State Pollutant Discharge Elimination System (SPDES) DISCHARGE PERMIT

SIC Code:	**4952**	NAICS Code:	**221320**	SPDES Number:	**NY0022730**
Discharge Class (CL):	**05**			DEC Number:	**7-4930-00026/00001**
Toxic Class (TX):	**T**			Effective Date (EDP):	**EDP**
Major-Sub Drainage Basin:	**06 - 03**			Expiration Date (ExDP):	**ExDP**
Water Index Number:	**SR (portion 3)**	Item No.:	**930 - 3**	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, as amended, (33 U.S.C. '1251 et.seq.)

PERMITTEE NAME AND ADDRESS					
Name:	**Town of Owego**	Attention:	**Director of Utilities**		
Street:	**1319 Main Street**				
City:	**Apalachin**	State:	**NY**	Zip Code:	**13732**
Email:	stilest@townofowego.com	Phone:	**607-625-2197**		

is authorized to discharge from the facility described below:

FACILITY NAME, ADDRESS, AND PRIMARY OUTFALL														
Name:	**Owego (T) Sewer District #1**													
Address / Location:	**398 Broadway Road**										County:	**Tioga**		
City:	**Owego**						State:	**NY**			Zip Code:	**13827**		
Facility Location:		Latitude:	**42**	°	**06**	’	**02**	” N	& Longitude:	**76**	°	**13**	’	**48** ” W
Primary Outfall No.:	**001**	Latitude:	**42**	°	**05**	’	**38**	” N	& Longitude:	**76**	°	**13**	’	**56** ” W
Outfall Description:	**Treated Sanitary**	Receiving Water:	**Susquehanna River**								Class:	**B**		

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:
CO BWP - Permit Coordinator
CO BWC - SCIS
RWE
RPA
EPA Region II
NYSEFC
SRBC

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

DEFINITIONS FOR PERMIT LIMITS, LEVELS AND MONITORING TERMS

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 department 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 Department.
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 (unless otherwise stated)	Susquehanna River	EDP	ExDP

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
								Location		
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	
Flow	Monthly Average	0.848	MGD			Continuous	Recorder	X		
	Daily Maximum	Monitor	MGD			Continuous	Recorder	X		
pH	Daily Minimum	6.0	SU			1/Day	Grab		X	
	Daily Maximum	9.0	SU			1/Day	Grab		X	
Temperature	Daily Maximum	Monitor	ºC			1/Day	Grab		X	
BOD_5	Monthly Average	30	mg/L	210	lbs/d	2/Month	6-hr. Comp.	X	X	(1)
	7-Day Average	45	mg/L	320	lbs/d	2/Month	6-hr. Comp.		X	
Total Suspended Solids (TSS)	Monthly Average	30	mg/L	210	lbs/d	2/Month	6-hr. Comp.	X	X	(1)
	7-Day Average	45	mg/L	320	lbs/d	2/Month	6-hr. Comp.		X	
Settleable Solids	Daily Maximum	0.3	mL/L			1/Day	Grab		X	
Dissolved Oxygen	Daily Minimum	Monitor	mg/L			2/Month	Grab		X	
Ammonia (as N)	Daily Maximum	16	mg/L	Monitor	lbs/d	1/Quarter	6-hr. Comp.		X	(2)
Total Kjeldahl Nitrogen (TKN) (as N)	Monthly Average	Monitor	mg/L	Monitor	lbs/d	2/Month	6-hr. Comp.	X	X	
Nitrate (as N)	Monthly Average	Monitor	mg/L	Monitor	lbs/d	2/Month	6-hr. Comp.	X	X	
Nitrite (as N)	Monthly Average	Monitor	mg/L	Monitor	lbs/d	2/Month	6-hr. Comp.	X	X	
Total Nitrogen (as N)	Monthly Average	Monitor	mg/L	Monitor	lbs/d	2/Month	Calculated	X	X	(3)
	Monthly Load			Monitor	lbs/mo	1/Month	Calculated		X	(4)
	12 Month Rolling Load			32,000	lbs/yr	1/Month	Calculated		X	(5,6)
Total Phosphorus (as P)	Monthly Average	1.0	mg/L	Monitor	lbs/d	2/Month	6-hr. Comp.	X	X	(6)
	Monthly Load			Monitor	lbs/mo	1/Month	Calculated		X	(7)
	12 Month Rolling Load			1,290	lbs/yr	1/Month	Calculated		X	(6,8)
Total Copper	Daily Maximum	Monitor	mg/L	3.1	lbs/d	1/Month	6-hr. Comp.		X	
Free Cyanide	Daily Maximum	Monitor	mg/L	0.57	lbs/d	1/Month	6-hr. Comp.		X	(9)
Total Iron	Daily Maximum	0.6	mg/L	Monitor	lbs/d	1/Quarter	6-hr. Comp.		X	(2)
Total Lead	Daily Maximum	Monitor	mg/L	0.36	lbs/d	1/Month	6-hr. Comp.		X	
Mercury	Daily Maximum	50	ng/L			1/Month	Grab		X	

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PERMIT LIMITS, LEVELS AND MONITORING (continued)

EFFLUENT DISINFECTION Required Seasonal from May 1st - October 31st		Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	FN
Coliform, Fecal	30-Day Geometric Mean	200	No./ 100 mL			2/Month	Grab		X	
Coliform, Fecal	7-Day Geometric Mean	400	No./ 100 mL			2/Month	Grab		X	
Chlorine, Total Residual	Daily Maximum	2.0	mg/L			1/Day	Grab		X	(10)

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

WHOLE EFFLUENT TOXICITY (WET) TESTING		Limit	Units	Action Level	Units	Sample Frequency	Sample Type	Inf.	Eff.	FN
WET - Acute Invertebrate	See footnote			15	TUa	Quarterly	See footnote		X	(2,11)
WET - Acute Vertebrate	See footnote			15	TUa	Quarterly	See footnote		X	(2,11)
WET - Chronic Invertebrate	See footnote			100	TUc	Quarterly	See footnote		X	(2,11)
WET - Chronic Vertebrate	See footnote			100	TUc	Quarterly	See footnote		X	(2,11)

FOOTNOTES:

1. Effluent shall not exceed 15% of influent concentration values for BOD_5 & TSS.
2. Quarterly samples shall be reported as calendar quarters (Q1 – January 1st to March 31st; Q2 – April 1st to June 30th; Q3 – July 1st to September 30th; Q4 – October 1st to December 31st).
3. Total Nitrogen (as N) = [Total Kjeldahl Nitrogen (TKN), as N] + [Nitrite (NO_2), as N] + [Nitrate (NO_3), as N].
4. Total Nitrogen (as N), monthly total (lbs/month) is calculated as the monthly average load (lbs/d) multiplied by the number of days in the month.
5. Total Nitrogen (as N), 12-month rolling total (lbs/year) is calculated as the current month load added to the month loads from the previous eleven months.
6. This is a final effluent limitation. See Schedule of Compliance for any applicable interim effluent limitations.
7. Total Phosphorus (as P), monthly total (lbs/month) is calculated as the monthly average load (lbs/d) multiplied by the number of days in the month.
8. Total Phosphorus (as P), 12-month rolling total (lbs/year) is calculated as the current month load added to the month loads from the previous eleven months.
9. 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.

Footnotes Continued on Next Page

Footnotes Continued

10. Reporting for Total Residual Chlorine is only applicable if chlorine is used for disinfection, elsewhere in the treatment process, or the facility otherwise has reasonable potential to discharge chlorine.

11. **Whole Effluent Toxicity (WET) Testing:**
Testing Requirements – Acute and if directed Chronic WET testing is required. Testing shall be performed in accordance with 40 CFR Part 136 and TOGS 1.3.2 unless prior written approval has been obtained from the Department. 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 50:1 for acute, and 100:1 for chronic. Discharges which are disinfected using chlorine should be dechlorinated prior to WET testing or samples shall be taken immediately prior to the chlorination system.

Monitoring Period - WET testing shall be performed quarterly (calendar quarters) during calendar years ending in 0 and 5.

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

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

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

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 may be performed using either USEPA Method 1631 or another sufficiently sensitive method, as approved under 40 CFR Part 136[1]. 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/or 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 Department 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 Department 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.

      v. 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.

[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.

