SPDES Number: **NY0120626**Page 1 of 10 v.1.27



State Pollutant Discharge Elimination System (SPDES) DISCHARGE PERMIT

SIC Code: 8999	NAICS Code:	721110		SPDES Number:	NY0120626		
Discharge Class (CL):	02			DEC Number:	6-4064-00028		
Toxic Class (TX):	N			Effective Date (EDP):			
Major-Sub Drainage Basin:	09 - 01			Expiration Date (ExDP):	5 yrs from EDP		
Water Index Number:	SL-1	Item No.:	910 – 1a				
Compact Area:	IJC						

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

PERMITTEE NAME AND ADDRESS							
Name:	Stonefence Lodging Inc.		Attention:	Private	LaRose		
Street:	7191 State Highway 37			Bruce	Lakose		
City:	Ogdensburg	^	State:	NY	Zip Code:	13669	
Email:	bblarose41@gmail.com		Phone:	315-39	3-3171		

is authorized to discharge from the facility described below:

FACILITY NAME, ADDRESS, AND PRIMARY OUTFALL																	
•				\	<i>,</i>	117	÷										
Name:	Stonef	ence Motel															
Address / Location:	7191 S	tate Highw	ay 37								County:			St.	L	awre	nce
City:	Ogden	sburg							State:	NY	Zip Cod	e:		130	66	9	
Facility Location:		Latitude:		44	0	40	,	25.6	" N	& Longitude:	75	°		31	,	41.3	7 " W
Primary Outfall No.:	001	Latitude:		44	•	40	,	35.28	" N	& Longitude:	75	°		31	,	47.6	8 " W
Outfall Description:	Treate	d Sanitary	Rece	eivin	ıg V	Vate	r:	St. La	wrence	River	Class:		Α	St	an	dard	: A

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

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

DISTRIBUTION:

BWP Permit Coordinator (<u>permit.coordinator@dec.ny.gov</u>) RWE

EPA Region II (Region2 NPDES@epa.gov)

NYS DOH - Canton Office

Administrator:	Jessica Hart			
Address:	317 Washington Street Watertown, NY 13601			
Signature		Date		

SPDES Number: **NY0120626** Page 2 of 10 v.1.27

SUMMARY OF ADDITIONAL OUTFALLS

Outfall	Wastewater Description	Outfall	L	atitude	9			Outfa	II I	Longitu	de)	
002	Treated Sanitary	44	0	40	,	29.9	" N	75	0	31	,	42.71	" W
Receiving Water: Groundwater								Class	: :	GA			



SPDES Number: **NY0120626**Page 3 of 10 v.1.27

DEFINITIONS

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

PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL	LIMITATIONS APPLY	RECEIVING WATER	EFFECTIVE	EXPIRING
001	All Year	St. Lawrence River	EDP	EDP + 5 yrs

	EFF	LUENT L	IMITATIO	ON		MONITORI	ING REQUIRE	MEN	TS	
PARAMETER						0 1		Loca	ation	FN
	Туре	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	
Flow	Monthly Average	5,850	GPD			Instantaneou	s Meter		Х	
PΗ	Daily Minimum	6.0	SU			1/week	Grab		x	
рп	Daily Maximum	9.0	SU			1/week	Grab		^	
BOD₅	Monthly Average	30	mg/L	1.5	lbs/d	2/year	Grab	Χ	Χ	1,2
BOD₅	7-Day Average	45	mg/L	2.2	lbs/d	2/year	Grab		Х	1,2
Total Suspended Solids (TSS)	Monthly Average	30	mg/L	1.5	lbs/d	2/year	Grab	X	Х	1,2
Total Suspended Solids (TSS)	7-Day Average	45	mg/L	2.2	lbs/d	2/year	Grab		Х	1,2
Settleable Solids	Daily Maximum	0.3	mL/L			2/year	Grab		Х	2
Temperature	Daily Maximum	Monitor	°F			1/week	Grab		Х	
EFFLUENT DISINFECTION Required All Year		Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	FN
Coliform, Fecal	30-Day Geometric Mean	200	No./ 100 mL			2/year	Grab		X	2
Coliform, Fecal	7-Day Geometric Mean	400	No./ 100 mL			2/year	Grab		Х	
Total Residual Chlorine	Daily Maximum	2.0	mg/L			1/week	Grab		Х	

FOOTNOTES:

- 1. Effluent shall not exceed 15% and 15% of influent concentration values for BOD $_5$ & TSS respectively.
- 2. The samples for the 2/year monitoring program shall be during the months of July and September.

OUTFALL	LIMITATIONS APPLY	RECEIVING WATER	EFFECTIVE	EXPIRING
002	No Monitoring Required	Groundwater	EDP	EDP + 5 yrs

SPDES Number: **NY0120626** Page 5 of 10 v.1.27

SCHEDULE OF COMPLIANCE

a) The permittee shall comply with the following schedule:

Outfall(s)	Compliance Action	Compliance Date ¹
001	Effluent Flow Measurement Device— The permittee will install a device that will enable the measurement of daily effluent flows from the wastewater treatment system.	EDP + 4 Months



¹ 6 NYCRR 750-1.14 (a)

