



Department of
Environmental
Conservation

State Pollutant Discharge Elimination System (SPDES) DISCHARGE PERMIT

SIC Code:	4952	NAICS Code:	221320	SPDES Number:	NY0024228
Discharge Class (CL):	07	DEC Number:	7-0554-00003/00001		
Toxic Class (TX):	N	Effective Date (EDP):	EDP		
Major-Sub Drainage Basin:	07 - 05	Expiration Date (ExDP):	ExDP		
Water Index Number:	Ont 66-12-P296	Item No.:	0705-0025	Modification Dates (EDPM):	
Compact Area:	IJC				

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

PERMITTEE NAME AND ADDRESS					
Name:	Village of Union Springs	Attention:	Robert Thurston Jr.		
Street:	P.O. Box 99				
City:	Union Springs	State:	NY	Zip Code:	13160
Email:	mayor@unionspringsny.com	Phone:	(315) 889-7341		

is authorized to discharge from the facility described below:

FACILITY NAME, ADDRESS, AND PRIMARY OUTFALL									
Name:	Union Springs Sewage Treatment Plant (STP)								
Address / Location:	Chapel Street, Frontenac Park					County:	Cayuga		
City:	Union Springs				State:	NY	Zip Code:	13160	
Facility Location:	Latitude:	42 °	50 '	41 " N	& Longitude:	76 °	41 '	51 " W	
Primary Outfall No.:	001	Latitude:	42 °	50 '	35 " N	& Longitude:	76 °	42 '	15 " W
Outfall Description:	Treated Sanitary		Receiving Water:	Cayuga Lake			Class:	A	Standard: A(T)

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

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

DISTRIBUTION:

BWP Permit Coordinator (permit.coordinator@dec.ny.gov)
BWP Permit Writer
RWE
RPA
EPA Region II (Region2_NPDES@epa.gov)
NYSEFC (sara.tully@efc.ny.gov)
DEC Water Quality Engineer (aslam.mirza@dec.ny.gov)

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

DEFINITIONS

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

PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL	LIMITATIONS APPLY	RECEIVING WATER	EFFECTIVE	EXPIRING
001	All Year (except as noted below)	Cayuga Lake	EDP	ExDP

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.	Eff.	
Flow	Monthly Average	0.33	MGD			Continuous	Recorder		X	
pH	Daily Minimum	6.0	SU			1/Day	Grab		X	
	Daily Maximum	9.0	SU							
Temperature	Daily Maximum	Monitor	°F			1/Day	Grab		X	
BOD ₅	Monthly Average	30	mg/L	82	lbs/d	1/Month	6-hr. Comp.	X	X	1
	7-Day Average	45	mg/L	123	lbs/d	1/Month	6-hr. Comp.		X	
Total Suspended Solids (TSS)	Monthly Average	30	mg/L	82	lbs/d	1/Month	6-hr. Comp.	X	X	1
	7-Day Average	45	mg/L	123	lbs/d	1/Month	6-hr. Comp.		X	
Settleable Solids	Daily Maximum	0.3	mL/L			1/Day	Grab		X	
Dissolved Oxygen June 1st – October 31st	Daily Minimum	7.0	mg/L			1/Month	Grab		X	
Ammonia (as N) June 1st – October 31st	Monthly Average	9.7	mg/L			1/Month	6-hr. Comp.		X	
Ammonia (as N) November 1 st – May 31 st	Monthly Average	Monitor	mg/L			1/Month	6-hr. Comp.		X	
Total Phosphorus (as P)	Monthly Average	1.0	mg/L	2.75	lbs/d	1/Month	6-hr. Comp.		X	
Total Mercury	Daily Maximum	50	ng/L			1/Month	Grab		X	
EFFLUENT DISINFECTION Required All Year		Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	FN
Coliform, Fecal	30-Day Geometric Mean	200	No./ 100 mL			1/Month	Grab		X	
Coliform, Fecal	7-Day Geometric Mean	400	No./ 100 mL			1/Month	Grab		X	
Chlorine, Total Residual	Daily Maximum	0.18	mg/L			1/Day	Grab		X	2

FOOTNOTES:

- Effluent shall not exceed 15% of influent concentration values for BOD₅ & TSS.
- Sampling and reporting for total residual chlorine are only necessary if chlorine is used for disinfection, elsewhere in the treatment process, or the facility otherwise has reasonable potential to discharge chlorine. Otherwise, the permittee shall report NODI-9 on the DMR.

MERCURY MINIMIZATION PROGRAM (MMP) - Type II

1. General - The permittee must develop, implement, and maintain a mercury minimization program (MMP), containing the elements set forth below, to reduce mercury effluent levels with the goal of achieving the WQBEL of 0.7 ng/L.
2. MMP Elements - The MMP must be a written document and must include any necessary drawings or maps of the facility and/or collection system. Other related documents already prepared for the facility may be used as part of the MMP and may be incorporated by reference. At a minimum, the MMP must include the following elements as described in detail below:
 - a. Monitoring - Monitoring at outfall, influent and other locations tributary to compliance points shall be performed using either USEPA Method 1631 or another sufficiently sensitive method, as approved under 40 CFR Part 136¹. Monitoring of raw materials, equipment, treatment residuals, and other non-wastewater/non-stormwater substances may be performed using other methods as appropriate. Monitoring must be coordinated so that the results can be effectively compared between locations.

