



Department of
Environmental
Conservation

State Pollutant Discharge Elimination System (SPDES) DISCHARGE PERMIT

SIC Code: 6515	NAICS Code: 531190	SPDES Number:	NY0066788
Discharge Class (CL):	09	DEC Number:	8-2420-00014/00001
Toxic Class (TX):	N	Effective Date (EDP):	
Major-Sub Drainage Basin:	04 - 02	Expiration Date (ExDP):	
Water Index Number:	Ont 117-27	Item No.: 0402-0019	Modification Dates (EDPM):
Compact Area:	IJC		

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

PERMITTEE NAME AND ADDRESS			
Name:	Twin Cedars of Avon, LLC	Attention:	Lauretta LaMothe-Ryan
Street:	12250 Woodland Ridge Circle		
City:	South Lyon	State:	MI Zip Code: 48178
Email:	lryan@livewindward.com	Phone:	248-514-4002

is authorized to discharge from the facility described below:

FACILITY NAME, ADDRESS, AND PRIMARY OUTFALL											
Name:	Twin Cedars of Avon, LLC										
Address / Location:	6130 East Avon-Lima Road						County:	Livingston			
City:	Avon				State:	NY		Zip Code:	14414		
Facility Location:	Latitude:	42 °	54 '	11 " N	& Longitude:	77 °	40 '	45 " W			
Primary Outfall No.:	001	Latitude:	42 °	54 '	9 " N	& Longitude:	77 °	40 '	26 " W		
Outfall Description:	Treated Sanitary	Receiving Water:	Honeoye Creek, lower, and minor tribs					Class:	C		

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. The co-permittees subject to one or more conditions of this permit are listed on page 2.

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

DISTRIBUTION:

- BWP Permit Coordinator (permit.coordinator@dec.ny.gov)
- BWP Permit Writer
- RWE
- RPA
- EPA Region II (Region2_NPDES@epa.gov)
- NYSEFC (sara.tully@efc.ny.gov)

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

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DEFINITIONS

TERM	DEFINITION
7-Day Geo Mean	The highest allowable geometric mean of daily discharges over a calendar week.
7-Day Average	The average of all daily discharges for each 7-days in the monitoring period. The sample measurement is the highest of the 7-day averages calculated for the monitoring period.
12-Month Rolling Average (12 MRA)	The current monthly value of a parameter, plus the sum of the monthly values over the previous 11 months for that parameter, divided by the number of months for which samples were collected in the 12-month period.
30-Day Geometric Mean	The highest allowable geometric mean of daily discharges over a calendar month, calculated as the antilog of: the sum of the log of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.
Action Level	Action level means a monitoring requirement characterized by a numerical value that, when exceeded, triggers additional permittee actions and DEC review to determine if numerical effluent limitations should be imposed.
Compliance Level / Minimum Level	A compliance level is an effluent limitation. A compliance level is given when the water quality evaluation specifies a Water Quality Based Effluent Limit (WQBEL) below the Minimum Level. The compliance level shall be set at the Minimum Level (ML) for the most sensitive analytical method as given in 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	Honeoye Creek	EDP	

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.	Eff.	
Flow	Monthly Average	0.165	MGD			Continuous	Meter		X	
pH	Daily Minimum	6.5	SU			Daily	Grab		X	
	Daily Maximum	8.5	SU							
Temperature	Daily Maximum	Monitor	°F			Daily	Grab		X	
Dissolved Oxygen	Daily Minimum	7.0	mg/L			Weekly	Grab		X	
BOD ₅	Daily Maximum	5.0	mg/L	6.9	lbs/d	2/month	6-hr. Comp.	X	X	1,4
Total Suspended Solids (TSS)	Daily Maximum	10	mg/L	13.8	lbs/d	2/month	6-hr. Comp.	X	X	1,4
Settleable Solids	Daily Maximum	0.1	mL/L			Daily	Grab		X	
Ammonia (as N) SUMMER 6/1 – 10/31	Daily Maximum	1.4	mg/L			2/month	Grab		X	
Ammonia (as N) WINTER 11/1 – 5/31	Daily Maximum	2.1	mg/L			2/month	Grab		X	
Ammonia (as N) SUMMER 6/1 – 10/31	Monthly Average		mg/L	1.9	lbs/d	2/month	Grab		X	3
Ammonia (as N) WINTER 11/1 – 5/31	Monthly Average		mg/L	2.9	lbs/d	2/month	Grab		X	3
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			Monthly	Grab		X	5
Coliform, Fecal	7-Day Geometric Mean	400	No./100 mL			Monthly	Grab		X	5
Chlorine, Total Residual	Daily Maximum	0.03	mg/L			Daily	Grab		X	2,5

FOOTNOTES:

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

3. The month total (lbs/month) for Ammonia is calculated as the monthly average load (lbs/d) multiplied by the number of days in the month.
4. At least 1 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.
5. Limits and monitoring requirements are not in effect until May 1, 2026. See the schedule of compliance on page 7.