SPDES Number: **NY0120626**Page 6 of 10 v.1.27

DISCHARGE NOTIFICATION REQUIREMENTS

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

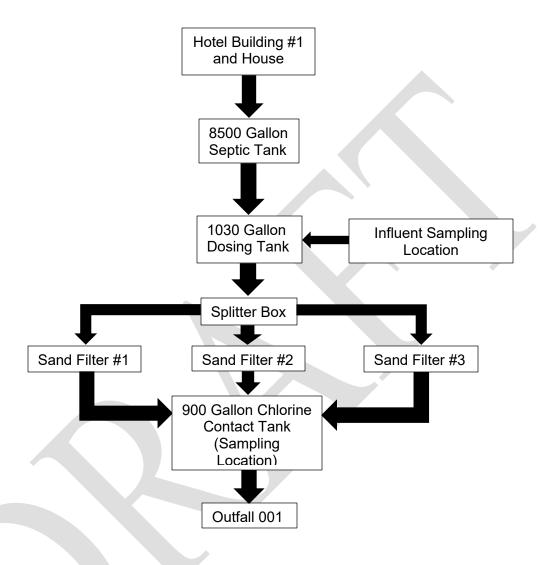
The signs shall have **minimum** dimensions of eighteen inches by twenty-four inches (18" x 24") and shall have white letters on a green background and contain the following information:

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

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

MONITORING LOCATIONS

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



SPDES Number: **NY0120626**Page 8 of 10 v.1.27

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

(d)

F. Planned Changes

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

SPDES Number: **NY0120626**Page 9 of 10 v.1.27

GENERAL REQUIREMENTS (continued)

G. Sludge Management

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

H. SPDES Permit Program Fee

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

I. Water Treatment Chemicals (WTCs)

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

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



SPDES Number: **NY0120626** Page 10 of 10 v.1.27

RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

- A. The monitoring information required by this permit shall be retained for a period of at least five years from the date of the sampling for subsequent inspection by the DEC or its designated agent.
- B. <u>Annual SPDES Monitoring Reports</u>: An annual report shall be submitted to DEC by February 1st each year. The report shall summarize information for January to December of the previous year and shall be submitted electronically, or in hardcopy format, utilizing the SPDES Annual Report Form available on the DEC's website.

Hard copy submission of the Annual Report shall be submitted to the Regional Water Engineer at the address below:

Department of Environmental Conservation Regional Water Engineer, Region 6 State Office Building, Watertown, New York, 13601-3787 Phone: (315) 785-2513

- C. 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.
- D. Calculations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.
- E. 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.
- F. 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.
- G. Schedule of Additional Submittals:

The permittee shall submit the following information to the Regional Water Engineer:

	SCHEDULE OF ADDITIONAL SUBMITTALS													
Outfall(s)	Outfall(s) Required Action													
001	SHORT-TERM MONITORING PROGRAM The permittee shall collect monthly samples of the discharge to track the treatment system operations over a 6-month period starting May 1, 2025, for BOD ₅ , TSS, Settleable Solids, and Fecal Coliform parameters. Each sample shall be separated by a minimum of 30 days. The permittee shall submit an electronic copy of the sampling results monthly via email to brian.boyer@dec.ny.gov .	By the 28 th of the month following each sampling event.												

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

Date: September 3, 2024 v.1.25 Permit Writer: Brian Boyer

Water Quality Reviewer: Mike Bocchi

Full Technical Review

SPDES Permit Fact Sheet Stonefence Lodging Inc. Stonefence Motel NY0120626



Date: September 3, 2024 v.1.25 Permit Writer: Brian Boyer

Water Quality Reviewer: Mike Bocchi

Full Technical Review

Summary of Permit Changes

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

- Updated permit format, definitions, and general conditions
- Updated permittee name and contact info
- Added treatment system flow chart and sampling location.

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

Administrative History

5/17/1994 The permit was indefinitely extended. The permit previously expired on 12/01/1982.

2/7/2024 DEC issued a Request for Information (RFI) to modify and renew the SPDES

DEC issued a Request for Information (RFI) to modify and renew the SPDES permit to update the permit to reflect current operations at the facility.

3/15/2024 The permittee submitted a SPDES Application for P/C/I Discharge of Treated Sanitary Sewage Discharges to Surface Water in response to the RFI.

Facility Information

This facility is a private facility located just outside the City of Ogdensburg, in the Town of Oswegatchie, St. Lawrence County, New York, that receives flow from domestic users, with effluent consisting of treated sanitary sewage from a 12-unit Motel, a 5-bedroom home and non-guest laundry facilities.

The current 5,850 GPD treatment plant consists of:

- Primary Treatment: 8,500-gallon septic tank
- Secondary Treatment: Three 45' x 65' buried sand filters
- Disinfection: 900-gallon chlorine contact tank

Sludge is periodically pumped out of the septic tank by a licensed hauler and taken to a permitted wastewater treatment facility.

The primary outfall (Outfall 001) is a submerged 4" pipe that discharges 180' offshore into the St. Lawrence River.

The facility does not have any planned improvements.