MERCURY MINIMIZATION PROGRAM (MMP) - Type II (Continued)

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 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 the Department 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 the Department 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 completed and maintained on site 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 Department 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

[3] For example, the outreach program could include education about sources of mercury and what to do if a mercury source is found.
[4] 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 II (Continued)

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 first status report is required to be completed in accordance with the Schedule of Additional Submittals. 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 Department identifies inadequacies in the MMP.

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

DEFINITIONS:

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

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

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 discharge.

(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.

MINI INDUSTRIAL PRETREATMENT PROGRAM

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

1. Industrial Survey
   The permittee submitted the results of an industrial survey.

2. Develop Procedures
   The permittee submitted documentation of procedures for obtaining and ensuring compliance with applicable standards. Such procedures include requirements and schedules for discharge permits, industrial self-monitoring, compliance monitoring of industries by the permittee, on-going POTW monitoring, and an enforcement program. Such procedures are equivalent to procedures described or referenced in the document entitled Introduction to the National Pretreatment Program, USEPA, June, 2011, (https://www.epa.gov/npdes/pubs/pretreatment_program_intro_2011.pdf).

3. Treatment Plant/Industry Monitoring
   The permittee submitted the results of industrial and POTW monitoring and a completed Fast Report On Significant Industries forms (FROSIs) for all significant industrial users (SIUs).

4. Local Sewer Use Law
   The permittee submitted a draft local sewer use law equivalent to the DEC Model Sewer Use Law, NYSDEC, 1994. Local limits for substance capable of causing SPDES permit violations, endangering municipal employees or limiting sludge disposal options were included in the local law. Such limits were developed in accordance with document entitled Local Limits Development Guidance, US EPA, July 2004, EPA 833-R-04-002A (https://www.epa.gov/npdes/pubs/pretreatment_local_limits.pdf). After approval by the Department, dated September 1, 1995, the permittee submitted a copy of the enacted Law accompanied by proof of enactment.

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

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

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

SCHEDULE OF COMPLIANCE

a) The permittee shall comply with the following schedule:

Outfall(s)	Compliance Action	Due Date
001	PHOSPHORUS CONCENTRATION EFFLUENT LIMITATION The Total Phosphorus monthly average effluent concentration limit of 1.0 mg/L will become effective January 1, 2025. This requirement will be monitor only until the limit takes effect.	January 1, 2025
001	PHOSPHORUS LOADING LIMITATION The total phosphorus 12-month rolling load of 1,290 lbs/yr will become effective January 1, 2025. The interim limit of 3,600 lbs/yr will be effective until then.	January 1, 2025
001	NITROGEN LOADING LIMITATION The total nitrogen 12-month rolling load of 32,000 lbs/yr will become effective January 1, 2025. The interim limit of 27,000 lbs/yr will be effective until then.	January 1, 2025

The above compliance actions are one-time requirements. The permittee shall comply with the above compliance actions to the Department's satisfaction once. When this permit is administratively renewed by NYSDEC letter entitled "SPDES NOTICE/RENEWAL APPLICATION/PERMIT," the permittee is not required to repeat the submission(s) noted above. The above due dates are independent from the effective date of the permit stated in the "SPDES NOTICE/RENEWAL APPLICATION/PERMIT" letter.

INTERIM EFFLUENT LIMITS FOR PARAMETERS SUBJECT TO THIS SCHEDULE OF COMPLIANCE

Outfall	Parameter(s) Affected	Interim Effluent Limit			Limits Apply	Notes	Interim Limits Expire
		Type	Limit	Units			
001	Total Phosphorus	Monthly Average	Monitor	mg/L	Year-Round	1	12/31/2024
001	Total Phosphorus	12 Month Rolling Average	3,600	lbs/yr	Year-Round	1,2	12/31/2024
001	Total Nitrogen	12 Month Rolling Average	27,000	lbs/yr	Year-Round	1,2	12/31/2024

Notes:
1. See permit limits table for sample type and frequency.
2. See permit footnotes for the calculation of 12 month rolling load.

b) The permittee shall submit a written notice of compliance or non-compliance with each of the above schedule dates no later than 14 days following each elapsed date, unless conditions require more immediate notice as prescribed in 6 NYCRR Part 750-1.2(a) and 750-2. All such compliance or non-compliance notification shall be sent to the locations listed under the section of this permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS. Each notice of non-compliance shall include the following information:
   1. A short description of the non-compliance;
   2. A description of any actions taken or proposed by the permittee to comply with the elapsed schedule requirements without further delay and to limit environmental impact associated with the non-compliance;
   3. Any details which tend to explain or mitigate an instance of non-compliance; and
   4. An estimate of the date the permittee will comply with the elapsed schedule requirement and an assessment of the probability that the permittee will meet the next scheduled requirement on time.

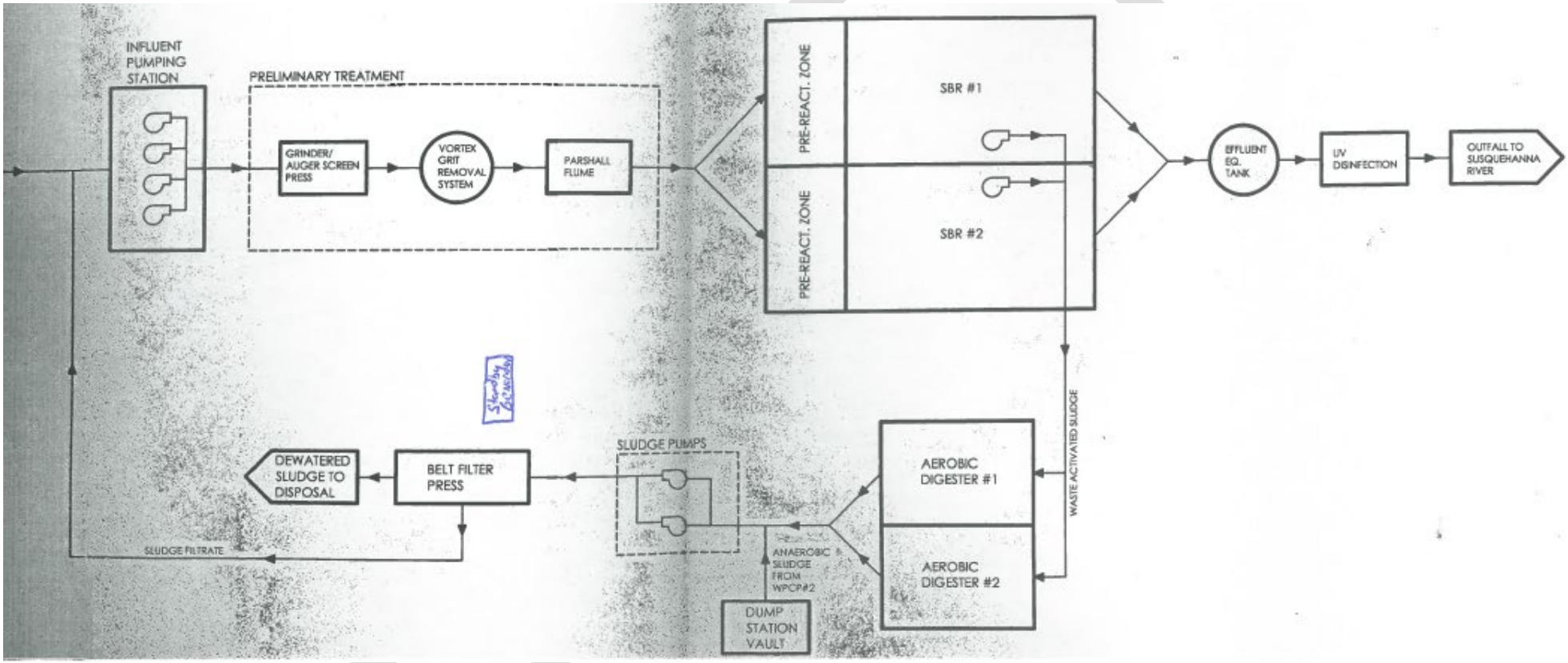
c) The permittee shall submit copies of any document required by the above schedule of compliance to the NYSDEC Regional Water Engineer and to the Bureau of Water Permits.

