maximize pollutant capture; and minimize water quality impacts from combined sewer overflows. The submittal requirements are summarized in the [Schedule of Additional Submittals](#). These requirements are being continued from the previous permits for the City and the Village. For BJCJSB, six BMPs are being added as applicable from the previous permit.

BMP 1. CSO Maintenance/Inspection

The intent of this BMP is to ensure proper maintenance and inspection of the combined sewer system and associated structures. For all permittees that own or operate these appurtenances, routine inspections, repair, cleaning, and maintenance must be performed. BJCJSB maintains and operates the influent throttling gates at BJCSTP and, pursuant to this permit, must inspect the influent throttling gates on at least a weekly basis. The requirements for the City and the Village to maintain and inspect all CSOs within their respective collection systems are being continued from the previous permits.

BMP 2. Maximum Use of Collection System for Storage

The intent of this BMP is to ensure that the flows BJCSTP is required to treat during wet weather can be conveyed to BJCSTP. Per TOGS 1.6.3, "in systems with potential for significant collection system storage, consideration should be given to in-line storage technologies such as inflatable dams or sluice gates which can be controlled from the host POTW via telemetry." Due to BJCJSB's ability to modulate influent flows to BJCSTP, and thereby lead to the commencement of CSO discharges, this BMP is applicable to BJCSTP. The operations of such a gate should be included in the WWOP per BMP #6.

The requirements for the City and the Village to use the maximum amount of in-system storage capacity (without causing service backups) is being continued from the previous permits. The purpose of these requirements is to minimize CSOs from the City and the Village collection

⁵ See 6 NYCRR 750-2.8(a)(2)

systems, and to convey the maximum amount of combined sewage to BJCSTP in accordance with BMP 4. "Maximize Flow to POTW."

BMP 7. Control of Floatable and Settleable Solids

The discharge of floating solids, oil and grease, or solids of sewage origin which cause deposition in the receiving waters, is a violation of the NYS Narrative Water Quality Standards contained in 6 NYCRR Part 703. The intent of this BMP is to prevent aesthetic issues and other floating substances from being discharged during wet weather conditions.

In order to eliminate or minimize the discharge of these substances, BJCJSB, the City, and the Village are all being required to implement all of the measures cited in BMPs 1, 2, & 4, and the City and the Village shall implement BMP 5. Since BJCJSB is allowed to operate a secondary treatment bypass, in accordance with BMP #4, BJCSTP's WWOP, continued operation of the bypass must minimize the discharge of these pollutants. If aesthetic problems persist, BJCJSB, the City, and the Village should consider whether modifications to the WWOP would address the issue and make modifications as necessary.

BMP 10. Sewage Backups

This BMP provides the authority for NYSDEC to prohibit further connection to the POTW system, which may exacerbate sewer backups (SBUs) and surcharging in the system. This BMP ensures that none of the following will cause or contribute to SBUs or surcharge problems in the collection system: operation of the throttling gate in accordance with the WWOP in BMP #6; interceptor maintenance in accordance with BMP #1; maximizing storage in the collection system in accordance with BMP #2.

BJCJSB operates the influent throttling gates at BJCSTP, impacting the flows received at the plant; therefore, BJCSTP operations can possibly, but may not necessarily, affect sewage backups in the collection systems of the City or the Village. Therefore, whenever there are documented, recurrent instances of sewage backing up into house(s) or discharges of raw sewage onto the ground surface from surcharging manholes, the owner of the collection system in which these instances occur is required to provide written notification to BJCJSB of these instances. This requirement is new. In these circumstances, BJCJSB, the City, and the Village should consider if modifications to the Wet Weather Operating Plan are necessary.

BMP 13. Public Notification

BMP #13 is being clarified to include the requirement that BJCJSB notify the public of all known or suspected discharge events that occur not in accordance with requirements of BMP #4, "Maximize Flow to POTW" or BMP #6, "Wet Weather Operating Plan," including bypasses of treatment unit(s). The public notification requirements for the City and the Village, including CSO outfall signage, are being continued from the previous permits.

BMP 14. Characterization and Monitoring

This BMP is intended for the development of the LTCP and any future revision of the LTCP required. The characterization of the total POTW, including BJCSTP and the combined sewer systems of the City and the Village, is most effectively completed when considering the hydraulics of the complete system during development of a LTCP. Therefore, BMP 14 is being clarified to require BJCJSB, the City, and the Village to jointly characterize the combined sewer system, determine the frequency of overflows, and identify CSO impacts in accordance with Combined Sewer Overflows, Guidance for Nine Minimum Controls, EPA, 1995, Chapter 10. These are minimum requirements, more extensive characterization and monitoring efforts may be required as part of future revision of the Long-Term Control Plan (LTCP).

Long-Term Control Plan (LTCP)

As described in the [Facility Information](#) section above, CSO discharges from the City and the Village are addressed under an approved joint LTCP, in collaboration with BJCJSB, to achieve compliance with the USEPA CSO Control Policy.

On April 14, 1992, the City entered into an Order on Consent with DEC (Case No. R7-0579-90-12) to address CSO violations. On April 6, 1992, BJCJSB, the City, and the Village entered into a different Order on Consent with DEC (Case No. R7-0580-90-12), requiring evaluation of the combined sewer system and development, submission, and implementation of an LTCP. In accordance with Order on Consent R7-0589-90-12, the City and Village submitted a joint LTCP on February 28, 1999, consistent with the "Guidance for Long-Term Control Plan", EPA, September 1995. The plan was approved on October 13, 2000. The approved LTCP stated the co-permittees were already attaining the presumptive approach criteria. The approved LTCP consisted of two phases: phase one incorporated requirements for collection system projects in both the City and the Village; and phase two was the BJCSTP upgrade. Implementation of the approved LTCP is completed as of 2020.