Date: September 3, 2024 v.1.25 Permit Writer: Brian Boyer

Water Quality Reviewer: Mike Bocchi

Full Technical Review

Site Overview



Existing Effluent Quality
The Pollutant Summary Table presents the effluent limitations. Appendix Link

Permittee: Stonefence Lodging Inc. Facility: Stonefence Motel SPDES Number: NY0120626

USEPA Non-Major/Class 02 PCI

Date: September 3, 2024 v.1.25 Permit Writer: Brian Boyer

Water Quality Reviewer: Mike Bocchi

Full Technical Review

Receiving Water Information

The facility discharges via the following outfalls:

Outfall No.	Design Flow (GPD)	SIC Code	Wastewater Type	Receiving Water
001	5,850	8999	Treated Sanitary Sewage	St. Lawrence River, Class A
002	1,800	8999	Treated Sanitary Sewage	Groundwater, GA

Reach Description

The St. Lawrence River lies at the border of New York State and Canada and serves as a major gateway between the North Atlantic and the Great Lakes. At its most downstream point in New York, the Saint Lawrence drains an area of nearly 300,000 square miles.

The St. Lawrence River within New York is specified in 6 NYCRR Part 910, Table 1, Item 1a, and is classified as Class A. The best usages of Class A waters are a source of water supply for drinking, culinary or food processing purposes; primary and secondary contact recreation; and fishing. The waters shall be suitable for fish, shellfish and wildlife propagation and survival.

Impaired Waterbody Information

The St. Lawrence River segment, Portion 4 (PWL No. 0901-0004) at facility location was first listed on the 2010 New York State Section 303(d) List of Impaired/TMDL Waters as impaired due to due to Fish Consumption Advisories from Dioxin, Mirex, PCBs in river sediment from historic industrial operations. The segment continues to be listed as of the 2018 NYS Section 303(d) List. A TMDL has not been developed to address the impairment and, therefore, there are no applicable wasteload allocations (WLAs) for this facility.

Critical Receiving Water Flow Data & Mixing Zone

NYSDEC typically uses critical low flows to evaluate effluent limitations to ensure water quality standards are maintained. The 1Q10, 7Q10 and 30Q10 flows can be thought of as the lowest 1-Day, 7-Day and 30-Day average flows that are expected to occur on average once every 10 years. The 1Q10 flow is used to assess for aquatic acute A(A), the 7Q10 for aquatic chronic A(C), and the 30Q10 for human, aesthetic, wildlife (HEW).

In accordance NYSDEC Technical Operations Guidance Series (TOGS) 1.3.1, for large rivers such as the St. Lawrence River, application of critical flows is not appropriate, and maximum dilution ratios of 50:1 and 100:1 for aquatic acute and chronic mixing zone criteria, respectively, shall be used as the limiting conditions for evaluating water quality. HEW is set to a maximum allowance of 100:1.

Allowable Dilution Ratios

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

Critical receiving water flow data are listed in the Pollutant Summary Table at the end of this fact sheet. Appendix Link

Facility: Stonefence Motel SPDES Number: NY0120626

USEPA Non-Major/Class 02 PCI

Date: September 3, 2024 v.1.25 Permit Writer: Brian Boyer

Water Quality Reviewer: Mike Bocchi

Full Technical Review

Receiving Water Quality Information

NYSDEC collects water quality information on rivers, streams, lakes, estuaries, and coastal waters in New York. The Rotating Integrated Basin Studies (RIBS) Program monitors rivers, lakes

Receiving water quality for pH was taken from RIBS Station 09-STLW-51.9, St. Lawrence River in Ogdensburg, located about 5 miles downstream from Outfall 001. The only station with Hardness and Ammonia is 09-STLW-8.3, St. Lawrence River in Massena, located 50 miles downstream. Non-Detects were set to the laboratory reporting levels.

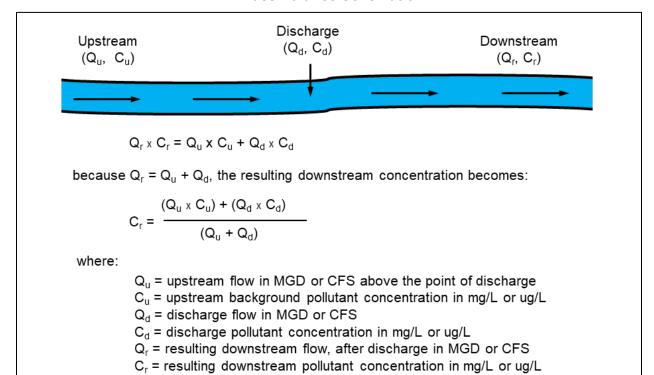
Ambient Receiving Water Quality

Parameter	Units	Mean	Range	80 th Percentile	Number of Samples	Non Detects
рH	SU	8.2	7.8 - 8.7	8.3	11	0
Hardness (as CaCO ₃)	mg/L	119	74 - 139	=	56	0
Nitrogen Ammonia (as N)	mg/L	0.016	0.005 - 0.067	=	58	17

When evaluating water quality for ammonia, TOGS 1.3.1.E recommends using the 75th - 80th percentile value as the critical pH condition when receiving water information is available.

For conservative pollutants with rapid and complete mixing, a steady-state, mass-balance approach is used to calculate the downstream water quality resulting from a discharge.

Mass Balance Schematic



SPDES Number: NY0120626

USEPA Non-Major/Class 02 PCI

Date: September 3, 2024 v.1.25 Permit Writer: Brian Boyer

Water Quality Reviewer: Mike Bocchi

Full Technical Review

Mass balance equations above can be rearranged and use variable substitution to express relationships in terms of dilution (D) for convenience or when dilution is limited due to mixing zone constraints. Dilution based on stream flow is calculated as:

$$D = \frac{Facility \ Design \ Flow + Stream \ Flow}{Facility \ Design \ Flow}$$

The predicted instream concentration for conservative pollutants based on dilution can be calculated as:

$$C_r = \frac{C_d + C_u(D-1)}{D}$$

Effluent limits can be calculated as:

$$C_{eff} = (C_{wqs} - C_u)D + C_u$$

Where:

= Allowable dilution.