Minimum required monitoring is as follows:

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

¹ Outfall monitoring must be conducted using the methods specified in Table 8 of DOW 1.3.10.

² A level of 0.2 mg/L (200,000 ng/L) or more is considered hazardous per 40 CFR Part 261.11. 500 ng/L is used here to alert the permittee that there is an unusual concentration of mercury and that it will need to be managed appropriately.

³ For example, the outreach program could include education about sources of mercury and what to do if a mercury source is found.

Waste Compliance Report for Dental Dischargers”⁴ form, as needed, to satisfy the inspection requirements. The permittee must conduct the outreach program at least once every five years and ensure the “Amalgam Waste Compliance Report for Dental Dischargers” are submitted by new users, as necessary. The outreach program could be supported by a subset of site inspections.

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

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

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

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

⁴ The form, “Amalgam Waste Compliance Report for Dental Dischargers,” can be found here:
https://www.dec.ny.gov/docs/water_pdf/dentalform.pdf

DEFINITIONS:

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

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

DRAFT

DISCHARGE NOTIFICATION REQUIREMENTS

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

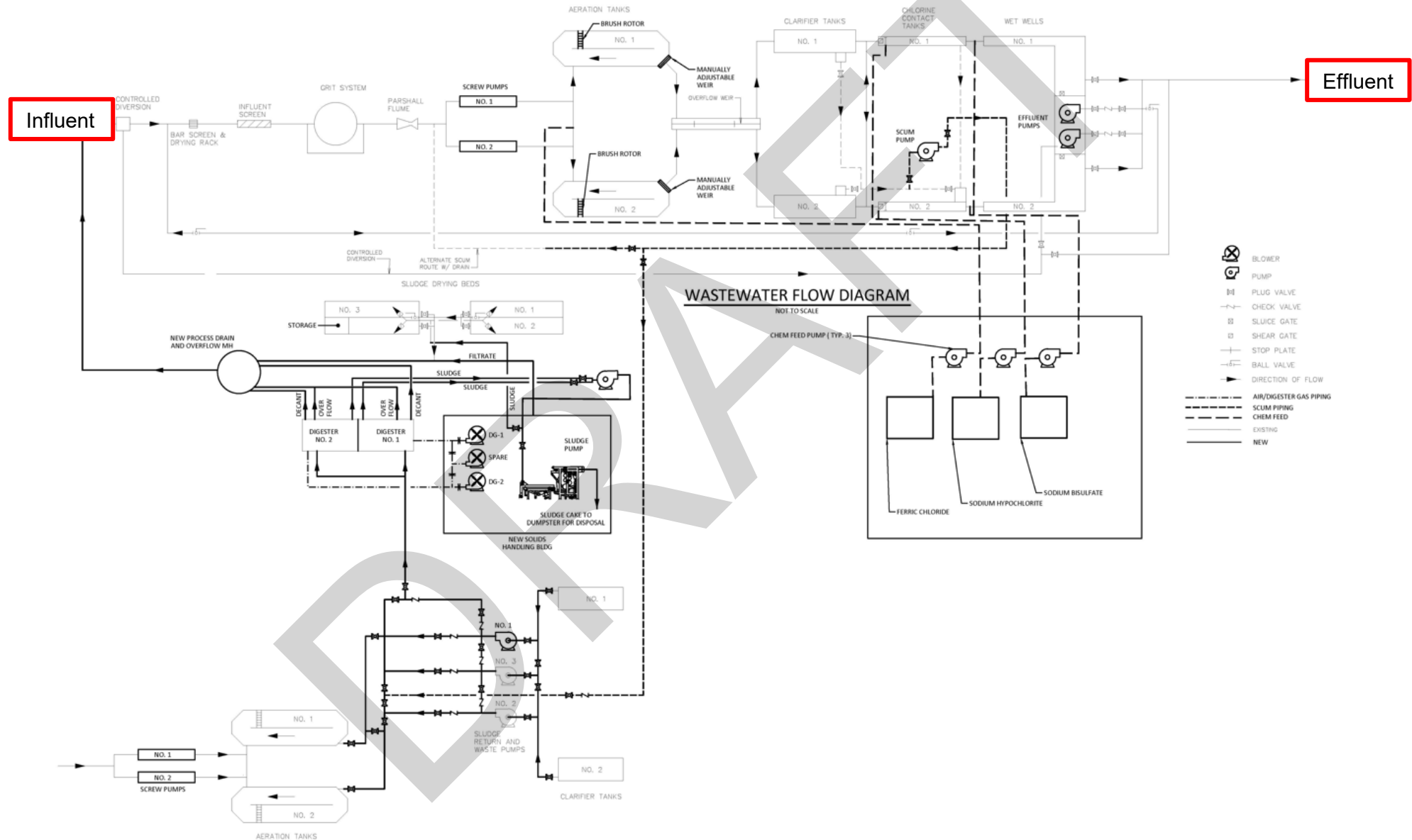
The signs shall have **minimum** dimensions of eighteen inches by twenty-four inches (18" x 24") and shall have white letters on a green background and contain the following information:

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

- (e) Upon request, the permittee shall make available electronic or hard copies of the sampling data to the public. In accordance with the RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS page of your permit, each DMR shall be maintained (either electronically or as a hard copy) on record for a period of five years.
- (f) The permittee shall periodically inspect the outfall identification sign(s) in order to ensure they are maintained, are still visible, and contain information that is current and factually correct. Signs that are damaged or incorrect shall be replaced within 3 months of inspection.