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:

Influent: After screening

Effluent: After decanting; fecal after UV



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

GENERAL REQUIREMENTS (continued)

2. Notification Requirement for POTWs
   All POTWs shall provide adequate notice to the Department and the USEPA of the following:

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

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

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

H. SPDES Permit Program Fee
   The permittee shall pay to the Department an annual SPDES permit program fee within 30 days of the date of the first invoice, unless otherwise directed by the Department, 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 Department review and authorization. At a minimum, the permittee must notify the Department in writing of its intent to change WTC use by submitting a completed *WTC Notification Form* for each proposed WTC. The Department 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 Department. 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 Department.
   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 Department'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 Department 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 Department's website.

DMRs must be submitted electronically using the electronic reporting tool (NetDMR) specified by NYSDEC. Instructions on the use of NetDMR can be found at https://www.dec.ny.gov/chemical/103774.html. **Hardcopy paper DMRs will only be received at the address listed below for the Bureau of Water Permits, 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 RWE 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
615 Erie Boulevard West, Syracuse, New York, 13204-2400 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 Department'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 as a hardcopy 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**
001	ANNUAL FLOW CERTIFICATION 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 28th)

SCHEDULE OF ADDITIONAL SUBMITTALS		
Outfall(s)	**Required Action**	**Due Date**
001	WHOLE EFFLUENT TOXICITY (WET) TESTING WET testing shall be performed on an Acute and if necessary Chronic basis, WET testing shall be performed quarterly (calendar quarters) during calendar years ending in 0 and 5. The toxicity test report including all information requested of this permit shall be attached to your WET DMRs and sent to the WET@dec.ny.gov email address.	Within 60 days following the end of each monitoring period
001	MERCURY MINIMIZATION PLAN The permittee must complete and maintain onsite an annual mercury minimization status report in accordance with the requirements of this permit.	***Maintained Onsite*** EDP + 12 months, annually thereafter
001	MINI PRETREATMENT PROGRAM - FROSI Submit completed Fast Report On Significant Industries forms (FROSIs) for each SIU to the Department, or notification letter that no new significant industrial users have been added.	January 28th of each year
001	MINI PRETREATMENT PROGRAM – Industrial Chemical Survey (ICS) Forms Submit Industrial Chemical Survey forms completed by all SIUs to the Department. Notify the Department of any proposed significant changes to its implementing procedures or local sewer use law.	January 28th 2025 and every three years thereafter

Unless noted otherwise, the above actions are one-time requirements. The permittee shall submit the results of the above actions to the satisfaction of the Department. When this permit is administratively renewed by NYSDEC letter entitled "SPDES NOTICE/RENEWAL APPLICATION/PERMIT", the permittee is not required to repeat the above submittal(s), unless noted otherwise. The above due dates are independent from the effective date of the permit stated in the letter of "SPDES NOTICE/RENEWAL APPLICATION/PERMIT."

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
Town of Owego SD#1
Owego (T) Sewer District #1
NY0022730

NEW YORK STATE | Department of Environmental Conservation

Contents

Summary of Permit Changes

A State Pollutant Discharge Elimination System (SPDES) EBPS permit renewal has been drafted for the Owego (T) Sewer District #1. The following is a summary of the changes. The details of these changes are specified below and in the permit:

General Permit Changes

- Updated cover page
- Updated definitions page
- Updated footnotes
- Added new language for the Type II Mercury Minimization Plan requirements
- Removed BMP for sanitary sewer systems with active overflows language and annual report requirement
- Updated schematic and monitoring locations page
- Updated the schedule of submittals

Permit Limits Changes

- Removed Type I SSO Outfalls SD1 and SD5
- Converted ammonia limit from 20 mg/L (as NH_3) to 16 mg/L (as N) to correspond with how ammonia is reported on lab reports and reduced sampling frequency to quarterly
- Removed the Chesapeake Bay TMDL Implementation tables, sub-aggregate language specific to Owego SD1 and Owego SD2, and incorporated the existing requirements for total nitrogen, TKN, nitrate, nitrite, and total phosphorus into the permit limits table
- Added a monthly average effluent limitation for total phosphorus of 1.0 mg/L
- Updated temperature monitoring units from °F to °C to be consistent with the Town of Owego SD#2 SPDES permit
- Removed influent monitoring/reporting requirements for pH, temperature, and settleable solids
- Total cyanide monitoring/reporting will change to free cyanide monitoring/reporting
- Decreased iron sampling frequency from monthly to quarterly
- Added a daily maximum mercury limitation of 50 ng/L
- Removed Action Levels for fluoride, nickel, and zinc
- Incorporated existing effluent limitations for fecal coliform and total residual chlorine into the permit limits table
- Decreased WET action levels to 15 TUa and 100 TUc from 38 TUa and 250 TUc, respectively, based on updated dilution

Schedule of Compliance

- Added a new compliance deadline for the monthly average total phosphorus limit of 1.0 mg/L (1/1/2025) with interim limits of monitor only
- Continued compliance schedule for 12-month rolling load for total phosphorus of 1,290 lbs/yr (effective 1/1/2025) with interim limit of 3,600 lbs/yr (expiring 12/31/2024)
- Continued compliance schedule for 12-month rolling load for total nitrogen of 32,000 lbs/yr (effective 1/1/2025) with interim limit of 27,000 lbs/yr (expiring 12/31/2024)
- Removed effluent disinfection schedule as all items have been completed

This factsheet summarizes the information used to determine the effluent limitations and other conditions contained in the permit. General background information about the regulatory basis for the effluent limitations and other conditions contained in this permit are in the Appendix linked throughout this factsheet.

Administrative History

9/1/2014 The last full technical review was performed and the SPDES permit became effective with a new five-year term and expiration date of 8/31/2019. The 2014 permit has formed the basis of this permit.

8/31/2019 The current permit was extended pursuant to SAPA[1].

7/16/2020 Department issued a Request for Information (RFI) to modify and renew the SPDES permit due to the facility's EBPS score[2]. At the time of the RFI, the facility had an EBPS score of 225.

12/4/2020 The Town of Owego SD#1 submitted a complete NY-2A permit application.

Please see the Notice of Complete Application, published in the Environmental Notice Bulletin and newspapers, for information on the public notice process.

Facility Information

This is a publicly owned treatment works that receives flow from domestic and industrial users. Wastewater consists of treated sanitary and process wastewater. The sewage collection system consists of 10 miles of separate sewers that serves between 1,200 and 1,500 people. The treatment plant was constructed in 1957 to provide secondary treatment for a design flow of 0.5 MGD. The treatment plant was upgraded to provide treatment for a design flow of 0.848 MGD in 1999.

The influent is pumped vertically to the influent/preliminary treatment room. The wastewater then flows by gravity through a grinder/auger. The grit is removed, and the wastewater continues through a Parshall flume. The flow then goes directly to the two Sequencing Batch Reactors (SBRs) to receive secondary treatment with the flow being constant to both SBRs. The SBRs alternate phases: 1) Aerate/Mix React 2) Settle/Decant. The decanted effluent then goes to an equalization tank, from there the effluent receives UV disinfection prior to discharge to the Susquehanna River. The sludge generated from the treatment process is aerobically digested and then dewatered using a belt filter press. The sludge is disposed of by land application at two local farms or at the Tioga Landfill. The outfall consists of a 16" pipe that extends out into the river.