Post-Construction Compliance Monitoring (PCCM)

The EPA National CSO Control policy requires the City and the Village as CSO communities to develop and implement a PCCM Program to verify compliance with the policy and evaluate attainment of NYS water quality standards. A PCCM Plan (PCCMP) was submitted by the City and the Village on February 10, 2010, and approved by DEC on March 1, 2010. The City and the Village conducted initial PCCM in 2010 and submitted the Final Report in February 2011. Due to multiple significant construction projects at BJCSTP, further PCCM was deferred until completion of construction and return to normal operations. The City and the Village conducted additional PCCM in 2021–2022 and submitted a Final Report on December 26, 2022. DEC provided comment on the 2022 PCCM Report and issued a conditional approval on October 13, 2023, which amongst other things, required submission of a revised PCCMP and additional sampling. A comprehensive revised PCCMP was submitted January 18, 2024. DEC provided comments on the revised PCCMP on February 21, 2024, to which the City & Village jointly responded on March 1, 2024. The revised PCCMP was approved by DEC on March 13, 2024. The City and Village will conduct another year of follow-up monitoring in 2024. In addition to this follow-up monitoring in 2024, this permit requires routine PCCM in years ending 2 and 7, submitted in a PCCM report the following year (years ending 3 and 8).

Sensitive Area Reassessment

This permit requires the City and the Village to perform reassessment of the feasibility of eliminating or relocating CSO outfalls discharging to sensitive areas. The reassessment is required once per permit term, or every five years. This requirement is new.

Stormwater Pollution Prevention Requirements

BJCSTP is a publicly owned treatment works ≥ 1 MGD that requires SPDES permit coverage under 40 CFR 122.26 (b)(14)(ix). On September 27, 2019, BJCJSB submitted a Conditional Exclusion for No Exposure Form, certifying that all industrial activities and materials are completely sheltered from exposure. This condition must be maintained for the exclusion to remain applicable. The schedule of submittals also includes a due date for re-certification every five years as required by 40 CFR 122.26(g)(iii). This requirement is being continued from the previous permit.

Mercury⁶

The multiple discharge variance (MDV) for mercury provides the framework for DEC to require mercury monitoring and mercury minimization programs (MMPs), through SPDES permitting. BJCSTP is located outside the Great Lakes Basin and is an EPA Major, Class 05 POTW with mercury sources in the collection system, and the previous permit included requirements for the implementation of MMP for High Priority POTWs. This permit includes updated requirements for the implementation of MMP Type I. [Appendix Link](#)

For BJCSTP Outfall 001, this permit will continue to have a daily max total mercury effluent limitation of 50 ng/L. The 12-month rolling average limit of 24 ng/L is being reduced to 12 ng/L based on the existing effluent quality (EEQ) and 95th percentile value of 0.7 ng/L (8 samples collected from 10/2022 to 5/2023). As the EEQ is <12 ng/L, the sampling frequency is being reduced from monthly to quarterly, and quarterly influent monitoring may be conducted in lieu of monitoring within the collection system.

A mercury minimization program consisting of the following will also be continued:

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

Biennial Pollutant Scan

Three effluent samples for applicable parameters must be submitted with an NY-2A Application⁷. This permit includes a requirement to perform biennial sampling (once every two years) of the treatment plant effluent for the parameters in the NY-2A Application, Tables A – D. This requirement ensures the data is representative of effluent conditions over the permit term and will be available for the next application submittal and permit review. This requirement is new.

Industrial Pretreatment Program

BJCJSB is required to continue implementation of a USEPA-approved pretreatment program in accordance with 40 CFR 403 and TOGS 1.3.3. The program specifies continued implementation of an industrial user compliance program, submission of user information, modification of local sewer use law (if necessary), and periodic reporting.

Emerging Contaminant Monitoring

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 product as well as in manufacturing processes for decades. These contaminants 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 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: <https://www.dec.ny.gov/chemical/127939.html>.

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

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

⁷ Pursuant to 40 CFR 122.21(j)(4)(vi).

Permittee: Binghamton Johnson City Joint Sewage Treatment Board
v.1.18

Date: September 12, 2024

Facility: Binghamton Johnson City Joint Sewage Treatment Plant
SPDES Number: NY0024414
USEPA Major/Class 05 Municipal

Full Technical Review
Permit Writer: Evan Walters
Water Quality Reviewer: Ethan Sullivan

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

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

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

Schedule(s) of Additional Submittals

A schedule of additional submittals is included in this permit for the following ([Appendix Link](#)):

- BJCJSB
 - Water Treatment Chemical (WTC) Annual Report Form
 - Emerging Contaminant Short-Term Monitoring Program
 - Annual Flow Certification
 - Biennial Pollutant Scan
 - Whole Effluent Toxicity (WET) Testing
 - Stormwater No Exposure Certification
 - Mercury Minimization Program Status Report
 - Industrial Pretreatment Program Report
 - CSO Annual Report
- The City and Village
 - CSO Annual Reports
 - Post-Construction Compliance Monitoring (PCCM) Program Reports
 - Sensitive Area Reassessment Reports
 - Public Notification

OUTFALL AND RECEIVING WATER SUMMARY TABLE – BJCSTP

Outfall	Latitude	Longitude	Receiving Water Name	Water Class	Water Index No. / Priority Waterbody Listing (PWL) No.	Major / Sub Basin	Hardness (mg/l)	1Q10 (MGD)	7Q10 (MGD)	30Q10 (MGD)	Critical Effluent Flow (MGD)	Dilution Ratio		
												A(A)	A(C)	HEW
001	42° 05' 52" N	75° 57' 48" W	Susquehanna River	A	SR-04 PWL: 0603-0002	06 / 03	83 ⁸	205	217	254	35	6.9	7.2	8.3
01A	42° 05' 51" N	75° 57' 49" W	Internal to Outfall 001	Being removed from permit										
01B	42° 05' 51" N	75° 57' 49" W	Internal to Outfall 001	-	-	-	-	-	-	-	-	-	-	-

POLLUTANT SUMMARY TABLE – BJCSTP

Outfall 001

Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement	
			Permit Limit	Existing Effluent Quality	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL			
Outfall #	001	Description of Wastewater: Treated combined wastewater and stormwater. Wastewater consists of sanitary and industrial wastes, including categorical industries as defined in 40 CFR Subchapter N. Type of Treatment: Fine screens, aerated grit removal, chemically enhanced primary treatment (CEPT), biological aerated filters (CN BAF), denitrification (DN BAF), ultraviolet disinfection														
General Notes: Existing discharge data from 10/2022 to 5/2023 was obtained from Discharge Monitoring Reports and NY-2A application materials submitted by BJCJSB on 4/1/2023. All applicable water quality standards were reviewed for development of the WQBELs. The standard and WQBEL shown below represent the most stringent. Note: Unless noted otherwise, existing effluent quality represents that actual average and actual maximum of monthly average and daily maximum (including 7-day averages) sampling. These calculations were selected due to the low number of samples.																
Flow Rate	MGD	12 MRA	35	21 Average	8 / 0	-	-	Narrative: No alterations that will impair the waters for their best usages.						703.2	-	Design Flow
	MGD	Daily Max	Monitor	59 Max	8 / 0	-	-							-	Monitor	
	A flow limit of 35 MGD equal to the maximum capacity through the DN BAF cells is specified. At this flow, the facility can treat wastewater using all treatment units specified above. Flows above 35 MGD bypass the denitrification units and are discharged via Outfall 01B. If the collection system experiences flows above 60 MGD, combined sewer overflow discharges may occur in the City or the Village.															