 C_r = Resulting downstream pollutant concentration.

 C_d = Discharge pollutant concentration.

 C_{y} = Upstream ambient background concentration. C_{eff} = Allowable effluent concentration (effluent limit).

 C_{was} = Water quality standard concentration

For non-conservative, oxygen-demanding pollutants, instream dissolved oxygen concentrations from a point source discharge to a river, stream, or lake are calculated using modeling tools developed by NYSDEC.

Permit Requirements

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

Whole Effluent Toxicity (WET) Testing

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

Anti-backsliding

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

Appendix Link

Antidegradation

The permit contains effluent limitations which ensure that the best usages of the receiving waters will be maintained. The Notice of Complete Application published in the Environmental Notice Bulletin contains information on the State Environmental Quality Review (SEQR)¹ determination. Appendix Link

¹ As prescribed by 6 NYCRR Part 617

Date: September 3, 2024 v.1.25 Permit Writer: Brian Boyer

Water Quality Reviewer: Mike Bocchi

Full Technical Review

Discharge Notification Act Requirements

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

Schedule of Compliance

A Schedule of Compliance is being included² for the following items:

• Effluent Flow Measurement Device – The permittee will install a device that will enable the measurement of daily effluent flows from the wastewater treatment system.

Schedule of Additional Submittals

A schedule of additional submittals has been included for the following:

 SHORT-TERM MONITORING PROGRAM - The permittee shall collect monthly samples of the discharge to track the treatment system operations over a 6-month period starting May 1, 2025, for BOD5, TSS, Settleable Solids, and Fecal Coliform parameters. Each sample shall be separated by a minimum of 30 days. The permittee shall submit an electronic copy of the sampling results monthly via email to brian.boyer@dec.ny.gov.

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² Pursuant to 6 NYCRR 750-1.14

Facility: Stonefence Motel SPDES Number: NY0120626 USEPA Non-Major/Class 02 PCI Date: September 3, 2024 v.1.25 Permit Writer: Brian Boyer

Water Quality Reviewer: Mike Bocchi

Full Technical Review

OUTFALL AND RECEIVING WATER SUMMARY TABLE

					Water							D	ilution Ra	itio
Outfall	Latitude	Longitude	Receiving Water Name	Water Class	Index No. / Priority Waterbod y Listing (PWL) No.	Major / Sub Basin	Hardness (mg/l)	1Q10 (MGD)	7Q10 (MGD)	30Q10 (MGD)	Critical Effluent Flow (GPD)	A(A)	A(C)	HEW
001	44° 40' 35.28" N	75° 31' 47.68" W	St. Lawrence River	А	WIN: SL-1 PWL: 0901-0004	09/01	119³	-	ı	-	5,850	50:1	100:1	100:1
002	44° 40' 29.9" N	75° 31' 42.71" W	Groundwater	GA	-	N/A	-	ı	ı	ı	1,800	ı	ı	-

POLLUTANT SUMMARY TABLE

Outfall 001

Outfall #	004	Description	of Was	tewater: T	reated Sanita	ary Sewage)								
Outrail #	001	Type of Tre	atment:	Septic Tai	nk, Buried Sa	nd Filters,	Chlorine Disinfed	tion							
			Existing Discharge Data			TBELs					/ Data & W				Doois for
Effluent Parameter	THINK I	Averaging Period	Permit Limit	Existing Effluent Quality	# of Data Points Detects / Non- Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	ML	Basis for Permit Requirement
General Notes: Existing dischar represent the man	ge data		able for th	nis facility.	All applicabl	e water qu	ality standards w	/ere reviev	ved for dev	elopment	of the WQE	BELs. The st	andard and	WQBI	EL shown below
Flow Rate	GPD	Monthly Avg	5,850	-	-	5,850	Design Flow	Narrative:		ions that w	ill impair the	e waters for	6 NYCRR Part 703.2	-	Design Flow
	WQBEI NA Basis o	w limit is set <u>Ls</u> of Permit Con	<u>idition</u>		of the wastew		ent facility to ens	ure the pla	ant is opera	ted within	design spec	cifications.			

³ Ambient hardness was calculated from RIBS station 09-STLW-8.3, St. Lawrence River in Massena, using 56 samples collected from 2001 - 2016.