[1] State Administrative Procedures Act Section 401(2) and 6 NYCRR 621.11(*l*)
[2] Pursuant to 6 NYCRR 750-1.18 and NYS Environmental Benefit Permit Strategy (EBPS)

The facility accepts wastewater from the following significant industrial users and is required to continue implementation of their mini-pretreatment program:

Significant Industrial User (SIU)	Categorical Reference (if applicable to 40 CFR)
Lockheed Martin Systems	40 CFR 469
Sanmina SCI Industries	40 CFR 469

The facility accepts wastewater from the following municipalities:

Municipality	POSS Registration # or SPDES #	Combined Sewer Overflow (CSO)?	Sanitary Sewer Overflow (SSO)?
Town of Owego SD#1	NY0022730	No	Yes

Site Overview

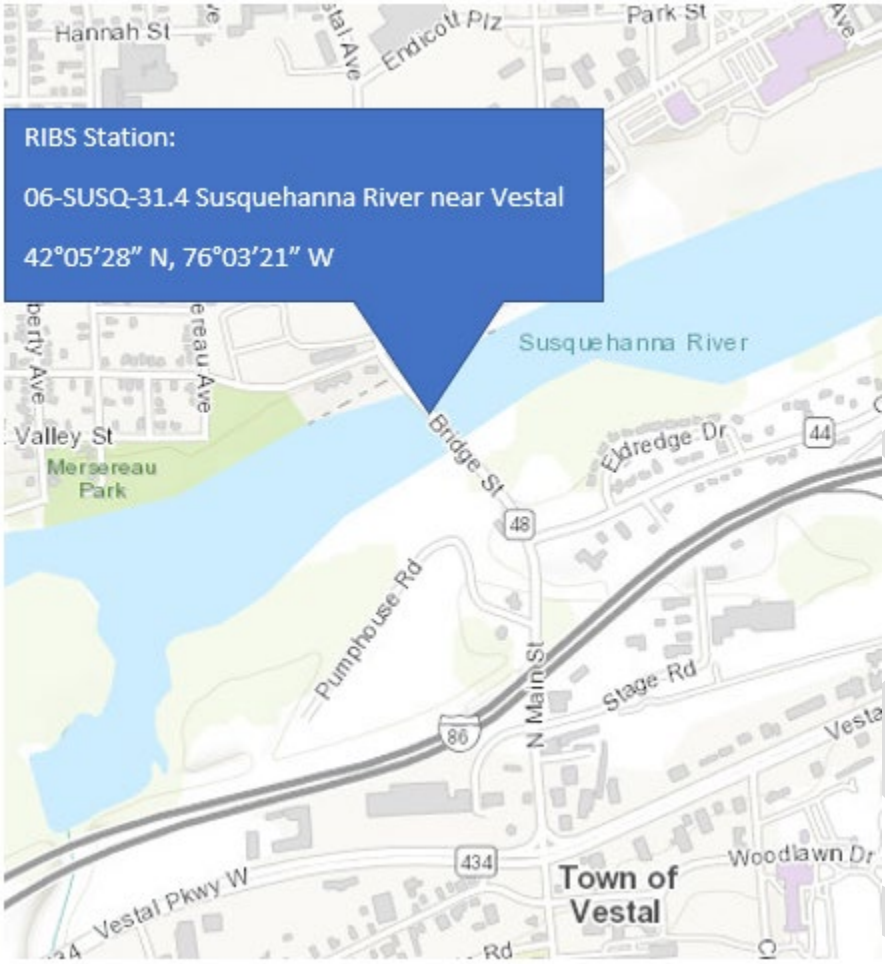
Type I Sanitary Sewer Overflows (SSOs) are classified as permanent emergency overflow structures which are designed, approved, constructed and intended only for emergency discharges. Type I SSOs are typically located at or immediately upstream of a pump station or at the headworks of the treatment plant.

The facility has the following Type I SSO outfall(s):
- Outfall SD1 (Taylor Rd pump station) receives no treatment.
- Outfall SD5 (Broadway Rd. pump station) receives no treatment.

Bypass from these outfalls is prohibited, with limited exceptions[3], and thus, these outfalls are not authorized and have been removed from the permit. Each discharge event is evaluated against emergency discharge criteria and must be reported in accordance with the Sewage Pollution Right to Know Act (SPRTK)[4].

In the summer of 2019, the Town of Owego received a grant to complete the replacement of 36 manholes and to slip line 7,970 feet of 8-inch clay sewer main. Discharges from SD1 have reduced significantly since the sewer and manhole project was completed. All lift stations are checked daily to ensure pumps are working correctly or if repairs/replacements are necessary. The Town conducts I&I inspections to try and reduce the amount of I&I in the collection system. The Town also cleans all flat lines 2-3 times a year to prevent any blockages.

[3] Exceptions noted in 6 NYCRR 750-2.8(b)(2) and 40 CFR § 122.41(m)(4)(i)
[4] NYS Environmental Conservation Law Section 17-0826-a and 6 NYCRR 750-2.7



RIBS Station

The RIBS Station is located approximately 13 miles upstream of the facility. Data collected here was used to determine ambient concentrations for pH, TDS, and Copper in the river for the reasonable potential analysis.

Enforcement History

Environmental regulatory compliance and enforcement information for this facility can be found on the Enforcement and Compliance History Online at https://echo.epa.gov.

Existing Effluent Quality

The Pollutant Summary Table presents the existing effluent quality and permit limitations for discharges from the facility. Concentration and mass data are presented, based on Discharge Monitoring Reports and the application submitted by the permittee for the period 9/1/2015 to 8/31/2020. Appendix Link

Interstate Water Pollution Control Agencies

Outfall(s) 001 is located within the Chesapeake Bay watershed and Susquehanna River Basin Commission (SRBC) compact area which places additional requirements in the SPDES permit. Appendix Link

Additional Site-Specific Concerns

As required by ECL 17-0828, the permittee 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: Suez Water.

Receiving Water Information

The facility discharges via the following outfall(s):

Outfall No.	SIC Code	Wastewater Type	Receiving Water
001	4952	Treated Sanitary Sewage and Process Water	Susquehanna River, Class B
SD1	Sanitary Sewage – Pump Station Overflow (SSO) – no treatment ***This outfall has been removed from the permit as SSOs are no longer permitted***		Brick Pond, Class Unknown[5]
SD5	Sanitary Sewage – Pump Station Overflow (SSO) – no treatment ***This outfall has been removed from the permit as SSOs are no longer permitted***		Susquehanna River, Class B

The location of the outfall(s), and the name, classification, and index numbers of the receiving waters are indicated in the Outfall and Receiving Water Summary Table at the end of this fact sheet. Appendix Link

Impaired Waterbody Information

The Susquehanna River (PWL No. 0603-0013) is not listed on the 2018 New York State Section 303(d) List of Impaired/Total Maximum Daily Load (TMDL) waters; however, 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 TMDL[6], as discussed below.

Chesapeake Bay TMDL Watershed Information

The Town of Owego SD#1 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.

The Town of Owego SD#1 is required to sample and report Total Phosphorus as P, as well as Total Kjeldahl Nitrogen (TKN) as N, Nitrite (NO_2) as N, Nitrate (NO_3) 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. The Total Phosphorus and Total Nitrogen Sub-Aggregate language specific to Owego SD1 have been removed from the permit under the Phase III WIP. The applicable limitations now appear on the main effluent limitations table. 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.

Interim Limits Effective through 12/31/2024
Total Phosphorus (as P) 12-month Load (TP 12-ML): 3,600 lb/year
Total Nitrogen (as N) 12-month Load (TN 12-ML): 27,000 lb/year

Final Limits Effective 1/1/2025
Total Phosphorus (as P) 12-month Load (TP 12-ML): 1,290 lb/year
Total Nitrogen (as N) 12-month Load (TN 12-ML): 32,000 lb/year

[5] Per the Environmental Resource Mapper, Brick Pond is a state regulated freshwater wetland: ID: A-2, class 2
[6] https://www.dec.ny.gov/lands/33279.html

Mixing Zone and Critical Receiving Water Data

The 7Q10 flow calculated for the Susquehanna River at the facility was 230 MGD (360 CFS). Per TOGS 1.3.1, for large flow rivers, the chronic A(C) dilution ratio will be limited to 100:1. The 7Q10 flow was obtained from the drainage basin ratio and gage station data.

Gage Name: Susquehanna River at Vestal, NY
Gage ID: 01513500
Drainage Area at Gage (mi^2): 3960
Drainage Area at Facility (mi^2): 4220
7Q10 Flow at Gage (CFS): 340 Source: USGS SWToolbox
Calculated 7Q10 Flow at Facility (CFS): 360

The 30Q10 flow of 270 MGD (420 CFS) was obtained from the same source. Per TOGS 1.3.1, for large flow rivers, the Human, Aesthetic, Wildlife (HEW) dilution ratio will be limited to 100:1. The 1Q10 flow of 220 MGD (340 CFS) was obtained from the same source. Per TOGS 1.3.1, for large flow rivers, the acute A(A) dilution ratio will be limited to 50:1.

Dilution Ratio = (Facility Flow + Low Flow) / Facility Flow

Outfall No.	Acute Dilution Ratio A(A)	Chronic Dilution Ratio A(C)	Human, Aesthetic, Wildlife Dilution Ratio (HEW)	Basis
001	50:1	100:1	100:1	TOGS 1.3.1

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.