⁸ Ambient hardness data obtained from the average of 15 samples collected at RIBS Chemistry Monitoring Station 06-SUSQ-31.4 from 2017-2020 and is consistent with values used for the previous water quality review.

Outfall #	Description of Wastewater: Treated combined wastewater and stormwater. Wastewater consists of sanitary and industrial wastes, including categorical industries as defined in 40 CFR Subchapter N.														
	Type of Treatment: Fine screens, aerated grit removal, chemically enhanced primary treatment (CEPT), biological aerated filters (CN BAF), denitrification (DN BAF), ultraviolet disinfection														
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
pH	SU	Minimum	6.0	6.3 Min	8 / 0	6.0	TOGS 1.3.3	8.1 ⁹	-	6.5 – 8.5	Range	No Reasonable Potential	703.3	-	TBEL
	SU	Maximum	9.0	8.2 Max	8 / 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.															
Temperature	°C	Daily Max	Monitor	22 Max	8 / 0	-	-	-	Narrative (Non-Trout): The water temperature at the surface of a stream shall not be raised to more than 90F at any point and... shall not be raised or lowered to more than 5F over the temperature that existed before the addition			704.2	-	Monitor	
	Consistent with 6 NYCRR 750-1.13(a), monitoring is being continued and may be used to inform future permitting decisions.														
Dissolved Oxygen (DO)	mg/L	Daily Min	-	0.31 Average	365 / 0	Monitor	750-1.13 Monitor	-	4.3 Critical Point	(Non-Trout) 4.0 mg/L	Narrative	No Reasonable Potential	703.3	-	Monitor
	<p>The downstream DO concentration was modeled using the Streeter-Phelps equations and the following assumptions: Effluent DO = 2 mg/l (assumed value consistent with TOGS 1.3.1D), Effluent CBOD₅ = 27 mg/L (existing permit limit), Effluent NOD = 45 mg/L (existing ammonia limit = 1800 lbs/d). The model included the Northgate Chenango WWTP (NY0213781) located 7.4 miles upstream on the Chenango River along with the additional flow from the confluence with the Chenango River. The model also accounted for the Endicott WWTP (NY0027669) and Owego STP #2 (NY0025798) located 7.5 and 11.5 miles downstream respectively. The information included in the 303(e) Water Quality Management Plan for the Susquehanna River Basin, dated November 1976, was also reviewed for consistency with the dissolved oxygen model.</p> <p>The model showed that DO standards are maintained and consequently WQBELs for DO are unnecessary and the TBELs are protective of water quality. The model was used to represent the worst-case scenario of summer temperature conditions. The existing limits are also protective of winter conditions. Monitoring for DO and UOD is being included to provide information for the next water quality review.</p>														
Ultimate Oxygen Demand (UOD)	mg/L	Daily Max	-	-	-	Monitor	750-1.13 Monitor	-	See Dissolved Oxygen (DO)			-	Monitor		
	See justification for Dissolved Oxygen (DO). Monitoring is being added to provide information for the next water quality review.														

⁹ Per TOGS 1.3.1E, ambient pH obtained from 75th and 80th percentile values from 8 data points, collected at RIBS stations 06-SUSQ-33.5, 06-SUSQ-35.6, 06-SUSQ-37.6 in 1984, 2014, 2022.

Outfall #	001	Description of Wastewater: Treated combined wastewater and stormwater. Wastewater consists of sanitary and industrial wastes, including categorical industries as defined in 40 CFR Subchapter N. Type of Treatment: Fine screens, aerated grit removal, chemically enhanced primary treatment (CEPT), biological aerated filters (CN BAF), denitrification (DN BAF), ultraviolet disinfection													
		Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs					
Permit Limit	Existing Effluent Quality				# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
5-day Carbonaceous Biochemical Oxygen Demand (CBOD ₅)	mg/L	Monthly Avg	18	11 Average	8 / 0	-	-	-	See Dissolved Oxygen	No Reasonable Potential	703.3	-	Antibacksliding		
		7 Day Avg	27	14 Average	8 / 0	-	-								
		Daily Max	Monitor	20 Max	8 / 0	-	-								
	lbs/d	Monthly Avg	5300	1,600 Average	8 / 0	-	-								
		7 Day Avg	7900	2,500 Average	8 / 0	-	-								
		% Rem	Minimum	85	95 Average	8 / 0	-							-	
See justification for Dissolved Oxygen. Consistent with TOGS 1.3.3 for POTWs, the existing limits are more protective than secondary treatment standards. Loading limits reflect concentration limits at the 35 MGD design flow. The minimum monthly average 85% removal requirement applies including times when Outfall 01B is in use.															
Total Suspended Solids (TSS)	mg/L	Monthly Avg	20	6.4 Average	8 / 0	-	-	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages.	703.2	-	Antibacksliding			
		7 Day Avg	30	11 Average	8 / 0	-	-								
		Daily Max	Monitor	21 Max	8 / 0	-	-								
	lbs/d	Monthly Avg	5,800	980 Average	8 / 0	-	-								
		7 Day Avg	8,800	2,034 Average	8 / 0	-	-								
		% Rem	Minimum	85	92 Average	8 / 0	-						-		
Consistent with TOGS 1.3.3 for POTWs, the existing limits are more protective than secondary treatment standards. Given the available dilution, the existing limits are also protective of the narrative water quality standards. Loading limits reflect concentration limits at 35 MGD design flow.															
Settleable Solids	mL/L	Daily Max	0.3	0.1 Max	8 / 0	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	703.2	-	Antibacksliding & TBEL			
		Consistent with TOGS 1.3.3, the effluent limitation is remaining 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 water quality.													