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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:

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

SCHEDULE OF COMPLIANCE

a) The permittee shall comply with the following schedule:

Outfall(s)	Parameter(s) Affected	Interim Effluent Limit(s)	Compliance Action	Due Date
001	Fecal Coliform Total Residual Chlorine	N/A	<p>The permittee shall submit an approvable engineering report, prepared by a Professional Engineer licensed to practice engineering in New York State, detailing the disinfection designs that will be used to comply with the final effluent limitations for Fecal Coliform and Total Residual Chlorine.</p> <p>The permittee shall submit approvable Engineering Plans, Specifications, and Construction Schedule for the Implementation of effluent disinfection.</p> <p>The permittee shall begin construction of the treatment facilities in accordance with the Department approved schedule.</p> <p>The permittee shall complete construction and commence operation of the system, and comply with the final effluent limitations for Fecal Coliform and Total Residual Chlorine.</p>	<p>January 1, 2025</p> <p>May 1, 2025</p> <p>September 1, 2025</p> <p>May 1, 2026</p>
<p>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.</p>				

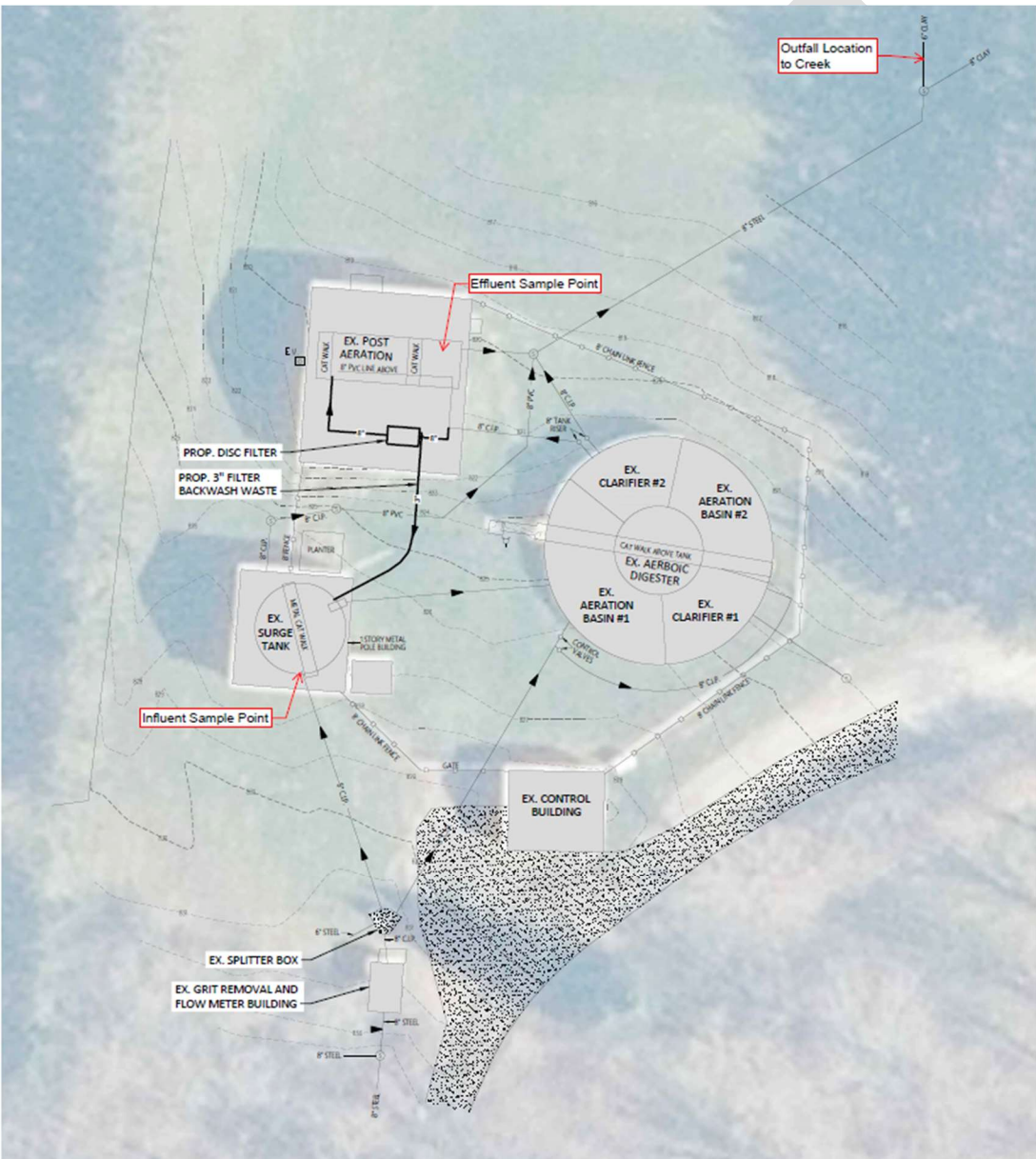
b) The permittee shall submit a [Report of Non-Compliance Event](#) form with each of the above schedule dates no later than 14 days following each elapsed date, unless conditions require more immediate notice as prescribed in 6 NYCRR Part 750-1.2(a) and 750-2. All notifications shall be sent to the locations listed under the section of this permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS. Each notice of non-compliance shall include the following information:

1. A short description of the non-compliance;
2. A description of any actions taken or proposed by the permittee to comply with the elapsed schedule requirements without further delay and to limit environmental impact associated with the non-compliance;
3. Any details which tend to explain or mitigate an instance of non-compliance; and
4. An estimate of the date the permittee will comply with the elapsed schedule requirement and an assessment of the probability that the permittee will meet the next scheduled requirement on time.

The permittee shall submit copies of any document required by the above schedule of compliance to the Department of Environmental Conservation, Regional Water Engineer – Region 8, 6274 E. Avon-Lima Road, Avon, New York 14414 and to the Department of Environmental Conservation, Division of Water - Bureau of Water Permits, 625 Broadway, Albany, New York. 12233-3505, unless otherwise specified in this permit or in writing by the Department.

MONITORING LOCATIONS

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



GENERAL REQUIREMENTS

- A. The regulations in 6 NYCRR Part 750 are hereby incorporated by reference and the conditions are enforceable requirements under this permit. The permittee shall comply with all requirements set forth in this permit and with all the applicable requirements of 6 NYCRR Part 750 incorporated into this permit by reference, including but not limited to the regulations in paragraphs B through I as follows:
- B. General Conditions
- | | |
|--|---|
| 1. Duty to comply | 6 NYCRR 750-2.1(e) & 2.4 |
| 2. Duty to reapply | 6 NYCRR 750-1.16(a) |
| 3. Need to halt or reduce activity not a defense | 6 NYCRR 750-2.1(g) |
| 4. Duty to mitigate | 6 NYCRR 750-2.7(f) |
| 5. Permit actions | 6 NYCRR 750-1.1(c), 1.18, 1.20 & 2.1(h) |
| 6. Property rights | 6 NYCRR 750-2.2(b) |
| 7. Duty to provide information | 6 NYCRR 750-2.1(i) |
| 8. Inspection and entry | 6 NYCRR 750-2.1(a) & 2.3 |
- C. Operation and Maintenance
- | | |
|-----------------------------------|--------------------------------------|
| 1. Proper Operation & Maintenance | 6 NYCRR 750-2.8 |
| 2. Bypass | 6 NYCRR 750-1.2(a)(17), 2.8(b) & 2.7 |
| 3. Upset | 6 NYCRR 750-1.2(a)(94) & 2.8(c) |
- D. Monitoring and Records
- | | |
|---------------------------|--|
| 1. Monitoring and records | 6 NYCRR 750-2.5(a)(2), 2.5(a)(6), 2.5(c)(1), 2.5(c)(2), & 2.5(d) |
| 2. Signatory requirements | 6 NYCRR 750-1.8 & 2.5(b) |
- E. Reporting Requirements
- | | |
|------------------------------|-----------------------------|
| 1. Reporting requirements | 6 NYCRR 750-2.5, 2.7 & 1.17 |
| 2. Anticipated noncompliance | 6 NYCRR 750-2.7(a) |
| 3. Transfers | 6 NYCRR 750-1.17 |
| 4. Monitoring reports | 6 NYCRR 750-2.5(e) |
| 5. Compliance schedules | 6 NYCRR 750-1.14(d) |
| 6. 24-hour reporting | 6 NYCRR 750-2.7(c) & (d) |
| 7. Other noncompliance | 6 NYCRR 750-2.7(e) |
| 8. Other information | 6 NYCRR 750-2.1(f) |
- 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.

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>

RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

- A. The monitoring information required by this permit shall be retained for a period of at least five years from the date of the sampling for subsequent inspection by the DEC or its designated agent.
- B. Discharge Monitoring Reports (DMRs): Completed DMR forms shall be submitted for each 1 month reporting period in accordance with the DMR Manual available on DEC's website.

DMRs must be submitted electronically using the electronic reporting tool (NetDMR) specified by DEC. Instructions on the use of NetDMR can be found at <https://www.dec.ny.gov/chemical/8461.html>. **Hardcopy paper DMRs will only be accepted if a waiver from the electronic submittal requirements has been granted by DEC to the facility.**

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

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

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

Department of Environmental Conservation
Division of Water, Bureau of Water Permits
625 Broadway, Albany, New York 12233-3505

Phone: (518) 402-8111

Department of Environmental Conservation
Regional Water Engineer, Region 8
6274 E. Avon-Lima Road, Avon, New York, 14414-9519

Phone: (585) 226-5450

Permittee: Twin Cedars of Avon, LLC
Facility: Twin Cedars of Avon, LLC
SPDES Number: NY0066788
USEPA Non-Major/Class 09 PCI