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SPDES Number: NY0120626 USEPA Non-Major/Class 02 PCI

Date: September 3, 2024 v.1.25 Permit Writer: Brian Boyer Water Quality Reviewer: Mike Bocchi

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0 15 11 11	224	Description	of Was	tewater: T	reated Sanit	ary Sewage)								
Outfall #	001	Type of Tre	atment:	Septic Tar	nk, Buried Sa	and Filters,	Chlorine Disinfed	tion							
			Existing Discharge Data			-	TBELs		Water Quality Data & WQBELs						Dania fam
Effluent Parameter	Units	Averaging Period	Permit Limit	Existing Effluent Quality	# of Data Points Detects / Non- Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	ML	Basis for Permit Requirement
	SU	Minimum	6.0	-	-	6.0	ECL 17-0509	8.2 ⁴	8.18	6.5 – 8.5	Range		6 NYCRR	-	TBEL
		Maximum	9.0	-	-	9.0	LOL 17-0309	0.2	8.21	0.5 – 0.5	rtange	_	Part 703.3	_	IDLL
	TBELs Consis	tent with ECI	_ 17-0509), TBELs f	or facilities tr	eating sanit	ary sewage are ı	eflective c	of federal se	condary tr	eatment sta	ndards in 40) CFR Part 1	33 an	d TOGS 1.3.3.
WQBELs With allowable dilution of 100:1, the projected instream concentration (PIC) with the TBELs are:															
рН		$PIC = \frac{C_d + C_u(D-1)}{D}$ $PIC = \frac{C_d + C_u(D-1)}{D}$													
		PIC Minimum = $[6.0 + 8.2(100 - 1)] / 100 = 8.18 \text{ SU}$ PIC Maximum = $[9.0 + 8.2(100 - 1)] / 100 = 8.21 \text{ SU}$													
	There i	e is no reasonable potential for pH water quality standards to be exceeded, therefore, WQBELs are not required.													
	Basis of Permit Condition The TBELs ensure water quality standards are maintained and are specified in the permit.														
	°F	Daily Max	-	-	-	Monitor	6 NYCRR Part 750-1.13	surface 90F at a	of a stream ny point and e than 5F ov	shall not l d shall n	ater tempera be raised to be raised aperature the dition.	more than or lowered	6 NYCRR Part 704.2	-	Monitor
Temperature	TBELs Consis		YCRR 75	50-1.13(a),	monitoring i	s specified	and may be used	to inform	future perm	nitting deci	sions.				
	WQBE The dis		no reasor	nable pote	ntial to excee	ed thermal o	criteria in Part 70	4, therefor	e, WQBELs	are unne	cessary.				
		of Permit Cor rature monito		pecified in	the permit.										

⁴ Ambient pH calculated from RIBS station 09-STLW-51.9, St. Lawrence River in Ogdensburg, using 11 samples collected in 1997, 2004, 2014, 2019.

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Outfall #		Description	escription of Wastewater: Treated Sanitary Sewage													
Outian #	001	Type of Tre	ype of Treatment: Septic Tank, Buried Sand Filters, Chlorine Disinfection													
			Exist	ing Discha	rge Data	7	ΓBELs				/ Data & WO				Daois for	
Effluent Parameter	Units	Averaging Period	Permit Limit	Existing Effluent Quality	# of Data Points Detects / Non- Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	ML	Basis for Permit Requirement	
	mg/L	Daily Max	-	-	-	-	-	7.4	6.8	4.0	Narrative	-	6 NYCRR Part 703.3	-	No Limitation	
	TBELs Not applicable.															

Not applicable.

WQBELs

The resulting downstream Dissolved Oxygen (DO) concentration was modeled using the NYSDEC Ponded Based Effluent Limits Screen Analysis Tool (PonSAT) under summer critical receiving water conditions:

Receiving Water Characteristics:

Temperature = 25°C (Non-Trout Waters, TOGS 1.3.1.D) DO Saturation = 90% (7.4 mg/L, TOGS 1.3.1.D) NOD = 0.0 mg/L (TOGS 1.3.1.D)

UOD = 3.0 mg/L (TOGS 1.3.1.D)

Water Depth = 5 Feet

Effluent Characteristics:

Flow = 5,850 GPD, Permit Limit)

Number of Ports = 1 Port Diameter = 4 Inches

Temperature = 25°C (Non-Trout Waters, TOGS 1.3.1.D)

DO = 0.0 mg/l (Worst Case Scenario) $BOD_5/CBOD_5 = 45 \text{ mg/L}$ (Permit Limit) Ammonia = 10 mg/L (NYSDEC Default) Organic Nitrogen = 6.0 mg/L (NYSDEC Default)

Results show a small local DO drop just after initial mixing, then returning to upstream levels shortly thereafter. BOD₅ TBELs ensures instream dissolved oxygen levels are maintained. Modeling and analysis under winter conditions is unnecessary.

Basis of Permit Condition

DO requirements are unnecessary and are not specified in the permit.

Dissolved

Oxygen

(DO)

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Outfall #	001	Description	scription of Wastewater: Treated Sanitary Sewage													
Outfall #	001	Type of Tre	atment:	Septic Ta	nk, Buried Sa	and Filters,	Chlorine Disinfed	tion								
			Exist	ing Discha	arge Data		TBELs	Water Quality Data & WQBELs							Daois for	
Effluent Parameter	Units	Averaging Period	Permit Limit	Existing Effluent Quality	# of Data Points Detects / Non- Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	ML	Basis for Permit Requirement	
	mg/L	Monthly Avg	30	-	-	30	ECL 17-0509									
		7 Day Avg	45	-	-	45	ECL 17-0509									
	lbs/d	Monthly Avg	1.5	-	-	1.5	ECL 17-0509				-	TBEL				
		7 Day Avg	2.2	-	-	2.2	ECL 17-0509									
		% Rem Minimum 85 - - 85 ECL 17-0509														
5-day Biochemical Oxygen Demand (BOD₅)	6 NYCI using the ways of the w	RR Part 750- ne design flow Monthly Av 7-Day Avg.	1.10(a) a w of 5,85 vg. = 0.00 . = 0.00 Dissolved	nd 40 CFI 0 GPD (0. 0585 MGD 0585 MGD d Oxygen.	R Part 122.45 00585 MGD) x 30 mg/L x x 45 mg/L x	5(f)(1) requ and the co 8.34 = 1.5		s for most p		•			lbs/d). BOD:	5 limits	were calculated	