Outfall #	001	Description of Wastewater: Treated combined wastewater and stormwater. Wastewater consists of sanitary and industrial wastes, including categorical industries as defined in 40 CFR Subchapter N. Type of Treatment: Fine screens, aerated grit removal, chemically enhanced primary treatment (CEPT), biological aerated filters (CN BAF), denitrification (DN BAF), ultraviolet disinfection													
		Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs					ML
Permit Limit	Existing Effluent Quality				# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
Nitrogen, Ammonia (as N)	mg/L	Monthly Avg	Monitor	0.3 Max	7* / 0	-	-	0.082**	0.14	0.6 Summer 0.9 Winter	A(C)	No Reasonable Potential	703.5	-	Monitor
	lb/d	Monthly Avg	1800 Summer	45 Max	7* / 0	Monitor	750-1.13 Monitor	-	-	-	-	-	-	-	Monitor
<p>WQS for Ammonia was determined from 703.5 from a pH of 8.1*** and a temperature of 25°C (assumed value and consistent with TOGS 1.3.1E). The projected instream concentration was calculated using the maximum reported effluent concentration of 0.3 mg/L as N and an assumed ambient upstream concentration of 0.082 mg/L. A multiplier¹⁰ of 2.0 was applied to the maximum effluent concentration to account for the number of samples. In accordance with TOGS 1.3.1E, the HEW dilution ratio was applied to calculate the projected instream concentration. A comparison of the projected instream concentration to the WQS indicates no reasonable potential to cause or contribute to a WQS violation. Therefore, no limitation is specified. Consistent with 6 NYCRR 750-1.13, concentration monitoring is being continued and may be used to inform future permitting decisions. The loading limit predates the Chesapeake Bay TMDL Nitrogen limits and is no longer required for the protection of water quality and is being changed to monitoring only (see Anti-backsliding discussion).</p> <p>*Sample taken in October 2022, measured 0.7 mg/L, was significantly higher than subsequent months. This data point may not represent normal operation and was not used for existing effluent quality. **Assumed ambient background concentration of ammonia consistent with TOGS 1.3.1D. ***pH calculated from the 75th-80th percentile of RIBS station data for the Susquehanna River (8 data points from 1994, 2014, and 2022).</p>															
Nitrate (NO ₃) as N	mg/L	Monthly Average	Monitor	2.4 Max	8 / 0	-	-	-	0.55	10	H(W.S)	No Reasonable Potential	703.5	-	Discontinued
	lb/d	Monthly Average	Monitor	260 Average	8 / 0	-	-	-	-	-	-	-		-	-
<p>The projected instream concentration was calculated using the maximum reported effluent concentration of 2.4 mg/L and assumed negligible ambient upstream concentration. A multiplier, as recommended in EPA's Technical Support Document Chapter 3.3, of 1.9 was applied to the projected effluent to account for the number of samples. A comparison of the projected instream concentration to the WQS indicates no reasonable potential to cause or contribute to a WQS violation. Therefore, no WQBEL is specified, and individual nitrate monitoring is being discontinued.</p> <p>Consistent with the Phase III WIP, monitoring for nitrate + nitrite and TKN are being continued and will be used to inform the individual constituents of the Total Nitrogen limitations.</p>															

¹⁰ As recommended from EPA's Technical Support Document, Chapter 3.3

Outfall #	001	Description of Wastewater: Treated combined wastewater and stormwater. Wastewater consists of sanitary and industrial wastes, including categorical industries as defined in 40 CFR Subchapter N. Type of Treatment: Fine screens, aerated grit removal, chemically enhanced primary treatment (CEPT), biological aerated filters (CN BAF), denitrification (DN BAF), ultraviolet disinfection													
		Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs					
Permit Limit	Existing Effluent Quality				# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
Nitrite (NO ₂) as N	mg/L	Monthly Average	Monitor	1.0 Max	7* / 0	-	-	-	0.24	1.0	HEW	No Reasonable Potential	703.5	-	Discontinued
	lb/d	Monthly Average	Monitor	40 Average	7* / 0	-	-	-	-	-	-	-		-	-
<p>The projected instream concentration was calculated using the maximum reported effluent concentration of 2.4 mg/L and assumed negligible ambient upstream concentration. A multiplier, as recommended in EPA's Technical Support Document Chapter 3.3, of 2.0 was applied to the projected effluent to account for the number of samples. A comparison of the projected instream concentration to the WQS indicates no reasonable potential to cause or contribute to a WQS violation. Therefore, no WQBEL is specified, and individual nitrite monitoring is being discontinued.</p> <p>Consistent with the Phase III WIP, monitoring for nitrate + nitrite and TKN are being continued and will be used to inform the individual constituents of the Total Nitrogen limitations.</p> <p>*Sample taken in October 2022, measured 2.4 mg/L, was significantly higher than subsequent months. This data point may not represent normal operation and was not used for existing effluent quality.</p>															
Nitrate (NO ₃) + Nitrite (NO ₂) as N	mg/L	Monthly Avg	Monitor	1.8 Max	8 / 0	-	-	-	0.55	10	HEW	No Reasonable Potential	703.5	-	Monitor
	lb/d	Monthly Avg	Monitor	290 Max	8 / 0	-	-	-	-	-	-	-		-	-
<p>The projected instream concentration was calculated using the maximum reported effluent concentration of 2.4 mg/L and assumed negligible ambient upstream concentration. A multiplier, as recommended in EPA's Technical Support Document Chapter 3.3, of 1.9 was applied to the projected effluent to account for the number of samples. A comparison of the projected instream concentration to the WQS indicates no reasonable potential to cause or contribute to a WQS violation. Therefore, no WQBEL is specified.</p> <p>Consistent with the Phase III WIP, monitoring requirements for nitrate + nitrite and TKN are being continued and will be used to inform the individual constituents of the Total Nitrogen limitations.</p>															