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 designated best use of the receiving waters will be maintained. Please see the Environmental Notice Bulletin for information on the State Environmental Quality Review (SEQR)[7] determination. Appendix Link

Whole Effluent Toxicity (WET) Testing

An evaluation of the discharge indicates the potential for toxicity based on the following criteria: Appendix Link

- Facilities of less than 1MGD that are managing industrial pretreatment programs. (#7)

Consistent with TOGS 1.3.2, a reasonable potential analysis was performed using the existing WET data for this facility (see data below). It was determined that there is the potential for toxicity in the effluent and WET action levels are being continued in the permit. Given the dilution available and location outside of the Great Lakes basin, the permit requires acute and if necessary chronic WET testing. Samples will be collected Quarterly for a one (1) year period in years ending in 5 and 0. WET testing action levels of 15 TUa and 100 TUc have been included in the permit for each species. The acute action levels for each species represent the acute dilution ratio times a factor of 0.3. The chronic action levels represent the chronic dilution ratio.

[7] As prescribed by 6 NYCRR Part 617

Permittee: Town of Owego SD#1
Facility: Owego (T) Sewer District #1
SPDES Number: NY0022730
USEPA Major/Class 05 Municipal
2020 Summary of WET Data

Date: July 13, 2022
Permit Writer: Abigail B. Johnson
Water Quality Reviewer: Abigail B. Johnson
Full Technical Review

Test Date	[1]MSS 48H LC50 (%Effluent)	[2]MSS TUa	[3]TUa Action Level	[4]MSS Survival 100% Effluent	[5]Acute Test Result	[6]MSS RPD TUa	[7]Acute WET Limit Required	[8]MSS 7D NOEC/IC25 (%Effluent)	[9]MSS NOEC/IC25 TUc	[10]TUc Action Level	[11]Chronic Test Result NOEC/IC25	[12]MSS RPD IC25 TUc	[13]Chronic WET Limit Required
02/20	>100% (FI)	<0.3 (FI)	38.0	100% (FI)	Pass	<0.8	No	>100% (FI)/>100% (FI)	<1.0 (FI)/<1.0 (FI)	250.0	Pass/Pass	<2.6	No
06/20	>100% (FI)	<0.3 (FI)	38.0	97.5% (F)	Pass	<0.8	No	>100% (FI)/>100% (FI)	<1.0 (FI)/<1.0 (FI)	250.0	Pass/Pass	<2.6	No
08/20	>100% (FI)	<0.3 (FI)	38.0	100% (FI)	Pass	<0.8	No	>100% (FI)/>100% (FI)	<1.0 (FI)/<1.0 (FI)	250.0	Pass/Pass	<2.6	No
11/20	>100% (FI)	<0.3 (FI)	38.0	97.5% (F)	Pass	<0.8	No	>100% (FI)/>100% (FI)	<1.0 (FI)/<1.0 (FI)	250.0	Pass/Pass	<2.6	No

[1]Most Sensitive Species 48-hour Lethal Concentration: (F=Fish; I=Invertebrate) is the concentration or percentage of effluent that is lethal to 50% of the exposed organisms over a 48-hour period, and often indicates one species is more sensitive than the other during effluent testing.

[2]Most Sensitive Species Toxic Units Acute: is calculated as (100 / MSS 48H LC50). However, because ≤ 0.3 TUa is defined as the acceptable amount of acute toxicity at the edge of the acute mixing zone, and mathematically 100 / 100 = 1.0 (i.e. a "failing result"), non-toxic acute test results are indicated as < 0.3.

[3]Toxic Unit Acute Action Level/Limit: is calculated as [(Acute Dilution Factor+1) x 0.3 TUa] representing the maximum allowable effluent TUa at the edge of the acute mixing zone using the seven-day once-in-ten year low flow (7Q10) ensuring acute protection of the receiving water. When the Acute Dilution Factor is <3.3, the default Acute Action Level of 0.3 TUa is used representing the maximum allowable effluent TUa at the end of pipe.

[4]Most Sensitive Species Survival in 100% Effluent: is the lowest percentage of surviving organisms in 100% effluent, providing additional evidence of unacceptable acute toxicity when the necessary 50% or greater mortality required to generate an LC50 has not been attained. *Denotes statistically significant mortality in 100% effluent as compared to the control.

[5]Acute Test Result: MSS TUa ≤ TUa Action Level/Limit for passing effluent test result and MSS TUa > TUa Action Level//Limit for a failing effluent test result. If unacceptable mortality (i.e. statistically significant as compared to the control) is noted in 100% effluent, this may also be considered a failing test result.

[6]Most Sensitive Species Reasonable Potential Determination Toxic Units Acute: is calculated as (MSS TUa x 2.6), the Reasonable Potential Multiplier when four quarterly tests have been completed, taking into account the statistical potential for effluent variability to occur causing an exceedance of the toxicity-based action level.

[7]Acute Whole Effluent Toxicity Limit Required: MSS RPD TUa ≤ TUa Action Level, then no toxicity-based limit is required and the action level remains in place. If MSS RPD TUa > TUa Action Level, then a toxicity-based limit is required and the action level becomes the limit. **In low dilution situations, the application of the RPD to the acute results often mathematically suggests the need for acute WET limits even when there is no toxicity evident in 100% effluent (a non-detect). Therefore, this data cannot be used to implement a WET limit.

[8]Most Sensitive Species 7-day No Observed Effect Concentration or 25% Inhibition Concentration: is the highest concentration or percentage of effluent tested that causes no statistically significant effect to the exposed test organisms as compared to the control over a 7-day period, or the concentration or percentage of effluent that causes a 25% reduction in reproduction or growth for the test population.

[9]Most Sensitive Species Toxic Units Chronic: is calculated as (100 / MSS 7D NOEC) or (100 / MSS 7D IC25).
[10]Toxic Unit Chronic Action Level/Limit: is calculated as [(Chronic Dilution Factor+1) x 1.0 TUc] representing the maximum allowable effluent TUc at the edge of the chronic mixing zone using the seven-day once-in-ten year low flow (7Q10) ensuring chronic protection of the receiving water.

[11]Chronic Test Result: MSS NOEC/IC25 TUc ≤ TUc Action Level/Limit for passing effluent test result and MSS NOEC/IC25 TUc > TUc Action Level/Limit for a failing effluent test result.

[12]Most Sensitive Species Reasonable Potential Determination Toxic Units Chronic: is calculated as (MSS IC25 TUc x 2.6), the Reasonable Potential Multiplier when four quarterly tests have been completed, taking into account the statistical potential for effluent variability to occur causing an exceedance of the toxicity-based action level.

[13]Chronic Whole Effluent Toxicity Limit Required: MSS RPD IC25 TUc ≤ TUc Action Level, then no toxicity-based limit is required and the action level remains in place. If MSS RPD IC25 TUc > TUc Action Level, then a toxicity-based limit is required and the action level becomes the limit. ***In low dilution situations, the application of the RPD to the chronic results often mathematically suggests the need for chronic WET limits even when there is no toxicity evident in 100% effluent (a non-detect). Therefore, this data cannot be used to implement a WET limit.

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. The permit also contains a requirement that the permittee make the sampling data available, upon request, to the public.

Mercury[8]

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

The facility is located outside of the Great Lakes, is a EPA major, is a Class 05 POTW which will continue to receive flows from Categorical Industrial Users (CIU) and the permit includes requirements for the implementation of MMP Type II.

Based on 1 data point of 4.6 ng/L collected as part of the application, the permit includes the general level currently achievable (GLCA) of 50 ng/L as the daily max effluent limitation with monthly sampling. A mercury minimization program consisting of the following is required:

- Monitoring of key locations
- Control strategy for implementation of the MMP
- Annual status report

The data collected will be used to establish a 12-month rolling average effluent limit during the next permit review.

Mini Industrial Pretreatment Program

The permittee is required to continue implementation of a Mini-Pretreatment Program because it serves Significant Industrial Users (SIUs). The program requires implementation of an industrial user compliance program, submission of user information, modification of local sewer use law (if necessary), and periodic reporting. This requirement is being continued from the previous permit.