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Outfall #	001	Description of Wastewater: Treated Sanitary Sewage													
Outian #	001	Type of Treatment: Septic Tank, Buried Sand Filters, Chlorine Disinfection													
Effluent			Existi	ing Discha	irge Data	TBELs			Wa	ater Qualit	y Data & W	QBELs			Pagia for
Effluent Parameter	Units	Averaging Period	Permit Limit	Existing Effluent Quality	# of Data Points Detects / Non- Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	ML	Basis for Permit Requirement
	mg/L	Monthly Avg	30	-	-	30	ECL 17-0509								
	9, =	7 Day Avg	45	-	-	45	ECL 17-0509				om sewage				
	lbs/d	Monthly Avg	1.5	-	-	1.5	ECL 17-0509	-				astes that will cause the waters for their best		-	TBEL
		7 Day Avg	2.2	-	-	2.2	ECL 17-0509]		usages.					
	% Rem	Minimum	85	-	-	85	ECL 17-0509								
	6 NYCRR Part 750-1.10(a) and 40 CFR Part 122.45(f)(1) requires effluent limits for most parameters be expressed in terms of weight (lbs/d). TSS limits were calculated using the design flow of 5,850 GPD (0.00585 MGD) and the concentration based TBEL: Monthly Avg. = 0.00585 MGD x 30 mg/L x 8.34 = 1.5 lbs/d 7-Day Avg. = 0.00585 MGD x 45 mg/L x 8.34 = 2.2 lbs/d WQBELs With an allowable dilution of 100:1, an effluent limitation equal to the TBEL is protective of the narrative water quality standard. Basis of Permit Requirement The TBELs are specified in the permit.														
	mL/L	Daily Max	0.3	-	-	0.3	BPJ	-	wastes	or other w or impair	om sewage; /astes that v the waters t sages		6 NYCRR Part 703.2	-	TBEL
Settleable Solids	TBELs Consistent with NYSDEC permitting practice for PCI facilities discharging treated sanitary sewage, a BPJ TBEL of 0.3 ml/L is specified for facilities providing secondar treatment and were taken from TOGS 1.3.3. WQBELs With an allowable dilution of 100:1, an effluent limitation equal to the TBEL is protective of the narrative water quality standard. Basis of Permit Requirement The TBELs are specified in the permit.														

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045-11.44	001	Description of Wastewater: Treated Sanitary Sewage													
Outfall #		Type of Tre	ype of Treatment: Septic Tank, Buried Sand Filters, Chlorine Disinfection												
		Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs							Danie fem
Effluent Parameter	Units		Permit Limit	Existing Effluent Quality	# of Data Points Detects / Non- Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	ML	Basis for Permit Requirement
	mg/L	Monthly Avg	-	-	-	-	-	0.016	0.12	0.41 ⁽¹⁾ 0.58 ⁽²⁾	A(C)	39 ⁽¹⁾ 56 ⁽²⁾	6 NYCRR Part 703.5	-	No Limitation

⁽¹⁾ Summer Conditions, (2) Winter Conditions

TBELs

Not Applicable.

With an allowable HEW dilution ratio of 100:1, an assumed effluent quality of 10 mg/L (NYSDEC Default), and an ambient receiving water concentration of 0.016 mg/L, the projected instream concentration is:

$$PIC = [10 \text{ mg/L} + 0.016 \text{ mg/L} \times (100 - 1)] / 100 = 0.12 \text{ mg/L}$$

The water quality standard for Ammonia (as NH₃) based on a Class A waterbody is 0.50 mg/L and was determined from Table 1 (Total Ammonia) in TOGS 1.1.1 with a pH of 8.3 (80th Percentile) and a summer water temperature of 25°C (TOGS 1.3.1.E).

Effluent limitations and reporting for Ammonia have been changed from (as NH3) to (as N) for simpler data reporting by being consistent with typical commercial laboratory

reporting units. Values can be converted using the equation: Ammonia (as N) = Ammonia (as NH₃) x 0.8224. The water quality standard based on Ammonia (as N) is:

Nitrogen, Ammonia (as N)

SUMMER 6/1 - 10/31

WINTER 11/1 - 5/31 Ammonia (as N) = $0.50 \text{ mg/L} \times 0.8224 = 0.41 \text{ mg/L}$

The calculated WQBEL based on the allowable HEW dilution of 100:1, a water quality standard of 0.41 mg/L, and an ambient background concentration pf 0.016 mg/L, is:

$$WQBEL = (C_{was} - C_b)D + C_b$$

WQBEL = $[(0.41 \text{ mg/L} - 0.016 \text{ mg/L}) \times 100] + 0.016 \text{ mg/L} = 39 \text{ mg/L}$

Comparing the PIC and instream water quality standard, and considering the calculated WQBEL, the discharge has no reasonable potential to exceed the water quality standard for ammonia, therefore, WQBELs are unnecessary.