Outfall #	001	Description of Wastewater: Treated combined wastewater and stormwater. Wastewater consists of sanitary and industrial wastes, including categorical industries as defined in 40 CFR Subchapter N. Type of Treatment: Fine screens, aerated grit removal, chemically enhanced primary treatment (CEPT), biological aerated filters (CN BAF), denitrification (DN BAF), ultraviolet disinfection														
		Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML
Permit Limit	Existing Effluent Quality				# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL			
Nitrogen, Total Kjeldahl (TKN) (as N)	mg/L	Monthly Avg	Monitor	1.6 Average	8 / 0	-	-	-	-	-	-	-	-	-	-	Monitor
	mg/L	Daily Max	38	3.5 Max	8 / 0	Monitor	750-1.13 Monitor	-	-	-	-	-	-	-	-	Monitor
	lb/d	Monthly Avg	Monitor	230 Average	8 / 0	-	-	-	-	-	-	-	-	-	-	Monitor
	lb/d	Daily Max	11,000	740 Max	8 / 0	Monitor	750-1.13 Monitor	-	-	-	-	-	-	-	-	Monitor
There is no TKN WQS for Class A waterbodies. The TKN limits predate the Chesapeake Bay TMDL Nitrogen limits and are no longer required for the protection of water quality and have been changed to monitor only (see Anti-backsliding discussion).																
Total Nitrogen	mg/L	Monthly Average	Monitor	3.4 Average	8 / 0	-	-	-	-	-	-	6.0	WIP III	-	-	TMDL
	mg/L	Daily Max	Monitor	6.9 Max	8 / 0	-	-	-	-	-	-	-	-	-	-	
	lb/d	Monthly Average	Monitor	520 Average	8 / 0	-	-	-	-	-	-	-	-	-	-	
	lb/d	Daily Max	Monitor	1600 Average	8 / 0	-	-	-	-	-	-	-	-	-	-	
	lb/mo	Month Total	Monitor	103,000 Average	8 / 0	-	-	-	-	-	-	-	-	-	-	
	lb/yr	12 Month Rolling Load	639,261	213,000 Average	8 / 0	-	-	-	-	-	-	-	-	-	-	
Consistent with the Phase III WIP this permit includes an annual loading limitation of 639,261 lbs/yr. See the Chesapeake Bay TMDL discussion in this fact sheet.																

Outfall #	001	Description of Wastewater: Treated combined wastewater and stormwater. Wastewater consists of sanitary and industrial wastes, including categorical industries as defined in 40 CFR Subchapter N. Type of Treatment: Fine screens, aerated grit removal, chemically enhanced primary treatment (CEPT), biological aerated filters (CN BAF), denitrification (DN BAF), ultraviolet disinfection													
		Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs					ML
Permit Limit	Existing Effluent Quality				# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
Total Phosphorus	mg/L	Monthly Avg	Monitor	0.35 Average	8 / 0	-	-	-	Narrative: None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usages.	1.0	WIP III	-	TMDL		
	mg/L	Daily Max	Monitor	0.60 Average	8 / 0	-	-	-		-					
	lb/d	Monthly Avg	Monitor	49 Average	8 / 0	-	-	-		-					
	lb/d	Daily Max	Monitor	140 Max	8 / 0	-	-	-		-					
	lb/mo	Monthly Total	Monitor	20,000 Max	8 / 0	-	-	-		-					
	lb/yr	12 Month Rolling Load	106,543	170,000	8 / 0	-	-	-		-					
Consistent with the Phase III WIP, and to maximize phosphorus removal ¹¹ , this permit includes a total phosphorus concentration limit of 1.0 mg/L expressed as a monthly average and a final 12 month rolling total limitation of 106,543 lbs/yr. The 1.0 mg/L phosphorus concentration is achievable with the current treatment technology employed at the facility. The annual loading limitation was calculated from a 1.0 mg/L concentration at the design flow of 35 MGD for 365 days of the year. See the Chesapeake Bay TMDL discussion in this fact sheet.															
Beryllium, Total	µg/L	Daily Max	Monitor	<1.0 Max	0 / 8	-	-	-	-	1,100*	A(C)	No Reasonable Potential	703.5	-	Discontinued
	lb/d	Daily Max	Monitor	<0.56 Max	0 / 8	-	-	-	-	-	-		-	-	Discontinued
	*The water quality standard for beryllium applies to the acid-soluble form; and is 11 ug/L when hardness is less than or equal to 75 ppm and 1,100 ug/L when hardness is greater than 75 ppm. The existing monitoring requirements are being discontinued in this permit and are no longer needed to inform downstream water quality in accordance with 6 NYCRR 701.1. See the Toxics Reduction Strategy section for more information.														

¹¹ Consistent with NYCRR 750-2.8(a)(5).

Outfall #	001	Description of Wastewater: Treated combined wastewater and stormwater. Wastewater consists of sanitary and industrial wastes, including categorical industries as defined in 40 CFR Subchapter N. Type of Treatment: Fine screens, aerated grit removal, chemically enhanced primary treatment (CEPT), biological aerated filters (CN BAF), denitrification (DN BAF), ultraviolet disinfection													
		Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs					
Permit Limit	Existing Effluent Quality				# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
Copper, Total	µg/L	Daily Max	Monitor	22 Max	8 / 0	-	-	-	6.9 Dissolved	7.6 Dissolved	A(C)	No Reasonable Potential	703.5	-	Monitor
	lb/d	Daily Max	20	3.3 Max	8 / 0	-	-	-	-	-	-		-	-	Antibacksliding
	<p>The projected instream concentration was calculated using the maximum reported effluent concentration of 22 µg/L and a negligible ambient upstream concentration. A multiplier, as recommended in EPA's Technical Support Document Chapter 3.3, of 2.4 was applied to the projected effluent to account for the number of samples. A metals translator of 1.042 was applied to convert between the total and dissolved form in accordance with the EPA Document 823-B-96-007.</p> <p>A comparison of the projected instream concentration to the WQS indicates no reasonable potential to cause or contribute to a WQS violation. The existing daily maximum limitation is being maintained in this permit to protect downstream water quality in accordance with 6 NYCRR 701.1. See the Toxics Reduction Strategy section for more information.</p>														
Cyanide, Total	mg/L	Daily Max	Monitor	<0.025 Max	0 / 8	-	-	-	-	0.2	H(W)	No Reasonable Potential	703.5	-	Monitor
	lb/d	Daily Max	10	<4.0 Max	0 / 8	-	-	-	-	-	-		-	-	Antibacksliding
	<p>The existing daily maximum limitation is being maintained in this permit to protect downstream water quality in accordance with 6 NYCRR 701.1. See the Toxics Reduction Strategy section for more information.</p>														
Cyanide, Free	µg/L	Daily Max	-	-	-	Monitor	750-1.13 Monitor	-	-	5.2	A(C)	-	703.5	-	Monitor
	lb/d	Daily Max	-	-	-	Monitor	750-1.13 Monitor	-	-	-	-	-	-	-	Monitor
	<p>Monitoring for free cyanide is being added in accordance with TOGS 1.3.1E to reflect current laboratory methods and to obtain data for future analyses.</p>														
Iron, Total	mg/L	Daily Max	Monitor	<0.0010 Max	0 / 8	-	-	-	-	0.3 Dissolved	E(W)	No Reasonable Potential	703.5	-	Monitor
	lb/d	Daily Max	290	<0.35 Max	0 / 8	-	-	-	-	-	-		-	-	Antibacksliding
	<p>The existing daily maximum limitation is being maintained in this permit to protect downstream water quality in accordance with 6 NYCRR 701.1. See the Toxics Reduction Strategy section for more information. However, the sampling frequency is being reduced from monthly to quarterly and will provide adequate data for future review.</p>														