Schedule(s) of Compliance

A Schedule of Compliance is being included in the permit[9] for the following items (Appendix Link):

- New schedule for total phosphorus monthly average concentration limit of 1.0 mg/L (effective 1/1/2025)
  - This is a new requirement and the permittee has had no time to meet the WQBEL under prior permits.
- Continued compliance schedule for total phosphorus 12-month rolling load of 1,290 lbs/yr (effective 1/1/2025)
- Continued compliance schedule for total nitrogen 12-month rolling load of 32,000 lbs/yr (effective 1/1/2025)

Schedule(s) of Additional Submittals

A schedule of submittals has been included:

- Mercury Minimization Plan (MMP) Annual Report
- Mini-Pretreatment Program Reports (FROSI and ICS Forms)
- WET testing results (years 0 & 5)
- Annual Flow Certification

[8] In accordance with DOW 1.3.10 Mercury – SPDES Permitting & Multiple Discharge Variance (MDV), December 30, 2020.
[9] Pursuant to 6 NYCRR 750-1.14

Permittee: Town of Owego SD#1
Facility: Owego (T) Sewer District #1
SPDES Number: NY0022730
USEPA Major/Class 05 Municipal

Date: July 13, 2022
Permit Writer: Abigail B. Johnson
Water Quality Reviewer: Abigail B. Johnson
Full Technical Review

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° 05' 38" N	76° 13' 56" W	Susquehanna River	B	SR (portion 3) PWL: 0603-0013	06 / 03	126[10]	220	230	270	0.848	50:1	100:1	100:1

POLLUTANT SUMMARY TABLE

Outfall 001

Outfall #	001	**Description of Wastewater:** Treated Sanitary Sewage and Industrial Process water														
		Type of Treatment: grinder, grit removal, SBR, flow equalization, UV disinfection														
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement	
			Permit Limit	Existing Effluent Quality[11]	# 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 9/1/2015 to 8/31/2020 was obtained from Discharge Monitoring Reports provided by the permittee. Ambient data was calculated from RIBS data from station 06-SUSQ-31.4 Susquehanna River near Vestal (2017-2020).																
Flow Rate	MGD	Monthly Avg	0.848	0.426 Actual Average	60/0	**0.848**	Design Flow	Narrative: No alterations that will impair the waters for their best usages.					703.2	-	TBEL	
		Daily Max	Monitor	2.41 Actual Max	60/0	**Monitor**	750-1.13								Monitor	
	Consistent with TOGS 1.3.3, a monthly average flow limitation equal to the average daily design capacity of the treatment plant is specified.															
pH	SU	Minimum	6.0	6.0 Actual Min	60/0	**6.0**	TOGS 1.3.3	7.9	-	6.5 – 8.5	Range	6.5 - 8.5	703.3	-	TBEL	
		Maximum	9.0	7.7 Actual Max	60/0	**9.0**										
	Consistent with TOGS 1.3.3 for POTWs, TBELs reflect secondary treatment standards. Given the available dilution an effluent limitation equal to the TBEL is reasonably protective of the WQS. Ambient pH data was taken as the 75th percentile of all the RIBS pH data for station 06-SUSQ-31.4 Susquehanna River near Vestal from 2017-2020. (15 samples)															

[10] Ambient hardness data obtained from NY-2A application. This corroborates the historical hardness data used in previous permit reviews.
[11] 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)

Outfall #	001	**Description of Wastewater:** Treated Sanitary Sewage and Industrial Process water
		Type of Treatment: grinder, grit removal, SBR, flow equalization, UV disinfection

Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[11]	# 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		
Temperature	°F	Daily Max	Monitor	80 Actual Max	60/0	**Monitor**	750-1.13 Monitor	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 NYCRR750-1.13(a), monitoring is required and may be used to inform future permitting decisions. This requirement is continued from the previous permit.														
Dissolved Oxygen (DO)	mg/L	Daily Min	Monitor	1.3 Actual Min	60.0	**Monitor**	750-1.13 Monitor	-	7.5 Critical Point	(Non-Trout) 4.0 mg/L	Narrative	No Reasonable potential	703.3	-	TBEL
	The downstream DO concentration was modeled using the Streeter-Phelps equations and the following assumptions: Effluent DO = 1.3 mg/L (observed minimum), Effluent BOD_5 = 45 mg/L, (7-day Average permit limit), Effluent Ammonia = 20 mg/L as NH_3 (daily maximum permit limit). The model showed that DO standards are maintained and consequently WQBELs for DO are unnecessary. Consistent with 6 NYCRR750-1.13(a), monitoring is required and may be used to inform future permitting decisions. This requirement is continued from the previous permit.														
5-day Biochemical Oxygen Demand (BOD_5)	mg/L	Monthly Avg	30	5.3	54/6	**30**	TOGS 1.3.3	-	See Dissolved Oxygen			No Reasonable Potential	703.3	-	TBEL
		7 Day Avg	45	12	54/6	**45**	TOGS 1.3.3								
	lbs/d	Monthly Avg	210	22	60/0	**210**	TOGS 1.3.3								
		7 Day Avg	320	58	60/0	**320**	TOGS 1.3.3								
	% Rem	Minimum	85	98 Avg	60/0	**85**	TOGS 1.3.3								
	Consistent with TOGS 1.3.3 for POTWs, TBELs reflect secondary treatment standards. As discussed in the dissolved oxygen justification, the TBELs are protective of water quality and WQBELs for BOD are unnecessary at this time.														

Outfall #	001	**Description of Wastewater:** Treated Sanitary Sewage and Industrial Process water
		Type of Treatment: grinder, grit removal, SBR, flow equalization, UV disinfection

Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[11]	# 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 Suspended Solids (TSS)	mg/L	Monthly Avg	30	7.7	57/3	**30**	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.						-	TBEL
		7 Day Avg	45	15	57/3	**45**	TOGS 1.3.3								
	lbs/d	Monthly Avg	210	35	60/0	**210**	TOGS 1.3.3								
		7 Day Avg	320	100	60/0	**320**	TOGS 1.3.3								
	% Rem	Minimum	85	96 Avg	60/0	**85**	TOGS 1.3.3								
	Consistent with TOGS 1.3.3 for POTWs, TBELs reflect secondary treatment standards. Given that adequate dilution is available, an effluent limitation equal to the TBEL, and consistent with TOGS 1.3.3, is reasonably protective of water quality standards.														
Settleable Solids	mL/L	Daily Max	0.3	0	0/60	**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	-	TBEL
	Consistent with TOGS 1.3.3, the effluent limitation is equal to the TBEL of 0.3 mL/L for POTWs providing secondary treatment without filtration. Given that adequate dilution is available the TBEL is reasonably protective of WQS.														
Nitrogen, Ammonia (as N) June 1st – Oct. 31st	mg/L	Daily Max	16 as N 20 as NH_3	7.2 as N 8.7 as NH_3	25/0	**16 as N** 20 as NH_3	Antibacksliding	0.082	-	0.9 as N	A(C)	83 as N	703.5	-	TBEL
	lb/d	Daily Max	Monitor	21 as N 26 As NH_3	25/0	**Monitor**	750-1.13 Monitor	-	-	-	-	-			
	The WQS for Ammonia was determined from 6 NYCRR 703.5 from a pH of 7.9 and a temperature of 25°C. The ambient pH of 7.9 was calculated as the 75th percentile of 15 data points from 2017-2020 from RIBS Station 06-SUSQ-31.4 Susquehanna River near Vestal. The temperature was assumed to be 25°C which is consistent with TOGS 1.3.1E. The ambient background concentration was assumed to be 0.1 mg/L as NH_3 (0.082 NH_3-N) in accordance with TOGS 1.3.1D. A comparison of the existing TBEL and the WQBEL indicates that the existing TBEL is more protective than the WQBEL; therefore, the existing TBEL limit of 16 mg/L NH_3-N is being continued in the permit but at a reduced sampling frequency.														