MONITORING LOCATIONS

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



GENERAL REQUIREMENTS

- A. The regulations in 6 NYCRR Part 750 are hereby incorporated by reference and the conditions are enforceable requirements under this permit. The permittee shall comply with all requirements set forth in this permit and with all the applicable requirements of 6 NYCRR Part 750 incorporated into this permit by reference, including but not limited to the regulations in paragraphs B through I as follows:
- B. General Conditions
- | | |
|--|---|
| 1. Duty to comply | 6 NYCRR 750-2.1(e) & 2.4 |
| 2. Duty to reapply | 6 NYCRR 750-1.16(a) |
| 3. Need to halt or reduce activity not a defense | 6 NYCRR 750-2.1(g) |
| 4. Duty to mitigate | 6 NYCRR 750-2.7(f) |
| 5. Permit actions | 6 NYCRR 750-1.1(c), 1.18, 1.20 & 2.1(h) |
| 6. Property rights | 6 NYCRR 750-2.2(b) |
| 7. Duty to provide information | 6 NYCRR 750-2.1(i) |
| 8. Inspection and entry | 6 NYCRR 750-2.1(a) & 2.3 |
- C. Operation and Maintenance
- | | |
|-----------------------------------|--------------------------------------|
| 1. Proper Operation & Maintenance | 6 NYCRR 750-2.8 |
| 2. Bypass | 6 NYCRR 750-1.2(a)(17), 2.8(b) & 2.7 |
| 3. Upset | 6 NYCRR 750-1.2(a)(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. In accordance with 6 NYCRR 750-2.7, the permittee shall give notice to the DEC at least 45 days prior to planned physical alterations or additions to the permitted facility when:
 - a. The alteration or addition to the permitted facility may meet any of the criteria for determining whether facility is a new source in 40 CFR §122.29(b); or
 - b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject either to effluent limitations in the permit, or to notification requirements under 40 CFR §122.42(a)(1); or
 - c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

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

GENERAL REQUIREMENTS (continued)

2. Notification Requirement for POTWs

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

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

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

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

G. Sludge Management

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

H. SPDES Permit Program Fee

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

I. Water Treatment Chemicals (WTCs)

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

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

RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

- A. The monitoring information required by this permit shall be retained for a period of at least five years from the date of the sampling for subsequent inspection by the DEC or its designated agent.

- B. Discharge Monitoring Reports (DMRs): Completed DMR forms shall be submitted for each 1 month reporting period in accordance with the DMR Manual available on DEC's website.

DMRs must be submitted electronically using the electronic reporting tool (NetDMR) specified by DEC. Instructions on the use of NetDMR can be found at: [How To Complete And Submit Discharge Monitoring Reports \(DMRs\) - NYSDEC](#). **Hardcopy paper DMRs will only be accepted if a waiver from the electronic submittal requirements has been granted by DEC to the facility.**

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

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

- C. Additional information required to be submitted by this permit shall be summarized and 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 the DEC's website. In addition, POTWs are required to provide a five-day incident report and supplemental information to the DEC in accordance with Part 750-2.7(d) by utilizing the Division of Water Report of Noncompliance Event form unless waived by DEC on a case-by-case basis.

- E. Schedule of Additional Submittals:

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

SCHEDULE OF ADDITIONAL SUBMITTALS		
Outfall(s)	Required Action	Due Date
	<u>WATER TREATMENT CHEMICAL (WTC) ANNUAL REPORT FORM</u> The permittee shall submit a completed WTC Annual Report Form each year that Water Treatment Chemicals are used. The form shall be attached to the December DMR.	December DMR (January 28 th)
	<u>ANNUAL FLOW CERTIFICATION</u> The permittee shall submit an Annual Flow Certification form each year in accordance with 750-2.9(C)(4). The form shall be attached to the February DMR or submitted through nForm.	February DMR (March 28 th)

SCHEDULE OF ADDITIONAL SUBMITTALS		
Outfall(s)	Required Action	Due Date
	<u>MERCURY MINIMIZATION PLAN</u> The permittee must complete and maintain onsite an annual mercury minimization status report in accordance with the requirements of this permit.	<i>Maintained Onsite</i> EDP + 12 months, annually thereafter

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

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

SPDES Permit Fact Sheet Village of Union Springs Sewage Treatment Plant NY0024228



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Summary of Permit Changes

A State Pollutant Discharge Elimination System (SPDES) EBPS renewal and full technical review has been drafted for the Sewage Treatment Plant. The changes to the permit include

- Updated permit format, definitions, and general conditions
- Addition of a daily maximum limitation for total mercury of 50 ng/L
- Addition of a monthly average load limitation for total phosphorus of 2.75 lbs/d
- Updated concentration limitation for total ammonia (as N) during summer months from a daily maximum of 12 mg/L to a monthly average of 9.7 mg/L
- Addition of monitoring for total ammonia (as N) during winter months
- Removed influent sampling requirements for pH, temperature, BOD₅ 7-day average, TSS 7-day average, settleable solids, ammonia, and phosphorus
- Removed Ultimate Oxygen Demand (UOD) and Total Kjeldahl Nitrogen (TKN) lines in the permit limits table (no previous requirements)

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

Administrative History

7/1/2011 The last full technical review was performed and the SPDES permit became effective with a new five-year term and expiration date of 6/30/2016. The 2011 permit has formed the basis of this permit.