Outfall #	001	Description of Wastewater: Treated combined wastewater and stormwater. Wastewater consists of sanitary and industrial wastes, including categorical industries as defined in 40 CFR Subchapter N. Type of Treatment: Fine screens, aerated grit removal, chemically enhanced primary treatment (CEPT), biological aerated filters (CN BAF), denitrification (DN BAF), ultraviolet disinfection													
		Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs					
Permit Limit	Existing Effluent Quality				# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
Lead, Total	µg/L	Daily Max	Monitor	<1.0 Max	0 / 8	-	-	-	-	3.1 Dissolved	A(C)	No Reasonable Potential	703.5	-	Monitor
	lb/d	Daily Max	18	<0.35 Max	0 / 8	-	-	-	-	-	-		-	-	-
The existing daily maximum limitation is being maintained in this permit to protect downstream water quality in accordance with 6 NYCRR 701.1. See the Toxics Reduction Strategy section for more information.															
Mercury, Total	ng/L	Daily Max	50	0.68 Max	8 / 0	-	-	-	-	0.7	H(FC)	50	GLCA	-	DOW 1.3.10
	ng/L	12 MRA	24	1.4 Average	8 / 0	-	-	-	-	0.7	H(FC)	12	-	-	DOW 1.3.10
See Mercury section of this fact sheet. Sampling frequency is being reduced from monthly to quarterly.															
Thallium, Total	µg/L	Daily Max	Monitor	<0.20 Max	0 / 8	-	-	-	-	8.0	A(C)	No Reasonable Potential	703.5	-	Monitor
	lb/d	Daily Max	Monitor	<0.070 Max	0 / 8	-	-	-	-	-	-		-	-	-
The existing monitoring requirements are being maintained in this permit to protect downstream water quality in accordance with 6 NYCRR 701.1. See the Toxics Reduction Strategy section for more information.															
Chloroform	µg/L	Daily Max	Monitor	<1.0 Max	0 / 8	-	-	-	-	7.0	H(WS)	No Reasonable Potential	703.5	-	Discontinued
	lb/d	Daily Max	Monitor	<0.18 Max	0 / 8	-	-	-	-	-	-		-	-	-
The existing monitoring requirements are being discontinued in this permit and are no longer needed to inform downstream water quality in accordance with 6 NYCRR 701.1. See the Toxics Reduction Strategy section for more information.															
Methyl Bromide	µg/L	Daily Max	Monitor	<1.0 Max	0 / 8	-	-	-	-	-	-	No Reasonable Potential	-	-	Discontinued
	lb/d	Daily Max	Monitor	<0.18 Max	0 / 8	-	-	-	-	-	-		-	-	-
The existing monitoring requirements are being discontinued in this permit and are no longer needed to inform downstream water quality in accordance with 6 NYCRR 701.1. See the Toxics Reduction Strategy section for more information.															

Outfall #	001	Description of Wastewater: Treated combined wastewater and stormwater. Wastewater consists of sanitary and industrial wastes, including categorical industries as defined in 40 CFR Subchapter N.													
		Type of Treatment: Fine screens, aerated grit removal, chemically enhanced primary treatment (CEPT), biological aerated filters (CN BAF), denitrification (DN BAF), ultraviolet disinfection													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
Methyl Chloride	µg/L	Daily Max	Monitor	<1.2 Max	0 / 8	-	-	-	-	5.0	H(WS)	No Reasonable Potential	703.5	-	Discontinued
	lb/d	Daily Max	Monitor	<0.11 Max	0 / 8	-	-	-	-	-	-		-	-	-
The existing monitoring requirements are being discontinued in this permit and are no longer needed to inform downstream water quality in accordance with 6 NYCRR 701.1. See the Toxics Reduction Strategy section for more information.															
Toluene	µg/L	Daily Max	Monitor	<1.0 Max	0 / 8	-	-	-	-	5.0	H(WS)	No Reasonable Potential	703.5	-	Discontinued
	lb/d	Daily Max	Monitor	<0.18 Max	0 / 8	-	-	-	-	-	-		-	-	-
The existing monitoring requirements are being discontinued in this permit and are no longer needed to inform downstream water quality in accordance with 6 NYCRR 701.1. See the Toxics Reduction Strategy section for more information.															
Coliform, Fecal	#/100 mL	30d Geo Mean	200	3.5 Average	8 / 0	200	TOGS 1.3.3	-	Narrative: The monthly geometric mean, from a minimum of five examinations, shall not exceed 200.			703.4	-	TBEL	
		7d Geo Mean	400	11 Max	8 / 0	400	TOGS 1.3.3	-							
Consistent with TOGS 1.3.3, effluent disinfection is required year-round due to the class of the receiving waterbody. Fecal coliform effluent limitations equal to the TBEL are specified.															
Total Residual Chlorine (TRC)	mg/L	Daily Max	0.030	-	0 / 0	2.0	TOGS 1.3.3	-	-	0.005	A(C)	0.026	703.5	0.03	Antibacksliding
	Effluent disinfection is currently required year-round and done through UV disinfection. The WQBEL was calculated by multiplying the WQS by the chronic dilution ratio. Due to the dilution, the calculated WQBEL is less than the TBEL and less than the accepted method minimum level (ML). The limit at the ML is being continued.														
The facility treats effluent using ultraviolet disinfection (as per normal operations), and there is no effluent data on this parameter for the period specified above. Consistent with this permit, sampling for TRC is only applicable if chlorine is used for disinfection or other wastewater treatment processes. Chlorine used solely for odor control and is subsequently returned to the headworks of the plant does not require sampling or monitoring of the effluent.															
Additional Parameters Detected															
Phenols, Total	µg/L	Daily Max	-	75.9	1 / 0	-	-	-	56.7	1	E(WS)	8.3	703.5	-	WQBEL
	The projected instream concentration was calculated using the maximum reported effluent concentration of 75.9 µg/L, a multiplier of 6.2, the HEW dilution ratio, and an assumed negligible upstream ambient concentration. The multiplier was selected from EPA's Technical Support Document Chapter 3.3 to account for the number of samples. A comparison of the projected instream concentration to the WQS indicates a reasonable potential to cause or contribute to a WQS violation and therefore a WQBEL is specified.														