Date: June 28, 2024
Permit Writer: Jonathan Tamargo
Water Quality Reviewer: Edward Schneider
Full Technical Review

SPDES Permit Fact Sheet Twin Cedars of Avon, LLC NY0066788



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Summary of Permit Changes

A State Pollutant Discharge Elimination System (SPDES) permittee-initiated permit modification has been drafted for the Twin Cedars of Avon, LLC. The changes to the permit are summarized below:

- Updated permit class from USEPA Non-Major/Class 02 PCI to Non-Major/Class 09 PCI.
- Updated permit format, definitions, and general conditions
- Changed limit for pH from Range 6.0 to 9.5 to Range 6.5 to 8.5
- Changed limit for Ammonia 6/1 – 10/31 from 2.0 mg/L to 1.4 mg/L
- Added limit for Ammonia 11/1 – 5/31
- Added Monthly Average loading limitations for Ammonia
- Added requirement for seasonal effluent disinfection
- Added Fecal Coliform limits
- Added Total Residual Chlorine limit
- Added Schedule of Compliance for Fecal Coliform and Total Residual Chlorine
- Added requirement to submit monthly Discharge Monitoring Reports (DMRs)

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

3/1/1987	The last full technical review was performed and the SPDES permit became effective with a new five-year term and expiration date of 3/1/1992. The 1987 permit, along with all subsequent modifications, has formed the basis of this permit. The permit was administratively renewed in 2002, 2012 and again in 2017. The current permit administrative renewal was effective until 4/30/2022.
2/21/1989	Permit was modified to remove the requirement to submit periodic Discharge Monitoring Reports.
6/25/2004	Permit was modified to remove the “Part II General Conditions” and updated language to reflect a regulatory change in NYS law governing SPDES permits.
10/25/2006	Permit was modified to include Discharge Notification Requirements.
10/14/2020	Permit transferred ownership.
4/30/2022	The SPDES permit expired.
4/9/2024	The Twin Cedars of Avon, LLC submitted a new PCI form to renew the expired permit.

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

Facility Information

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

The wastewater treatment plant is considered an activated sludge plant and has the following processes: headworks, equalization, secondary treatment, solids handling, tertiary filtration, and post aeration.

Headworks: Wastewater from the park enters the plant through an influent manhole which leads into the headworks channels, located in a small shed-style building. The main channel has a depressed section in the concrete, where grit (small stones and gravel) can drop out, as well as a grinder, which chops up suspended material in the wastewater into smaller sized pieces (e.g. wipes). There is a bypass channel with a manual bar rack. There are stop plates to isolate flow in the main channel or bypass channel when necessary. The influent flow rate is measured using a level sensor that is calibrated to measure the height of the wastewater above a v- notch weir (metal plate). After the headworks channels, the wastewater enters the headworks distribution structure, which allows flow to be directed to the surge (equalization) tank or clarifier 1, located in the DAVCO tank.

Equalization: The surge tank serves as an equalization basin (storage tank) when higher flows are experienced at the plant due to wet weather events. Two submersible surge pumps lift the flow into a steel distribution box, from which it flows by gravity into the DAVCO tank.

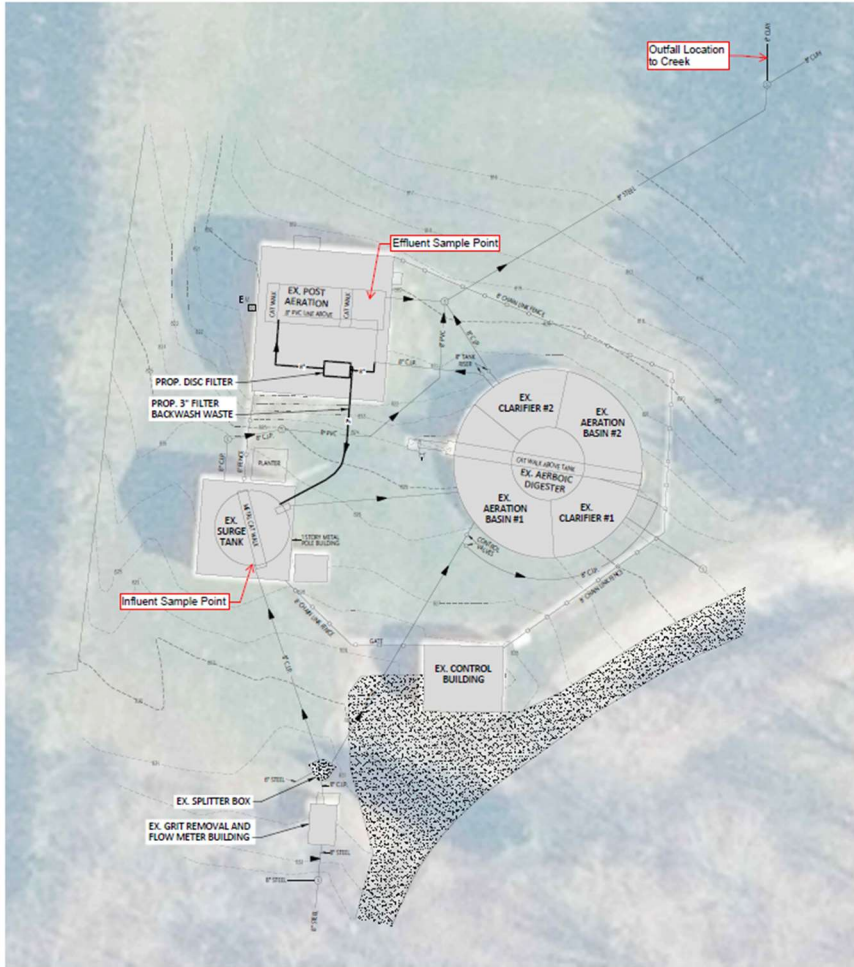
Secondary Treatment: Depending on the configuration of the valves in the yard outside the tank, the flow can be directed into aeration 1 or aeration 2, where the secondary process occurs and helps to breakdown the organic material in the wastewater. Flow typically enters aeration tank 1. From aeration 1, the wastewater flows into clarifier tank 1. In clarifier 1, sludge is collected from the bottom of the tank using a scraper/collector mechanism and air lift pumps, which discharge the sludge into the digester located in the center of the DAVCO tank. From clarifier 1, the wastewater flows into second aeration and clarifier tanks where the same process occurs before the wastewater flows by gravity into the clearwell. When necessary, the wastewater can bypass the clearwell and flow directly into the effluent line to the plant discharge.