The permit was administratively renewed in 2016 and again in 2021. The current permit administrative renewal is effective until 6/30/2026.

3/5/2024 DEC issued a Request for Information (RFI) to complete a full technical review of the SPDES permit due to a proposed capital improvement project at the sewage treatment plant and the resulting Environmental Benefit Permit Strategy (EBPS) score¹.

7/30/2024 The Village of Union Springs submitted a NY-2A permit application.

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

Facility Information

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

The current 0.330 MGD treatment plant consists of:

- Mechanical Bar Screen, Grit Removal
- Oxidation Ditches and Final Clarification
- Liquid Sodium Hypochlorite Feed System, Sodium Bisulfite Dechlorination

¹ Pursuant to 6 NYCRR 750-1.18 and NYS Environmental Benefit Permit Strategy (EBPS)

Permittee: Village of Union Springs
Facility: Sewage Treatment Plant
SPDES Number: NY0024228
USEPA Non-Major/Class 07 Municipal

Date: September 17, 2025 v.1.26
Permit Writer: Ethan Sullivan
Water Quality Reviewer: Aslam Mirza
Full Technical Review

Sludge is dewatered through a belt filter press and hauled to a landfill for disposal.

The primary outfall (Outfall 001) is a submerged diffuser located approximately 300' from the bank of Cayuga Lake and consists of a 10" pipe with three 6" diffuser nozzles.

The facility is planning general upgrades/improvements to the treatment plant and solids handling system.

The facility accepts wastewater from the following municipalities:

Municipality	POSS # or SPDES #	Collection System
Village of Union Springs	NY0024228	Separate

Site Overview

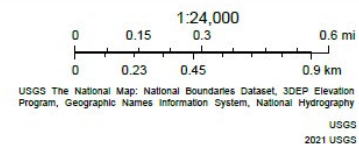


North

Union Springs WWTP



6/25/2024, 12:43:05 PM





Enforcement History

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

Existing Effluent Quality

The [Pollutant Summary Table](#) presents the existing effluent quality and effluent limitations. The existing effluent quality was determined from Discharge Monitoring Reports and the application submitted by the permittee for the period 7/31/2019 to 6/30/2024. [Appendix Link](#)

Interstate Water Pollution Control Agencies

The facility is located within the Great Lakes watershed and International Joint Commission (IJC) compact area. [Appendix Link](#)

Receiving Water Information

The facility discharges via the following outfalls:

Outfall No.	SIC Code	Wastewater Type	Receiving Water
001	4952	Treated Sanitary Sewage	Cayuga Lake, Class A(T)

Reach Description: Union Springs discharges directly to the northeastern end of Cayuga Lake, a Class A(T) waterbody segment. Nearby SPDES dischargers are Mackenzie-Childs Aurora LLC (NY0244236), located approximately 5 miles south on the eastern shoreline, and Cayuga and Aurelius Joint WWTP (NY0262102), located approximately 7.5 miles to the north on the northern shoreline.

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

Impaired Waterbody Information

In September 2024, a Total Maximum Daily Load (TMDL) was approved for Cayuga Lake to address the phosphorus impairment. As part of the TMDL, the discharges from the following outfalls are subject to the listed wasteload allocations (WLA) for the following parameters:

Outfall No.	Parameter	Wasteload Allocation
001	Total Phosphorus	2.75 lb/d (1,004 lb/yr)

Critical Receiving Water Data & Mixing Zone

The facility discharges to Cayuga Lake, which is a ponded waterbody. The previous water quality analysis established that a dilution ratio of 35:1 was appropriate given the location of the outfall and diffuser design. This dilution ratio has been continued.

Outfall No.	Acute Dilution Ratio A(A)	Chronic Dilution Ratio A(C)	Human, Aesthetic, Wildlife Dilution Ratio (HEW)	Basis
001	35:1			Historic Water Quality Record TOGS 1.3.1

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

None of the seven criteria that are indicative of potential toxicity are applicable to this facility; therefore, WET testing is not included in the permit. [Appendix Link](#)

Anti-backsliding

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

[Appendix Link](#)

Antidegradation

The permit contains effluent limitations which ensure that the best usages of the receiving waters will be maintained. The Notice of Complete Application published in the Environmental Notice Bulletin contains information on the State Environmental Quality Review (SEQR)² determination.

[Appendix Link](#)

Discharge Notification Act Requirements

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

² As prescribed by 6 NYCRR Part 617

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

Mercury³

The multiple discharge variance (MDV) for mercury provides the framework for DEC to require mercury monitoring and mercury minimization programs (MMPs), through SPDES permitting.

The facility is a Class 07 facility in the Great Lakes Basin with a mercury source (as identified by the permittee on the conditional exclusion form signed on 7/9/2024) and the permit includes requirements for the implementation of MMP Type II.