Under winter conditions with a water temperature of 10°C (TOGS 1.3.1.E), repeating the above procedure results in an Ammonia (as N) water quality standard of 0.58 mg/L and a calculated WQBEL of 56 mg/L. Winter limits are also unnecessary.

Basis of Permit Condition

Ammonia requirements are unnecessary and are not specified in the permit.

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O.,46-11.#	Description of Wastewater: Treated Sanitary Sewage Treated Sanitary Sewage State of Treatment Court Treatment Court State of Treatment Court Stat														
Outfall #		Type of Treatment: Septic Tank, Buried Sand Filters, Chlorine Disinfection													
Effluent			Existi	ng Discha	rge Data		ΓBELs		Wa	ter Qualit	y Data & Wo	QBELs			Basis for
Effluent Parameter	Units	Averaging Period	Permit Limit	Existing Effluent Quality	# of Data Points Detects / Non- Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Type Calc. Basis for WQBEL WQBEL		ML	Permit Requirement
	#/100 ml	30-Day Geo Mean	200	-	-	200	BPJ	-			nthly geome		6 NYCRR		TDEI
		7-Day Geo Mean	400	-	-	400	BPJ	_	from a mir		ceed 200.	ve examinations, shall eed 200.		4	TBEL
Coliform, Fecal	WQBE With ar	Effluent disinfection is required year-round due to the class of the receiving waterbody (Class A). Consistent with NYSDEC permitting practice for PCI facilities discharging treated sanitary sewage, BPJ TBELs were taken from TOGS 1.3.3. WQBELs With an allowable dilution of 100:1, the TBELs are protective of water quality standards. Basis of Permit Requirement The TBELs are specified in the permit.													
	mg/L	Daily Max	2.0	-	-	2.0	BPJ	-	-	0.005	A(C)	-	6 NYCRR Part 703.5	-	TBEL
Total Residual Chlorine (TRC)	TBELs Effluent disinfection is required year-round due to the class of the receiving waterbody (Class A). Consistent with NYSDEC permitting practice for PCI facilities discharging treated sanitary sewage, a chlorine BPJ TBEL of 2.0 mg/L was taken from TOGS 1.3.3. The TBEL ensures effective disinfection while preventing excessive chlorinated discharges.														

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Outfall 002

Ī,	O45-II #		Description of Wastewater: Treated Sanitary Sewage													
	Outfall #	002	Type of Tre	Type of Treatment: Septic Tank followed by Leach Field to Groundwater												
				Existing Discharge Data			-	ΓBELs	Water Quality Data & WQBELs							Б . (
	Effluent Parameter	Units	Averaging Period	Permit Limit	Existing Effluent Quality	# of Data Points Detects / Non- Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	ML	Basis for Permit Requirement

General Notes:

It is NYSDEC permitting practice for PCI facilities discharging treated sanitary sewage to groundwaters, that effluent limitations and monitoring requirements will not be imposed for a treatment system designed in accordance with engineering standards accepted by New York for discharges less than 10,000 GPD though a single outfall. This is consistent with SPDES General Permit for Groundwater Discharge of Treated Sanitary Sewage (GP-0-15-001).

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Appendix: Regulatory and Technical Basis of Permit Authorizations

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

Regulatory References

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

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

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

SPDES Permit Requirements	Regulatory Reference
Anti-backsliding	6 NYCRR 750-1.10(c)
Best Management Practices (BMPS) for CSOs	6 NYCRR 750-2.8(a)(2)
Environmental Benefits Permit Strategy (EBPS)	6 NYCRR 750-1.18, NYS ECL 17-0817(4), TOGS 1.2.2 (revised
	January 25,2012)
Exceptions for Type I SSO Outfalls (bypass)	6 NYCRR 750-2.8(b)(2), 40 CFR 122.41
Mercury Multiple Discharge Variance	Division of Water Program Policy 1.3.10
	(DOW 1.3.10)
Mixing Zone and Critical Water Information	TOGS 1.3.1 & Amendments
PCB Minimization Program	40 CFR Part 132 Appendix F Procedure 8, 6 NYCRR 750-1.13(a)
	and 750-1.14(f), and TOGS 1.2.1
Pollutant Minimization Program (PMP)	6 NYCRR 750-1.13(a), 750-1.14(f), TOGS 1.2.1
Schedules of Compliance	6 NYCRR 750-1.14
Sewage Pollution Right to Know (SPRTK)	NYS ECL 17-0826-a, 6 NYCRR 750-2.7
State Administrative Procedure Act (SAPA)	State Administrative Procedure Act Section 401(2), 6 NYCRR
	621.11(I)
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	NYCRR 750-2.1(i)
Request for Additional Information	

Outfall and Receiving Water Information

Impaired Waters

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

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

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Existing Effluent Quality

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

Permit Requirements

Basis for Effluent Limitations

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

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

Anti-backsliding

Anti-backsliding requirements are specified in the CWA sections 402(o) and 303(d)(4), ECL 17-0809, and regulations at 40 CFR 122.44(/) and 6 NYCRR 750-1.10(c) and (d). Generally, the relaxation of effluent limitations in permits is prohibited unless one of the specified exceptions applies, which will be cited on a case-by-case basis in this fact sheet. Consistent with current case law⁵ and USEPA interpretation⁶ 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

⁵ American Iron and Steel Institute v. Environmental Protection Agency, 115 F.3d 979, 993 n.6 (D.C. Cir. 1997)

⁶ 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)

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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) for Industrial Facilities

A TBEL requires a minimum level of treatment for industrial point sources based on currently available treatment technologies or Best Management Practices (BMPs). CWA sections 301(b) and 402, ECL sections 17-0509, 17-0809 and 17-0811, and 6 NYCRR 750-1.11 require technology-based controls on effluents. TBELs are set based upon an evaluation of New Source Performance Standards (NSPS), Best Available Technology Economically Achievable (BAT), Best Conventional Pollutant Control Technology (BCT), Best Practicable Technology Currently Available (BPT), and Best Professional Judgment (BPJ).