Solid Handling: An aerobic digester is located in the center of the DAVCO tank. The aerobic digestion process essentially reduces the amount of biosolids (sludge) to be removed from the site. Currently, the sludge is removed from the site by a contracted sludge hauler.

Tertiary Treatment: There is a sand filter system located in the blower and filter building that is currently out of service. The design of a replacement tertiary treatment system is currently underway.

Post Aeration and Effluent: Currently, wastewater bypasses the sand filter system and gets sent to post aeration, where a blower/diffusers oxygenate the effluent waste stream. After post aeration, the flow is directed through an effluent pipe and out to the discharge pipe. The flow enters into a creek.

The primary outfall (Outfall 001) is located at the bank of the Honeoye Creek tributary and consists of a 12" pipe partially submerged at normal flow conditions.



PROPOSED SITE PLAN
SCALE: 1" = 20'-0"

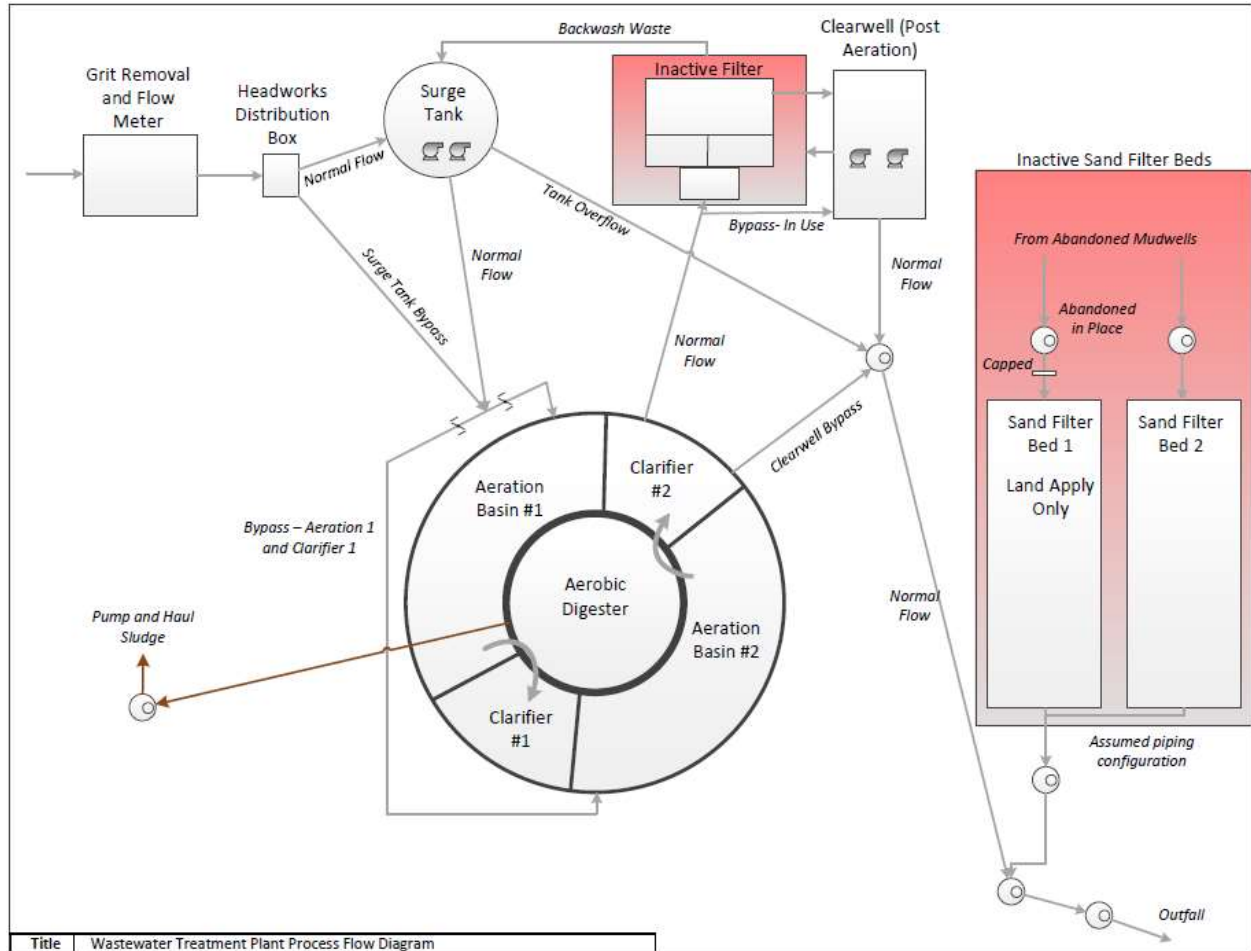




Image 1: Picture of the Outfall

Enforcement History

The facility a Notice of Violation (NOV) dated 8/3/2023. The NOV required the following compliance actions which influenced this new permit:

- The facility must submit monthly Discharge Monitoring Reports
- The facility must sample for Ammonia at a frequency of twice per month

Existing Effluent Quality

The [Pollutant Summary Table](#) presents the existing effluent quality and effluent limitations. The existing effluent quality was determined from the application submitted by the permittee for the period 1/1/2023 to 10/31/2024. [Appendix Link](#)

Receiving Water Information

The facility discharges via the following outfall:

Outfall No.	SIC Code	Wastewater Type	Receiving Water
001	6515	Treated Sanitary Sewage	Honeoye Creek, lower, and minor tribs, Class C

Reach Description: The outfall discharges to unnamed ditch that then flows approximately 300 ft into an unnamed tributary of Honeoye Creek. The tributary then flows approximately 7.8 miles downstream where it enters Honeoye Creek. Per 6 NYCRR 821.4(a), water quality standards for class C are being used for development of WQBELs.

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

Impaired Waterbody Information

The Honeoye Creek segment (PWL No. 0402-0019) is not listed on the 2018 [New York State Section 303\(d\) List](#) of Impaired/TMDL Waters, and therefore, there are no applicable wasteload allocations (WLAs) for this discharge.