Outfall #	01A	Description of Wastewater: Effluent from denitrification cells (DN BAF) prior to disinfection – internal to Outfall 001											ML	Basis for Permit Requirement
		Type of Treatment: Fine screens, aerated grit removal, chemically enhanced primary treatment (CEPT), biological aerated filters (CN BAF), denitrification (DN BAF)												
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						
			Permit Limit	Existing Effluent Quality	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	
General Notes: Existing discharge data from 10/2022 to 5/2023 was obtained from Discharge Monitoring Report data provided BJCJSB.														
Internal Outfall 01A is being removed from this permit as it is no longer necessary for the protection of water quality. Monthly average limitations of 6.0 mg/L and 1.0 mg/L are being added to Outfall 001 for total nitrogen and total phosphorus respectively. Further monitoring of total nitrogen, nitrite, nitrate, TKN, and total phosphorus at Outfall 001 will provide sufficient information for future permit reviews.														
Flow Rate	MGD	Daily Max	Monitor	57 Max	8 / 0	-	-	Narrative: No alterations that will impair the waters for their best usages.				703.2	-	Discontinued
	Further monitoring of flow at Outfall 001 will provide sufficient information for future permit reviews.													
Total Nitrogen	mg/L	Monthly Avg	6.0	3.2 Average	8 / 0	-	-	-	-	-	-	-	-	Discontinued
	lb/d	Monthly Avg	Monitor	470 Average	8 / 0	-	-	-	-	-	-	-	-	Discontinued
	A monthly average total nitrogen limit of 6.0 mg/L is being added to Outfall 001 and will be protective of water quality.													
Nitrogen, Total Kjeldahl (TKN) (as N)	mg/L	Monthly Avg	Monitor	1.4 Average	8 / 0	-	-	-	-	-	-	-	-	Discontinued
	lb/d	Monthly Avg	Monitor	200 Average	8 / 0	-	-	-	-	-	-	-	-	Discontinued
	Further monitoring of TKN at Outfall 001 will provide sufficient information for future permit reviews.													
Nitrite (NO ₂) + Nitrate (NO ₃) (as N)	mg/L	Monthly Avg	Monitor	1.8 Average	8 / 0	-	-	-	-	-	-	-	-	Discontinued
	lb/d	Monthly Avg	Monitor	270 Average	8 / 0	-	-	-	-	-	-	-	-	Discontinued
	Further monitoring of nitrite and nitrate at Outfall 001 will provide sufficient information for future permit reviews.													
Action Level Parameters														
Total Phosphorus	mg/L	Monthly Avg	1.0	0.31 Avg	8 / 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	-	Discontinued
	lb/d	Monthly Avg	Monitor	43 Avg	8 / 0	-	-	-	-	-	-	-	-	Discontinued
	A monthly average total phosphorus limit of 1.0 mg/L is being added to Outfall 001 and will be protective of water quality.													

Outfall #	01B	Description of Wastewater: Bypass of denitrification cells (DN BAF) – internal to Outfall 001													
		Type of Treatment: Fine screens, aerated grit removal, chemically enhanced primary treatment (CEPT), biological aerated filters (CN BAF)													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality ¹²	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
General Notes: Existing discharge data from 10/2022 to 5/2023 was obtained from Discharge Monitoring Report data provided by the BJCJSB. All applicable water quality standards were reviewed for development of the WQBELs. The standard and WQBEL shown below represent the most stringent.															
Flow Rate	MGD	Daily Max	Monitor	16 Max	7 / 0	-	-	Narrative: No alterations that will impair the waters for their best usages.				703.2	-	Monitor	
	Consistent with 6 NYCRR 750-1.13, flow monitoring is being continued for informational purposes and to calculate pollutant loadings.														
Nitrite (NO ₂) + Nitrate (NO ₃) (as N)	mg/L	Daily Max	Monitor	14 Max	7 / 0	-	-	-	-	-	-	-	-	Monitor	
	lb/d	Daily Max	Monitor	1,400 Max	7 / 0	-	-	-	-	-	-	-	-	Monitor	
	Consistent with 6 NYCRR 750-1.13, nitrate + nitrite monitoring is being continued for informational purposes.														
Nitrogen, Total Kjeldahl (TKN) (as N)	mg/L	Daily Max	Monitor	9.8 Max	7 / 0	-	-	-	-	-	-	-	-	Monitor	
	lb/d	Daily Max	Monitor	320 Max	7 / 0	-	-	-	-	-	-	-	-	Monitor	
	Consistent with 6 NYCRR 750-1.13, total Kjeldahl nitrogen monitoring is being continued for informational purposes.														
Total Nitrogen	mg/L	Daily Max	Monitor	21 Max	7 / 0	-	-	-	-	-	-	-	-	Monitor	
	lb/d	Daily Max	Monitor	1,700 Max	7 / 0	-	-	-	-	-	-	-	-	Monitor	
	Consistent with 6 NYCRR 750-1.13, total nitrogen monitoring is being continued for informational purposes.														
Total Phosphorus	mg/L	Daily Max	Monitor	1.9 Max	7 / 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	Monitor	
	lb/d	Daily Max	Monitor	78 Max	7 / 0	-	-	-	-			-	-	Monitor	
	Consistent with 6 NYCRR 750-1.13, total phosphorus monitoring is being continued for informational purposes.														