Based on 3 data point(s) with an average of 1.63 ng/L collected as part of the application the facility is expected to meet the new daily max permit limit of 50 ng/L (with monthly sampling frequency). The limit represents the general level currently achievable (GLCA). The data collected will be used to establish an additional 12-month rolling average effluent limit during the next permit review. [Appendix Link](#)

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

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

Emerging Contaminant Monitoring

Based on the available data submitted with the application, no additional monitoring for perfluorooctanoic acid (PFOA), perfluorooctanesulfonic acid (PFOS), and 1,4-dioxane (1,4-D) is required at this time. See the [Pollutant Summary Table](#) below for more information.

Schedule of Additional Submittals

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

- Water treatment Chemical (WTC) Annual Report Form
- Annual Flow Certification
- Mercury Minimization Plan and Annual Status Report

³ In accordance with DOW 1.3.10 Mercury – SPDES Permitting & Multiple Discharge Variance (MDV), December 30, 2020.

OUTFALL AND RECEIVING WATER SUMMARY TABLE

Outfall	Latitude	Longitude	Receiving Water Name	Water Class	Water Index No. / Priority Waterbody Listing (PWL) No.	Major / Sub Basin	Hardness (mg/l)	1Q10 (MGD)	7Q10 (MGD)	30Q10 (MGD)	Critical Effluent Flow (MGD)	Dilution Ratio		
												A(A)	A(C)	HEW
001	42° 50' 35" N	76° 42' 15" W	Cayuga Lake	A(T)	0705-0025 PWL: Ont 66-12-p296	Seneca-Oneida-Oswego/Upper Seneca	-	Not Applicable			0.330	35:1		

POLLUTANT SUMMARY TABLE: OUTFALL-001

Outfall #	001	Description of Wastewater: Treated sanitary sewage and industrial process water.													
		Type of Treatment: Bars screen, Activated sludge, oxidation ditch, secondary clarifiers, chlorine disinfection, and dechlorination.													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality ⁴	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
General Notes: Existing discharge data from 7/31/2019 to 6/30/2024 was obtained from Discharge Monitoring Reports provided by the permittee. All applicable water quality standards were reviewed for development of the WQBELs. The standard and WQBEL shown below represent the most stringent.															
Flow Rate	MGD	Monthly Avg	0.33	0.143 Actual Average	60/0	0.339	Design Flow	No alterations that will impair the waters for their best usages.				703.2	-	Design Flow	
	The flow limit is set at the design flow of the wastewater treatment facility.														
pH	SU	Minimum	6.0	7.7 Actual Min	60/0	6.0	40 CFR 133.102	8.1 ⁵	-	6.5 – 8.5	Range	-	703.3	-	TBEL
		Maximum	9.0	8.9 Actual Max	60/0	9.0									
	Consistent with TOGS 1.3.3 for POTWs, TBELs reflect secondary treatment standards. Given the available dilution, the existing effluent limitation equal to the TBEL is protective of the WQS.														
Temperature	°F	Daily Max	Monitor	73 Actual Max	60/0	-	-	-	The water temperature at the surface of a lake shall not be raised more than 3F over the temperature that existed before the addition.			704.2	-	Monitor 750-1.13	
	Consistent with 6 NYCRR 750-1.13(a), monitoring will continue to be required for informational purposes and may be used to inform future permitting decisions. Given the dilution available, there is no reasonable potential to exceed the thermal standard for lakes (6NYCRR 704.2(b)(3)(i)) and a WQBEL is not proposed.														

⁴ Existing Effluent Quality: Unless otherwise stated, Daily Max = 99% lognormal; Monthly Avg = 95% lognormal (for datasets with ≤3 nondetects); Daily Max = 99% delta-lognormal; Monthly Avg = 95% delta-lognormal (for datasets with >3 nondetects)

⁵ Ambient background concentration for pH was established using a 2025 analysis of watershed specific data and consistent with previous permit reviews.

Outfall #	001	Description of Wastewater: Treated sanitary sewage and industrial process water.													
		Type of Treatment: Bars screen, Activated sludge, oxidation ditch, secondary clarifiers, chlorine disinfection, and dechlorination.													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality ⁴	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
Dissolved Oxygen (DO)	mg/L	Daily Min	7.0	7.9 Actual Average	25/0	7.0	TOGS 1.3.1	-	-	5.0	No Reasonable Potential	703.3	-	Antibacksliding	
SUMMER 6/1 – 10/31	The existing effluent limitation is set at the recommendation from TOGS 1.3.1 for representing the highest degree of treatment that can reasonably be achieved by a wastewater facility treating domestic type waste. In addition, given the available dilution, the existing DO limit and secondary treatment standards for BOD ₅ will continue and are expected to be protective of water quality.														
5-day Biochemical Oxygen Demand (BOD ₅)	mg/L	Monthly Avg	30	3.01	54/6	30	40 CFR 133.102	-	DO = 5.0 mg/l (Surrogate Standard)	703.3	-	TBEL			
		7 Day Avg	45	3.01	54/6	45	40 CFR 133.102								
	lbs/d	Monthly Avg	82	3.38	54/6	-	-								
		7 Day Avg	123	3.38	54/6	-	-								
	% Rem	Minimum	85	97.4	60/0	85	40 CFR 133.102								
		Consistent with 40 CFR Part 133.102 and TOGS 1.3.3 for POTWs, TBELs reflect secondary treatment standards. Due to the available dilution, it is expected the effluent discharge at secondary treatment level will meet the WQ standard (Past WQ decision and record).													
Total Suspended Solids (TSS)	mg/L	Monthly Avg	30	1.82	44/16	30	40 CFR 133.102	-	None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. 703.2	-	-	TBEL			
		7 Day Avg	45	1.82	44/16	45	40 CFR 133.102								
	lbs/d	Monthly Avg	82	8.0	44/16	-	-								
		7 Day Avg	123	8.0	44/16	-	-								
	% Rem	Minimum	85	98.5	60/0	85	40 CFR 133.102								
		Consistent with 40 CFR Part 133.102 and TOGS 1.3.3 for POTWs, TBELs reflect secondary treatment standards. Given the available dilution, an effluent limitation equal to the TBEL, and consistent with TOGS 1.3.3, is protective of water quality standards.													