Critical Receiving Water Data & Mixing Zone

The low flow condition for the Tributary of Honeoye Creek was obtained from a drainage basin ratio analysis with USGS gage station 0423204920, EAST BRANCH ALLEN CREEK located PITTSFORD NY. The 1Q10, 7Q10 and 30Q10 flows at the gage were found from the USGS Hydrologic Toolbox software and an analysis of data from 1991 to 2003.

The low flows at the facility location were found from a drainage basin ratio analysis and are shown below.

Gage Name: EAST BRANCH ALLEN CREEK located PITTSFORD NY
 Gage ID: 0423204920
 Drainage Area at Gage (mi²): 6.96
 Drainage Area at Facility (mi²): 0.52
 1Q10 Flow at Gage (CFS): 0.630 Source: Hydrologic Toolbox
 7Q10 Flow at Gage (CFS): 0.802 Source: Hydrologic Toolbox
 30Q10 Flow at Gage (CFS): 1.252 Source: Hydrologic Toolbox
 Calculated 7Q10 Flow at Facility (CFS): 0.05
 Calculated 1Q10 Flow at Facility (CFS): 0.06
 Calculated 30Q10 Flow at Facility (CFS): 0.09

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

The 7Q10 low-flow condition of the Tributary of Honeoye Creek was found to be 0.06 CFS. Consistent with TOGS 1.3.1, intermittent stream effluent limits apply for flows <0.1 CFS, and the water quality standards will be applied as end-of-pipe limitations with no mixing or dilution.

Critical receiving water data are listed in the [Pollutant Summary Table](#) at the end of this fact sheet. [Appendix Link](#)

Permit Requirements

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

Whole Effluent Toxicity (WET) Testing

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

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Facility: Twin Cedars of Avon, LLC
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USEPA Non-Major/Class 09 PCI

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Water Quality Reviewer: Edward Schneider
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Anti-backsliding

The effluent limitation of 6.9 lbs/d and 13.8 lbs/d for BOD5 and TSS respectively are not considered anti-backsliding due to the standardized approach of loading calculations.

Appendix Link

Antidegradation

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

Appendix Link

Discharge Notification Act Requirements

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

Additionally, the permit contains a requirement to make the DMR sampling data available to the public upon request. This requirement is new.