Outfall #	001	**Description of Wastewater:** Treated Sanitary Sewage and Industrial Process water
		Type of Treatment: grinder, grit removal, SBR, flow equalization, UV disinfection

Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[11]	# 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) Nov. 1st – May 31st	mg/L	Daily Max	16 as N 20 As NH_3	10.7 as N 13 Actual Max As NH_3	35/0	**16 as N** 20 as NH_3	Antibacksliding	0.082	-	1.3 as N	A(C)	126 as N	703.5	-	TBEL
	lb/d	Daily Max	Monitor	26 as N 32 Actual Max As NH_3	35/0	**Monitor**	750-1.13 Monitor	-	-	-	-	-			
	The WQS for Ammonia was determined from 6 NYCRR 703.5 from a pH of 7.9 and a temperature of 10°C. The ambient pH of 7.9 was calculated as the 75th percentile of 15 data points from 2017-2020 from RIBS Station 06-SUSQ-31.4 Susquehanna River near Vestal. The temperature was assumed to be 10°C which is consistent with TOGS 1.3.1E. The ambient background concentration was assumed to be 0.1 mg/L as NH_3 (0.082 NH_3-N) in accordance with TOGS 1.3.1D. A comparison of the existing TBEL and the WQBEL indicates that the existing TBEL is more protective than the WQBEL; therefore, the existing TBEL limit of 16 mg/L NH_3-N is being continued in the permit but at a reduced sampling frequency.														
Total Kjeldahl Nitrogen (TKN) (as N)	mg/L	Monthly Avg	Monitor	5.5	60/0	**Monitor**	WIP III	-	-	-	-	-	-	-	Monitor
	lb/d	Monthly Avg	Monitor	21	60/0	**Monitor**	WIP III	-	-	-	-	-	-	-	Monitor
	Consistent with the Phase III WIP, sampling and reporting for TKN will be continued in the permit and used to inform the individual constituents of Total Nitrogen.														
Nitrate (NO_3) (as N)	mg/L	Monthly Avg	Monitor	21	60/0	**Monitor**	WIP III	-	-	-	-	-	-	-	Monitor
	lb/d	Monthly Avg	Monitor	76	60/0	**Monitor**	WIP III	-	-	-	-	-	-	-	Monitor
	Consistent with the Phase III WIP, sampling and reporting for nitrate will be continued in the permit and used to inform the individual constituents of Total Nitrogen.														
Nitrite (NO_2) (as N)	mg/L	Monthly Avg	Monitor	0.041	59/1	**Monitor**	WIP III	-	-	-	-	-	-	-	Monitor
	lb/d	Monthly Avg	Monitor	0.21	60/0	**Monitor**	WIP III	-	-	-	-	-	-	-	Monitor
	Consistent with the Phase III WIP, sampling and reporting for nitrite will be continued in the permit and used inform the individual constituents of Total Nitrogen.														

Outfall #	001	**Description of Wastewater:** Treated Sanitary Sewage and Industrial Process water
		Type of Treatment: grinder, grit removal, SBR, flow equalization, UV disinfection

Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[11]	# 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 Nitrogen	mg/L	Monthly Avg	Monitor	18	60/0	**Monitor**	WIP III	-	-	-		-	-	-	Monitor
	lb/d	Monthly Avg	Monitor	85	60/0	**Monitor**	WIP III	-	-	-		-	-	-	Monitor
	lb/ mon	Monthly Total	Monitor	3,170	60/0	**Monitor**	WIP III	-	-	-		-	-	-	Monitor
	lb/yr	12 Month Rolling Load	27,000	32,430	60/0	**32,000**	WIP III	-	-	-		-	-	-	TMDL
	Consistent with the Phase III WIP the permit includes a final annual loading limitation of 32,000 lbs/yr. Interim and final loading limits are provided in Chesapeake Bay TMDL discussion in this factsheet.														
Total Phosphorus	mg/L	Monthly Avg	Monitor	2.5	60/0	**1.0**	WIP III	-	Narrative: None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usages.			-	-	-	TMDL
	lb/d	Monthly Avg	Monitor	8.0	60/0	**Monitor**	WIP III								
	lb/mon	Monthly Avg	Monitor	278	60/0	**Monitor**	WIP III								
	lb/yr	12 Month Load	3,600	2,650	60/0	**1,290**	WIP III								
	Consistent with the Phase III WIP, and to maximize phosphorus removal[12], the permit includes a total phosphorus concentration limit of 1.0 mg/L expressed as a monthly average and a final annual loading limitation of 1,290 lbs/yr. The 1.0 mg/L phosphorus concentration will be achievable with chemical addition treatment technology which the facility will utilize in the future. The facility is currently in the design phase of this project and additional time is being given to meet the final effluent limitation and a Schedule of Compliance has been included in the permit. This concentration limit shall become effective 1/1/2025. The annual loading limitation was calculated from a 0.5 mg/L concentration at the design flow of 0.848 MGD for 365 days of the year. Interim and final loading limits are provided in Chesapeake Bay TMDL discussion in this factsheet.														
Mercury	ng/L	Daily Max	-	4.6	1/0	-	-	-	-	0.7	H(FC)	50	GLCA	-	MDV
	The facility has been given MMP Type I requirements. For more information, see the Mercury section of factsheet.														

[12] Consistent with NYCRR 750-2.8(a)(5).

Outfall #	001	**Description of Wastewater:** Treated Sanitary Sewage and Industrial Process water
		Type of Treatment: grinder, grit removal, SBR, flow equalization, UV disinfection

Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[11]	# 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 Copper	mg/L	Daily Max	Monitor	0.34 Total	60/0	**Monitor**	750-1.13 Monitoring	0.0023 Dissolved	0.0049 Dissolved	0.011 Dissolved	A(C)	No Reasonable Potential	703.5	-	750-1.13 Monitoring
	lb/d	Daily Max	3.1	1.3	60/0	**3.1**	WMDL	-	-	-	-	-		-	WMDL
	The projected instream concentration was calculated using the maximum reported effluent concentration of 0.27 mg/L* and an ambient upstream concentration of 0.0023 mg/L. The ambient concentration of 0.0023 mg/L was obtained by averaging the 15 data points from RIBS Station 06-SUSQ-31.4 Susquehanna River near Vestal (2017-2020). A multiplier of 1.0 was applied to the projected effluent based on the number of effluent 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. A comparison of the projected instream concentration to the WQS indicates no reasonable potential to cause or contribute to a WQS violation; however, the existing loading limitation is based on a previous waste load allocation (WLA) developed to protect downstream segments and is being maintained under the current Watershed Maximum Daily Load (WMDL). *Excluded 0.87 mg/L June 2016 sample as it was 3x larger than the next highest reported effluent concentration and did not appear representative														
Total Cyanide (previously) **Free Cyanide (proposed)***	mg/L	Daily Max	Monitor	0.019 Total	56/4	**Monitor**	750-1.13 Monitoring	-	0.0005 Free	0.0052 Free	A(C)	No Reasonable Potential	703.5	-	750-1.13 Monitoring
	lb/d	Daily Max	0.57	0.071	60/0	**0.57**	WMDL	-	-	-	-	-		-	WMDL
	The projected instream concentration was calculated using the maximum effluent concentration of 0.05 mg/L and an assumed negligible ambient upstream concentration. A multiplier of 1.0 was applied to the projected effluent based on the number of effluent samples. A comparison of the projected instream concentration to the WQS indicates no reasonable potential to cause or contribute to a WQS violation; however, the existing limit is based on a previous waste load allocation (WLA) developed to protect downstream segments and is being maintained under the current Watershed Maximum Daily Load (WMDL). *The WQS is for free cyanide; however, an approved analytical method for free cyanide was not previously available. The new limit has therefore been changed to free cyanide.														
Total Iron	mg/L	Daily Max	0.6	0.68 Total	60/0	**0.6**	Antibacksliding	-	-	-	-	-	703.5	-	Antibacksliding
	lb/d	Daily Max	Monitor	2.8	60/0	**Monitor**	750-1.13 Monitoring	-	-	-	-	-		-	
	While the iron WQS was repealed for Class B waterbodies, the limit is being maintained in accordance with 6 NYCRR 750-1.10(c) and (d) – anti-backsliding, but at a reduced sampling frequency														

Outfall #	001	**Description of Wastewater:** Treated Sanitary Sewage and Industrial Process water
		Type of Treatment: grinder, grit removal, SBR, flow equalization, UV disinfection

Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[11]	# 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 Lead	mg/L	Daily Max	Monitor	0.11 Total	59/1	**Monitor**	750-1.13 Monitoring	-	0.0012 Dissolved	0.0049 Dissolved	A(C)	No Reasonable Potential	703.5	-	WMDL
	lb/d	Daily Max	0.36	0.34	59/1	**0.36**	WMDL	-	-	-	-	-		-	
	The projected instream concentration was calculated using the maximum effluent concentration of 0.16 mg/L and an assumed negligible ambient upstream concentration. A multiplier of 1.0 was applied to the projected effluent based on the number of effluent samples. A metals translator of 1.320 was applied to convert between the total and dissolved form in accordance with the EPA Document 823-B-96-007. A comparison of the projected instream concentration to the WQS indicates no reasonable potential to cause or contribute to a WQS violation; however, the existing loading limitation is based on a previous waste load allocation (WLA) developed to protect downstream segments upstream and is being maintained under the current Watershed Maximum Daily Load (WMDL).														
Total Fluoride	mg/L	Daily Max	-	0.13*	1/4	-	-	-	0.003	2.6	A(C)	No Reasonable Potential	703.5	-	**Discontinued**
	lb/d	Daily Max	18 Action Level	14 Actual Max	19/0	-	-	-	-	-	-	-		-	
	The projected instream concentration was calculated using the maximum reported effluent concentration of 0.13 mg/L* and a negligible ambient upstream concentration. A multiplier of 2.3 was applied to the projected effluent based on the number of effluent concentration samples. A comparison of the projected instream concentration to the WQS indicates no reasonable potential to cause or contribute to a local WQS violation. The existing action level is based on a previous waste load allocation (WLA) developed to protect downstream segments but will be removed based on the current Watershed Maximum Daily Load (WMDL). *Reporting of concentration data for this parameter is not required by the permit and only 5 sample results were readily available for review. Of those results, this was the only sample above the detection limit														
Total Nickel	mg/L	Daily Max	-	0.029* Total	1/4	-	-	-	0.00066 Dissolved	0.063 Dissolved	A(C)	No Reasonable Potential	703.5	-	**Discontinued**
	lb/d	Daily Max	1.8 Action Level	0.36	20/0	-	-	-	-	-	-	-		-	
	The projected instream concentration was calculated using the maximum reported effluent concentration of 0.029 mg/L* and a negligible ambient upstream concentration. A multiplier of 2.3 was applied to the projected effluent based on the number of effluent samples. A metals translator of 1.003 was applied to convert between the total and dissolved form in accordance with the EPA Document 823-B-96-007. A comparison of the projected instream concentration to the WQS indicates no reasonable potential to cause or contribute to a WQS violation. The existing action level is based on a previous waste load allocation (WLA) developed to protect downstream segments but will be removed based on the current Watershed Maximum Daily Load (WMDL). *Reporting concentration data for this parameter is not required by the permit and only 5 sample results were readily available for review. Of those results, this was the only sample above the detection limit														

Outfall #	001	**Description of Wastewater:** Treated Sanitary Sewage and Industrial Process water
		Type of Treatment: grinder, grit removal, SBR, flow equalization, UV disinfection

Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[11]	# 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 Zinc	mg/L	Daily Max	0.16 Action Level	0.12 Total Actual Max	20/0	-	-	-	0.0017 Dissolved	0.10 Dissolved	A(C)	No Reasonable Potential	703.5	-	**Discontinued**
	lb/d	Daily Max	-	-	-	-	-	-	-	-	-	-		-	
	The projected instream concentration was calculated using the maximum effluent concentration of 0.12 mg/L and a negligible ambient upstream concentration. A multiplier of 1.4 was applied to the projected effluent based on the number of effluent samples. A metals translator of 1.014 was applied to convert between the total and dissolved form in accordance with the EPA Document 823-B-96-007. A comparison of the projected instream concentration to the WQS indicates no reasonable potential to cause or contribute to a WQS violation. The existing action level is based on a previous waste load allocation (WLA) developed to protect downstream segments but will be removed based on the current Watershed Maximum Daily Load (WMDL).														
Coliform, Fecal	#/100 ml	30d Geo Mean	200	16	15/0	**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	39	15/0	**400**	TOGS 1.3.3	-							
	Consistent with TOGS 1.3.3, effluent disinfection is required seasonally from May 1st - October 31st, due to the class of the receiving waterbody. Fecal coliform limits equal to the TBEL are specified.														
Total Residual Chlorine	mg/L	Daily Max	2.0	-	-	**2.0**	TOGS 1.3.3	-	-	0.005	A(C)	2.5	TOGS 1.1.1	-	TBEL
	Effluent disinfection is currently required seasonally and will remain a permit requirement. The WQBEL was calculated by multiplying the WQS by the chronic dilution ratio and a decay factor of five. Due to the high dilution, the calculated WQBEL is greater than the TBEL and an effluent limitation of 2.0 mg/L is appropriate. The plant utilizes UV disinfection. Reporting for Total Residual Chlorine is only applicable if chlorine is used elsewhere in the treatment process, or the facility otherwise has reasonable potential to discharge chlorine.														
Additional Pollutants Detected															
Total Dissolved Solids (TDS)	mg/L	Daily Max	-	636	1/0	-	-	141	217	500	Narrative	No Reasonable Potential	703.3	-	**No Limitation or Monitoring**
	The ambient TDS concentration was taken as an average of 15 samples collected from the upstream RIBS station 06-SUSQ-31.4 Susquehanna River near Vestal from 2017-2020. The projected instream concentration was calculated using the maximum effluent concentration of 636 mg/L and an ambient upstream concentration of 141 mg/L. A multiplier of 6.2 was applied to the projected effluent based on the number of effluent 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.														

Appendix: Regulatory and Technical Basis of Permit Authorizations

The information presented in the Appendix is meant to supplement the factsheet for multiple types of permits and may not be applicable to this specific permit.

Regulatory References

The requirements included in SPDES permits are based on both federal and state laws, regulations, policies, and guidance.

- 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, often referred to as Technical and Operational Guidance Series memos (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 factsheet:

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 (TOGS 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)

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.

Outfall and Receiving Water Information

Impaired Waters

The NYS 303(d) List of Impaired/TMDL Waters (http://www.dec.ny.gov/chemical/31290.html) identifies waters where specific designated uses are not fully supported and for which the state must consider the development of a 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 for the development of the TMDL, and to allow the Department to accurately determine the existing capabilities of the wastewater treatment plant 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 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

During development of the permit, a statistical evaluation of existing effluent quality is performed to calculate the 95th (monthly average) and 99th (daily maximum) percentiles of the existing effluent quality. That evaluation is completed 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. When there are three or fewer non-detects, a lognormal distribution of the data is assumed, and lognormal calculations are used to determine the monthly average and daily maximum concentrations of the existing effluent. 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 permit limitations form the basis for the next permit. Existing effluent quality is evaluated against the existing permit 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 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 factsheet. Consistent with current case law[13] and USEPA interpretation[14] 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.

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. 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.

Other Technology Based Effluent Limitations:

There are no federal technology-based standards for toxic pollutants from POTWs. For each toxic parameter present in the discharge a Reasonable Potential Analysis is conducted. This may be a statistical analysis of existing data in accordance with TOGS 1.2.1, or an assessment of the technology employed at the facility and selection of the appropriate limitation from TOGS 1.2.1 Attachment C. Where the TBEL is more stringent than the WQBEL, the TBEL is applied as an action level in accordance with TOGS 1.3.3.

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 700-704 and 750-1.11 require that permits include limitations for

[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)

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. The limitations must be stringent enough to ensure that water quality standards are met 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.

Mixing Zone Analyses

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

Reasonable Potential Analysis (RPA)

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

1) identify the pollutants present in the discharge(s) based upon existing data, sampling data collected by the permittee as part of the permit application or a short-term high intensity monitoring program, or data gathered by the Department;

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 Department 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, 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 Department 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.

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 Part 702.16(b) of Chapter X, Title 6 of the New York State Codes, Rules, and Regulations. 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), SPDES permits must contain monitoring requirements using sufficiently sensitive test procedures approved under 40 CFR Part 136. A method is "sufficiently sensitive" when the method's minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant parameter; or the lowest ML of the analytical methods approved under 40 CFR Part 136. The ML represents the lowest level that can be measured within specified limitations of precision and accuracy during routine laboratory operations on most effluent matrices. When establishing effluent limitations for a specific parameter (based on technology or water quality requirements), it is possible that the calculated limitation will fall below the ML established by the approved analytical method(s). In these instances, the calculated limitation is included in the permit with a compliance level set equal to the ML of the most sensitive method.

Monitoring Requirements

CWA section 308, 40 CFR 122.44(i), and 6 NYCRR 750-1.13 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 Department 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.

Schedules of Additional Submittals

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

Mini Industrial Pretreatment Program

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

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