Outfall #	001	Description of Wastewater: Treated sanitary sewage and industrial process water.													
		Type of Treatment: Bars screen, Activated sludge, oxidation ditch, secondary clarifiers, chlorine disinfection, and dechlorination.													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality ⁴	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
Settleable Solids	mL/L	Daily Max	0.3	<0.1	0/60	0.3	TOGS 1.3.3	-	None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages				703.2	-	TBEL
	Consistent with TOGS 1.3.3, the effluent limitation is equal to the TBEL of 0.3 mL/L for POTWs providing secondary treatment without filtration. Given the dilution available the TBEL is protective of WQS.														
Nitrogen, Ammonia (as N) SUMMER 6/1 – 10/31	mg/L	Monthly Avg	12	1.68 Actual Average	22/3	-	-	0.027	-	0.30	A(C)	9.7	703.5	-	WQBEL
	The WQ standard for Ammonia was determined from TOGS 1.1.1 for an ambient pH of 8.3 and a summer temperature of 25 °C. The pH was found from the 80 th percentile of a 2025 analysis of watershed specific data. The temperature of the receiving waterbody was an assumed value and consistent with TOGS 1.3.1.E. The background concentration of ammonia of 0.027 mg/L as N was calculated using the median of 436 samples gathered from Rotating Basin Integrated Study (RIBS) station ID 5730255 on Cayuga Lake, gathered from 2002 to 2024.														
	The WQBEL was calculated using the available dilution and is lower than the existing limitation. Therefore, the effluent limitation has been reduced to equal the WQBEL.														
Nitrogen, Ammonia (as N) WINTER 11/1 – 5/31	mg/L	Monthly Avg	-	-	22/3	-	-	0.027	-	0.60	A(C)	19.2	703.5	-	Monitor 750-1.13
	The WQ standard for Ammonia was determined from TOGS 1.1.1 for an ambient pH of 8.3 and a winter temperature of 10 °C. The pH was found from the 80 th percentile of a 2025 analysis of watershed specific data. The temperature of the receiving waterbody was an assumed value and consistent with TOGS 1.3.1.E. The background concentration of ammonia of 0.027 mg/L as N was calculated using the median of 436 samples gathered from Rotating Basin Integrated Study (RIBS) station ID 5730255 on Cayuga Lake, gathered from 2002 to 2024.														
	The WQBEL was calculated using the available dilution and due to the summer performance, it is unlikely that reasonable potential will be triggered during the winter. Monitoring has been added to obtain effluent winter data for calculating reasonable potential during the next review.														
Total Phosphorus	mg/L	Monthly Avg	1.0	0.38 Actual Average	60/0	-	-	-	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usages.				703.2	-	Antibacksliding
	lbs/d	Monthly Avg	-	-	-	-	-	-	-	-	-	2.75	TOGS 1.3.1	-	TMDL
	Consistent with the TMDL, and to maximize phosphorus removal ⁶ to improve the water quality of Cayuga Lake, the permit continues to require a total phosphorus concentration limit of 1.0 mg/L and a new load limitation expressed as a monthly average.														

⁶ Consistent with NYCRR 750-2.8(a)(5).

Outfall #	001	Description of Wastewater: Treated sanitary sewage and industrial process water.													
		Type of Treatment: Bars screen, Activated sludge, oxidation ditch, secondary clarifiers, chlorine disinfection, and dechlorination.													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality ⁴	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
Total Mercury	ng/L	Daily Maximum	-	1.63 Actual Average	3/0	-	-	-	-	0.7	H(FC)	50	GLCA	-	DOW 1.3.10
See Mercury section of this fact sheet.															
Coliform, Fecal	#/100 ml	30d Geo Mean	200	4.8 Actual Average	60/0	200	TOGS 1.3.3	-	The monthly geometric mean, from a minimum of five examinations, shall not exceed 200. 703.4				-	-	TBEL
		7d Geo Mean	400	4.8 Actual Average	60/0	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 will continue to be specified.															
Total Residual Chlorine (TRC)	mg/L	Daily Max	0.18	0.12 Actual Average	60/0	2.0	TOGS 1.3.3	-	-	0.005	A(C)	0.18	703.5	-	WQBEL
The WQBEL was calculated by multiplying the WQS by the chronic dilution ratio and is equal to the existing limit. Effluent disinfection is currently required year-round and will remain a permit requirement.															
Additional Pollutants Detected															
1-4 Dioxane	ug/L	-	-	0.13 Max	3/0	-	-	-	0.011	0.35	H(WS)	No Reasonable Potential	TOGS 1.1.1	-	No Limitation
	The projected instream concentration was calculated from the water quality standard, multiplier of 3.0, and the HEW dilution ratio. The multiplier was selected from EPA's Technical Support Document Chapter 3.3 to account for the number of samples. The projected instream concentration shows no reasonable potential for violating the guidance value and no limitation or monitoring is needed at this time.														
Total Nitrogen	mg/L	Monthly Avg	-	21	3/0	-	-	-	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usages.			703.2	-	No limitation	
	No numerical water quality standard exists for Class A(T) therefore no reasonable potential analysis is assumed and no limitation is applied.														