Schedule of Compliance

A Schedule of Compliance is being included² for the following items (Appendix Link):

- New disinfection requirement

¹ As prescribed by 6 NYCRR Part 617

² Pursuant to 6 NYCRR 750-1.14

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° 54' 9" N	77° 40' 26" W	Honeoye Creek, lower, and minor tribs	C	Ont 117-27 PWL: 0402-0019	04/02	-	Intermittent			0.165	1:1	1:1	1:1

POLLUTANT SUMMARY TABLE

Outfall 001

Outfall #	001	Description of Wastewater: Treated Sanitary Sewage													
		Type of Treatment: Equalization, Aeration, Clarification, Aerobic Digester													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality ³	# 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 January 1, 2023 to October 31, 2023 was obtained from the application provided by the permittee. All applicable water quality standards were reviewed for development of the WQBELs. The standard and WQBEL shown below represent the most stringent.															
Flow Rate	MGD	Monthly Avg	0.165	0.071 Actual Average	10	0.165	Design Flow	No alterations that will impair the waters for their best usages.				703.2	-	Design Flow	
		Consistent with 40CFR Part 133.102 and TOGS 1.3.3, a monthly average flow limitation equal to the average daily design capacity of the treatment plant is specified.													
pH	SU	Minimum	6	6.93 Actual Min	303	6.0	40 CFR 133.102	-	-	6.5 – 8.5	Range	6.5 - 8.5	703.3	-	ISEL
		Maximum	9.5	7.94 Actual Max	303	9.0		Consistent with TOGS 1.3.1, intermittent stream effluent limits (ISEL) are applied to effluent discharges to streams where little or no streamflow is available for dilution. As such, the water quality standards will be applied as end-of-pipe limitations with no mixing or dilution. These limitations are more stringent than the secondary treatment standards under 40CFRPart 133.102.							
Temperature	°C	Daily Max	Monitor	23 Actual Max	1	Monitor	750-1.13	-	The water temperature at the surface of a stream shall not be raised to more than 90F at any point and... shall not be raised or lowered to more than 5F over the temperature that existed before the addition				704.2	-	Monitor
		Consistent with 6 NYCRR 750-1.13(a), monitoring is required and may be used to inform future permitting decisions. This requirement is new.													

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

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Outfall #	001	Description of Wastewater: Treated Sanitary Sewage													
		Type of Treatment: Equalization, Aeration, Clarification, Aerobic Digester													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality ³	# 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		
Dissolved Oxygen (DO)	mg/L	Daily Min	7.0	2.0	11	7.0	TOGS 1.3.1	-	-	4.0 mg/L (703.3)	7.0	TOGS 1.3.1	-	ISEL	
Consistent with TOGS 1.3.1, intermittent stream effluent limits (ISEL) are applied to effluent discharges to streams where little or no streamflow is available for dilution. These limits represent the highest degree of treatment that can reasonably be achieved by a wastewater treatment facility treating domestic type waste.															
5-day Biochemical	mg/L	Daily Max	5.0	44.4	20	5.0	TOGS 1.3.1	-	DO=4.0 mg/L (Surrogate Standard) 703.3	5.0	6.9	TOGS 1.3.1	-	ISEL	
Oxygen Demand	lbs/d	Daily Max	3.34	7.88 30 Day flow-weighted average	10	6.9	-								
(BOD ₅)	% Rem	Minimum	-	72	10	85	40 CFR Part 133.102								
Consistent with TOGS 1.3.1, intermittent stream effluent limits (ISEL) are applied to effluent discharges to streams where little or no streamflow is available for dilution. These limits represent the highest degree of treatment that can reasonably be achieved by a wastewater treatment facility treating domestic type waste. These limits are more stringent than the secondary treatment standards under 40CFR Part 133.102.															
Total Suspended Solids (TSS)	mg/L	Daily Max	10	29.1	19	10	TOGS 1.3.1	-	None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. (703.2)	-	-	703.2	-	ISEL	
	lbs/d	Daily Max	6.68	4.71 30 Day flow-weighted average	10	13.8	-								
	% Rem	Minimum	-	82	10	85	40 CFR Part 133.102								
Consistent with TOGS 1.3.1, intermittent stream effluent limits (ISEL) are applied to effluent discharges to streams where little or no streamflow is available for dilution. These limits represent the highest degree of treatment that can reasonably be achieved by a wastewater treatment facility treating domestic type waste. These limits are more stringent than the secondary treatment standards under 40CFR Part 133.102.															