USEPA Effluent Limitation Guidelines (ELGs) Applicable to Facility

In many cases, BPT, BCT, BAT and NSPS limitations are based on effluent guidelines developed by USEPA for specific industries, as promulgated under 40 CFR Parts 405-471. Applicable guidelines, pollutants regulated by these guidelines, and the effluent limitation derivation for facilities subject to these guidelines is in the <u>USEPA Effluent Limitation Guideline Calculations Table</u>.

Best Professional Judgement (BPJ)

For substances that are not explicitly limited by regulations, the permit writer is authorized to use BPJ in developing TBELs. Consistent with section 402(a)(1) of the CWA, and NYS ECL section 17-0811, the DEC is authorized to issue a permit containing "any further limitations necessary to ensure compliance with water quality standards adopted pursuant to state law". BPJ limitations may be set on a case-by-case basis using any reasonable method that takes into consideration the criteria set forth in 40 CFR 125.3. Applicable state regulations include 6 NYCRR 750-1.11. The BPJ limitation considers the existing technology present at the facility, the statistically calculated existing effluent quality for that parameter, and any unique or site-specific factors relating to the facility. Technology limitations generally achievable for various treatment technologies are included in TOGS 1.2.1, Attachment C. These limitations may be used for the listed parameters when the technology employed at the facility is listed.

Technology-based Effluent Limitations (TBELs)

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

Water Quality-Based Effluent Limitations (WQBELs)

In addition to the TBELs, permits must include additional or more stringent effluent limitations and conditions, including those necessary to protect water quality. CWA sections 101 and 301(b)(1)(C), 40 CFR 122.44(d)(1), and 6 NYCRR Parts 750-1.11 require that permits include limitations for all pollutants or parameters which are or may be discharged at a level which may cause or contribute to an exceedance of any State water quality standard adopted pursuant to NYS ECL 17-0301. Additionally, 6 NYCRR Part

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701.1 prohibits the discharge of pollutants that will cause impairment of the best usages of the receiving water as specified by the water classifications at the location of discharge and at other locations that may be affected by such discharge. Water quality standards can be found under 6 NYCRR Parts 700-704. The limitations must be stringent enough to ensure that water quality standards are met at the point of discharge and in downstream waters and must be consistent with any applicable WLA which may be in effect through a TMDL for the receiving water. These and other requirements are summarized in TOGS 1.1.1, 1.3.1, 1.3.2, 1.3.5 and 1.3.6. The DEC considers a mixing zone analysis, critical flows, and reasonable potential analysis when developing a WQBEL.

Mixing Zone Analyses

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

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

Critical Flows

In accordance with TOGS 1.2.1 and 1.3.1, WQBELs are developed using dilution ratios that relate the critical low flow condition of the receiving waterbody to the critical effluent flow. The critical low flow condition used in the dilution ratio will be different depending on whether the limitations are for aquatic or human health protection. For chronic aquatic protection, the critical low flow condition of the waterbody is typically represented by the 7Q10 flow and is calculated as the lowest average flow over a 7-day consecutive period within 10 years. For acute aquatic protection, the critical low flow condition is typically represented by the 1Q10 and is calculated as the lowest 1-day flow within 10 years. However, NYSDEC considers using 50% of the 7Q10 to be equivalent to the 1Q10 flow. For the protection of human health, the critical low flow condition is typically represented by the 30Q10 flow and is calculated as the lowest average flow over a 30-day consecutive period within 10 years. However, NYSDEC considers using 1.2 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 DEC;
- 2) identify water quality criteria applicable to these pollutants;

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3) determine if WQBELs are necessary (i.e. reasonable potential analysis (RPA)). The RPA will utilize the procedure outlined in Chapter 3.3.2 of EPA's Technical Support Document (TSD). As outlined in the TSD, for parameters with limited effluent data the RPA may include multipliers to account for effluent variability; and,

4) calculate WQBELs (if necessary). Factors considered in calculating WQBELs include available dilution of effluent in the receiving water, receiving water chemistry, and other pollutant sources.

The DEC uses modeling tools to estimate the expected concentrations of the pollutant in the receiving water and develop WQBELs. These tools were developed in part using the methodology referenced above. If the estimated concentration of the pollutant in the receiving water is expected to exceed the ambient water quality standard or quidance value (i.e. numeric interpretation of a narrative water quality standard), then there is a reasonable potential that the discharge may cause or contribute to an exceedance of any State water quality standard adopted pursuant to NYS ECL 17-0301. If a TMDL is in place, the facility's WLA for that pollutant is applied as the WQBEL.

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

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

Minimum Level of Detection

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

Monitoring Requirements

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

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Other Conditions

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.