Emerging Contaminants 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 ⁷	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
Notes: See Emerging Contaminant Monitoring section above. Effluent samples were analyzed for the 40 PFAS compounds and 1,4-Dioxane. Existing effluent quality data was provided by the NY-2A application and did not specify a number of detections or non-detections.															
Perfluoro-butanoic Acid (PFBA)	ng/L	Daily Max	-	5.5 Actual Max	3	-	-	-	-	-	-	-	-	-	No limitation
	Based on available data, no additional monitoring is required at this time.														
Perfluoro-pentanoic Acid (PFPeA)	ng/L	Daily Max	-	61 Actual Max	3	-	-	-	-	-	-	-	-	-	No limitation
	Based on available data, no additional monitoring is required at this time.														
Perfluoro-hexanoic Acid (PFHxA)	ng/L	Daily Max	-	23.1 Actual Max	3	-	-	-	-	-	-	-	-	-	No limitation
	Based on available data, no additional monitoring is required at this time.														
Perfluoro-heptanoic Acid (PFHpA)	ng/L	Daily Max	-	1.3 Actual Max	3	-	-	-	-	-	-	-	-	-	No limitation
	Based on available data, no additional monitoring is required at this time.														
Perfluoro-octanoic Acid (PFOA)	ng/L	Daily Max	-	5.5 Actual Max	3	-	-	-	0.47	6.7	H(WS)	No Reasonable Potential	TOGS 1.1.1	-	No Limitation
	The projected instream concentration was calculated using the maximum measured effluent concentration of 5.5 ng/L, a multiplier of 3.0, 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 no reasonable potential to cause or contribute to a WQS violation. Therefore, no WQBEL has been specified, and no additional monitoring is required at this time.														
Perfluoro-nonanoic Acid (PFNA)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No limitation
	Based on available data, no additional monitoring is required at this time.														
Perfluoro-decanoic Acid (PFDA)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No limitation
	Based on available data, no additional monitoring is required at this time.														
Perfluoro-undecanoic Acid (PFUnA)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No limitation
	Based on available data, no additional monitoring is required at this time.														

⁷ Existing Effluent Quality: Unless otherwise stated, Daily Max = 99% lognormal; Monthly Avg = 95% lognormal (for datasets with ≤3 nondetects); Daily Max = 99% delta-lognormal; Monthly Avg = 95% delta-lognormal (for datasets with >3 nondetects)

Emerging Contaminants 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 ⁷	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
Perfluoro-dodecanoic Acid (PFDoA)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No limitation
	Based on available data, no additional monitoring is required at this time.														
Perfluoro-tridecanoic Acid (PFTiA)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No limitation
	Based on available data, no additional monitoring is required at this time.														
Perfluoro-tetradecanoic Acid (PFTeA)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No limitation
	Based on available data, no additional monitoring is required at this time.														
Perfluoro-butanesulfonic Acid (PFBS)	ng/L	Daily Max	-	3.2 Actual Max	3	-	-	-	-	-	-	-	-	-	No limitation
	Based on available data, no additional monitoring is required at this time.														
Perfluoro-pentanesulfonic Acid (PFPeS)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No limitation
	Based on available data, no additional monitoring is required at this time.														
Perfluoro-hexanesulfonic Acid (PFHxS)	ng/L	Daily Max	-	1.3 Actual Max	3	-	-	-	-	-	-	-	-	-	No limitation
	Based on available data, no additional monitoring is required at this time.														
Perfluoro-heptanesulfonic Acid (PFHpS)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No limitation
	Based on available data, no additional monitoring is required at this time.														
Perfluoro-octanesulfonic Acid (PFOS)	ng/L	Daily Max	-	1.4 Actual Max	3	-	-	-	0.12	2.7	H(WS)	No Reasonable Potential	TOGS 1.1.1	-	No Limitation
	The projected instream concentration was calculated using the maximum measured effluent concentration of 1.4 ng/L, a multiplier of 3.0, 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 no reasonable potential to cause or contribute to a WQS violation. Therefore, no WQBEL has been specified, and no additional monitoring is required at this time.														
Perfluoro-nonanesulfonic Acid (PFNS)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation
	Based on available data, no additional monitoring is required at this time.														
Perfluoro-decanesulfonic Acid (PFDS)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation
	Based on available data, no additional monitoring is required at this time.														
	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation

Emerging Contaminants 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 ⁷	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
Perfluoro-dodecane-sulfonic Acid (PFDoS)	Based on available data, no additional monitoring is required at this time.														
Perfluoro-octane-sulfonamide (FOSA)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation
	Based on available data, no additional monitoring is required at this time.														
N-methyl Perfluoro-octanesulfon-amidoacetic Acid (NMeFOSAA)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation
	Based on available data, no additional monitoring is required at this time.														
N-ethyl Perfluoro-octanesulfon-amidoacetic Acid (NEtFOSAA)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation
	Based on available data, no additional monitoring is required at this time.														
4:2 Fluorotelomer Sulfonic Acid (FTS)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation
	Based on available data, no additional monitoring is required at this time.														
6:2 Fluorotelomer Sulfonic Acid (FTS)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation
	Based on available data, no additional monitoring is required at this time.														
8:2 Fluorotelomer Sulfonic Acid (FTS)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation
	Based on available data, no additional monitoring is required at this time.														
N-ethyl Perfluoro-octanesulfon-amide (NEtFOSA)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation
	Based on available data, no additional monitoring is required at this time.														

Emerging Contaminants 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 ⁷	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
N-methyl Perfluoro-octanesulfonamide (NMeFOSA)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation
	Based on available data, no additional monitoring is required at this time.														
N-methyl Perfluoro-octanesulfonamidoethanol (NMeFOSE)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation
	Based on available data, no additional monitoring is required at this time.														
N-ethyl Perfluoro-octanesulfonamidoethanol (NEtFOSE)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation
	Based on available data, no additional monitoring is required at this time.														
9-Chlorohexadeca-fluoro-3-oxanonane-1-sulfonic Acid (9Cl-PF3ONS)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation
	Based on available data, no additional monitoring is required at this time.														
Hexafluoro-propylene Oxide Dimer Acid (HFPO-DA or GenX)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation
	Based on available data, no additional monitoring is required at this time.														
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic Acid (11Cl-PF3OUdS)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation
	Based on available data, no additional monitoring is required at this time.														
4,8-Dioxa-3H-perfluorononanoic Acid (ADONA)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation
	Based on available data, no additional monitoring is required at this time.														
	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation

Emerging Contaminants 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 ⁷	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
3-Perfluoropropyl Propanoic Acid (3:3 FTCA)	Based on available data, no additional monitoring is required at this time.														
2H,2H,3H,3H-Perfluoro-octanoic Acid (5:3 FTCA)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation
	Based on available data, no additional monitoring is required at this time.														
3-Perfluoroheptyl Propanoic Acid (7:3 FTCA)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation
	Based on available data, no additional monitoring is required at this time.														
Nonafluoro-3,6-dioxaheptanoic Acid (NFDHA)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation
	Based on available data, no additional monitoring is required at this time.														
Perfluoro-4-methoxy-butanoic Acid (PFMBA)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation
	Based on available data, no additional monitoring is required at this time.														
Perfluoro-3-methoxy-propanoic Acid (PFMPA)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation
	Based on available data, no additional monitoring is required at this time.														
Perfluoro(2-ethoxyethane)sulfonic Acid (PFEEA)	ng/L	Daily Max	-	ND	0/3	-	-	-	-	-	-	-	-	-	No Limitation
	Based on available data, no additional monitoring is required at this time.														

Appendix: Regulatory and Technical Basis of Permit Authorizations

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

Regulatory References

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

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

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

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

Outfall and Receiving Water Information

Impaired Waters

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

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

Interstate Water Pollution Control Agencies

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

Existing Effluent Quality

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

Permit Requirements

Basis for Effluent Limitations

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

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

Anti-backsliding

Anti-backsliding requirements are specified in the CWA sections 402(o) and 303(d)(4), ECL 17-0809, and regulations at 40 CFR 122.44(l) and 6 NYCRR 750-1.10(c) and (d). Generally, the relaxation of effluent limitations in permits is prohibited unless one of the specified exceptions applies, which will be cited on a case-by-case basis in this fact sheet. Consistent with current case law⁸ and USEPA interpretation⁹ 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.

⁸ American Iron and Steel Institute v. Environmental Protection Agency, 115 F.3d 979, 993 n.6 (D.C. Cir. 1997)

⁹ U.S. EPA, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; 65 Fed. Reg. 31682, 31704 (May 18, 2000); Proposed Water Quality Guidance for the Great Lakes System, 58 Fed. Reg. 20802, 20837 & 20981 (April 16, 1993)

Antidegradation Policy

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

Effluent Limitations

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

Technology-based Effluent Limitations (TBELs)

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

Water Quality-Based Effluent Limitations (WQBELs)

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

Mixing Zone Analyses

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

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

Critical Flows

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

Reasonable Potential Analysis (RPA)

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

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

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

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

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

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

Whole Effluent Toxicity (WET) Testing:

WET tests use small vertebrate and invertebrate species to measure the aggregate toxicity of an effluent. There are two different durations of toxicity tests: acute and chronic. Acute toxicity tests measure survival over a 96-hour test exposure period. Chronic toxicity tests measure reductions in survival, growth, and reproduction over a 7-day exposure. TOGS 1.3.1 includes guidance for determining when aquatic toxicity testing should be included in SPDES permits. The authority to require toxicity testing is in 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.

Monitoring Requirements

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

Other Conditions

Mercury

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

Schedule(s) of Additional Submittals

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