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Outfall #	Description of Wastewater: Treated Sanitary Sewage														
	Type of Treatment: Equalization, Aeration, Clarification, Aerobic Digester														
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality ³	# 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		
Settleable Solids	mL/L	Daily Max	0.1	<0.1	303	0.1	TOGS 1.3.1	-	None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. (703.2)			703.2	-	ISEL	
	Consistent with TOGS 1.3.1, intermittent stream effluent limits (ISEL) are applied to effluent discharges to streams where little or no streamflow is available for dilution. These limits represent the highest degree of treatment that can reasonably be achieved by a wastewater treatment facility treating domestic type waste. These limits are more stringent than the secondary treatment standards under 40CFR Part 133.102.														
Nitrogen, Ammonia (as N)	mg/L	Daily Max	2.0 (as NH ₃)	31.4 (as NH ₃)	20	-	-	-	-	1.4 (as N)	A(C)	1.4 (as N)	703.5	-	WQBEL
	lb/d	Monthly Avg	-	-	-	-	-	-	-	-	-	1.92 (as N)			
SUMMER 6/1 – 10/31	Consistent with TOGS 1.3.1, intermittent stream effluent limits (ISEL) are applied to effluent discharges to streams where little or no streamflow is available for dilution. As such, the water quality standards will be applied as end-of-pipe limitations with no mixing or dilution. A temperature of 25°C (default value) and a pH of 7.64 SU (80 th percentile of effluent pH data from Jan 2023- Oct 2023). As the stream is intermittent no ambient background concentrations for ammonia does not exist. Ammonia has been changed from (as NH ₃) to (as N) for simpler data reporting, as this is consistent with the laboratory reporting units. Values can be converted using the equation: Ammonia (as N) = Ammonia (as NH ₃) x 0.8224.														
Nitrogen, Ammonia (as N)	mg/L	Daily Max	2.0	31.4	20	-	-	-	-	2.1 (as N)	A(C)	2.1 (as N)	703.5	-	WQBEL
	lb/d	Monthly Avg	-	-	-	-	-	-	-	-	-	2.9 (as N)			
WINTER 11/1 – 5/31	Consistent with TOGS 1.3.1, intermittent stream effluent limits (ISEL) are applied to effluent discharges to streams where little or no streamflow is available for dilution. As such, the water quality standards will be applied as end-of-pipe limitations with no mixing or dilution. A temperature of 25°C (default value) and a pH of 7.64 SU (80 th percentile of effluent pH data from Jan 2023- Oct 2023). As the stream is intermittent no ambient background concentrations for ammonia does not exist. The existing permit limit of 2.0 mg/L listed above is reflective of a year-round limit. There has not previously been a winter ammonia limit in this permit. Based on the data provided by the permittee, seasonal WQBELs are being applied per Department evaluation (TOGS 1.3.1 E). Ammonia has been changed from (as NH ₃) to (as N) for simpler data reporting, as this is consistent with the laboratory reporting units. Values can be converted using the equation: Ammonia (as N) = Ammonia (as NH ₃) x 0.8224.														

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Outfall #	Description of Wastewater: Treated Sanitary Sewage														
	Type of Treatment: Equalization, Aeration, Clarification, Aerobic Digester														
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality ³	# 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		
Coliform, Fecal	#/100 ml	30d Geo Mean	-	-	-	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	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 (TRC)	mg/L	Daily Max	-	-	-	2.0	TOGS 1.3.3	-	-	0.005	A(C)	0.005	703.5	0.03	ML
Seasonal effluent disinfection is being added to the permit. Consistent with TOGS 1.3.1, intermittent stream effluent limits (ISEL) are applied to effluent discharges to streams where little or no streamflow is available for dilution. As such, the water quality standards will be applied as end-of-pipe limitations with no mixing or dilution.															

Appendix: Regulatory and Technical Basis of Permit Authorizations

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

Regulatory References

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

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

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

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

Outfall and Receiving Water Information

Impaired Waters

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

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

Existing Effluent Quality

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

Permit Requirements

Basis for Effluent Limitations

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

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

Anti-backsliding

Anti-backsliding requirements are specified in the CWA sections 402(o) and 303(d)(4), ECL 17-0809, and regulations at 40 CFR 122.44(i) 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 law⁴ and USEPA interpretation⁵ 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

⁴ American Iron and Steel Institute v. Environmental Protection Agency, 115 F.3d 979, 993 n.6 (D.C. Cir. 1997)

⁵ 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)

to ensure that the water quality standards of receiving waters are met. In general, the CWA requires that the effluent limitations for a particular pollutant are the more stringent of either the TBEL or WQBEL.

Technology-based Effluent Limitations (TBELs)

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

Water Quality-Based Effluent Limitations (WQBELs)

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

Mixing Zone Analyses

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

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

Critical Flows

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

represented by the 30Q10 flow and is calculated as the lowest average flow over a 30-day consecutive period within 10 years. However, NYSDEC considers using 1.2 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;
- 3) determine if WQBELs are necessary (i.e. reasonable potential analysis (RPA)). The RPA will utilize the procedure outlined in Chapter 3.3.2 of EPA's Technical Support Document (TSD). As outlined in the TSD, for parameters with limited effluent data the RPA may include multipliers to account for effluent variability; and,
- 4) calculate WQBELs (if necessary). Factors considered in calculating WQBELs include available dilution of effluent in the receiving water, receiving water chemistry, and other pollutant sources.

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

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

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

discharges of conservative toxic pollutants to ensure water quality standards are met in downstream segments.

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.