¹² Existing Effluent Quality: Daily Max = 99% lognormal; Monthly Avg = 95% lognormal (for datasets with ≤3 nondetects); Daily Max = 99% delta-lognormal; Monthly Avg = 95% delta-lognormal (for datasets with >3 nondetects)

Appendix: Regulatory and Technical Basis of Permit Authorizations

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

Regulatory References

The provisions of the SPDES 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
- DEC water program policy, referred to as Technical and Operational Guidance Series (TOGS)
- USEPA Office of Water Technical Support Document for Water Quality-based Toxics Control, March 1991, Appendix E

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

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

Outfall and Receiving Water Information

Impaired Waters

The [NYS 303\(d\) List of Impaired/TMDL Waters](#) identifies waters where specific best usages are not fully supported. The state must consider the development of a Total Maximum Daily Load (TMDL) or other strategy to reduce the input of the specific pollutant(s) that restrict waterbody uses, in order to restore and protect such uses. SPDES permits must include effluent limitations necessary to implement a 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 wasteload allocations (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 SPDES 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 SPDES permit.

When conducting a full technical review of an existing SPDES 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, and/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 SPDES 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 SPDES 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 law¹³ and USEPA interpretation¹⁴ 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.

¹³ American Iron and Steel Institute v. Environmental Protection Agency, 115 F.3d 979, 993 n.6 (D.C. Cir. 1997)

¹⁴ 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 SPDES 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 SPDES permit, 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, SPDES permits must include additional or more stringent effluent limitations and conditions, including those necessary to protect water quality. CWA sections 101 and 301(b)(1)(C), 40 CFR 122.44(d)(1), and 6 NYCRR Parts 750-1.11 require that SPDES permits include limitations for all pollutants or parameters which are or may be discharged at a level which may cause or contribute to an exceedance of any State water quality standard adopted pursuant to NYS ECL 17-0301. Additionally, 6 NYCRR Part 701.1 prohibits the discharge of pollutants that will cause impairment of the best usages of the receiving water as specified by the water classifications at the location of discharge and at other locations that may be affected by such discharge. Water quality standards can be found under 6 NYCRR Parts 700-704. The limitations must be stringent enough to ensure that water quality standards are met at the point of discharge and in downstream waters and must be consistent with any applicable WLA which may be in effect through a TMDL for the receiving water. These and other requirements are summarized in TOGS 1.1.1, 1.3.1, 1.3.2, 1.3.5 and 1.3.6. 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., 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); DEC 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, DEC 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, DEC considers using 1.2 x 7Q10 to be equivalent to the 30Q10. The 7Q10 or 30Q10 flow is used with the critical effluent flow to calculate the dilution ratio. The critical effluent flow can be the maximum daily flow reported on the SPDES 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 SPDES permit application or a short-term high intensity monitoring program, or data gathered by 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.

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, 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 SPDES 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 SPDES permits with water quality-based effluent limits have been issued. In accordance with TOGS 1.3.1, the Division of Water implements a Toxics Reduction Strategy which is committed to the application of the TMDL process using numeric, pollutant-specific water quality standards through the Watershed Approach. The Watershed Approach accounts for the cumulative effect of multiple discharges of conservative toxic pollutants to ensure water quality standards are met in downstream segments.

Whole Effluent Toxicity (WET) Testing:

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

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

Minimum Level of Detection

Pursuant to 40 CFR 122.44(i)(1)(iv) and 6 NYCRR 750-2.5(d), SPDES permits must contain monitoring requirements using sufficiently sensitive test procedures approved under 40 CFR Part 136. A method is "sufficiently sensitive" when the method's minimum level (ML) is at or below the level of the effluent limitation established in the SPDES 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 SPDES 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 SPDES 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 SPDES permit contains the monitoring requirements for the facility. Monitoring frequency is based on the minimum sampling necessary to adequately monitor the facility's performance and characterize the nature of the discharge of the monitored flow or pollutant. Variable effluent flows and pollutant levels may be required to be monitored at more frequent intervals than relatively constant effluent flow and pollutant levels (6 NYCRR 750-1.13). For industrial facilities, sampling frequency is based on guidance provided in TOGS 1.2.1. For municipal facilities, sampling frequency is based on guidance provided in TOGS 1.3.3.

Requirements for Combined Sewer Overflows (CSOs)

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

CWA Section 402(q) requires that each SPDES permit for a discharge from a municipal combined storm and sanitary sewer shall conform to EPA's Combined Sewer Overflow Control Policy.^[1] The CSO Control Policy identifies specific requirements for Phase I and Phase II permits.

Phase I SPDES permits must include requirements for the implementation of the Nine Minimum Controls (NMCs) and development of the Long-Term CSO Control Plan (LTCP). The 15 CSO Best Management Practices (BMPs), set forth in TOGS 1.6.2, are equivalent to the "Nine Minimum Control Measures" required under the USEPA National Combined Sewer Overflow policy. BMPs are technology-based requirements developed in accordance with best professional judgement. These are largely non-structural measures designed to maximize pollutant capture and removal from the combined sewer system and the POTW as a whole.

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

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

Other Conditions

Mercury

The multiple discharge variance (MDV) for mercury was developed in accordance with 6 NYCRR 702.17(h) "to address widespread standard or guidance value attainment issues including the presence of a ubiquitous pollutant or naturally high levels of a pollutant in a watershed." The first MDV was issued in October 2010, and subsequently revised and reissued in 2015; each subsequent iteration of the MDV is designed to build off the previous version, to make reasonable progress towards the water quality standard (WQS) of 0.7 ng/L dissolved mercury. The MDV is necessary because human-caused conditions or sources of mercury prevent attainment

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

of the WQS and cannot be remedied (i.e., mercury is ubiquitous in New York waters at levels above the WQS and compliance with a water quality based effluent limitation (WQBEL) for mercury cannot be achieved with demonstrated effluent treatment technologies). DEC has determined that the MDV is consistent with the protection of public health, safety, and welfare. During the effective period of this MDV, any increased risks to human health are mitigated by fish consumption advisories issued periodically by the NYSDOH.

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

Schedules of Compliance

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

Schedule(s) of Additional Submittals

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

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