State Pollutant Discharge Elimination System (SPDES) DISCHARGE PERMIT

SIC Code:	**4952**	NAICS Code:	**221320**	SPDES Number:	**NY 002 5429**
Discharge Class (CL):	**07**			DEC Number:	**3-1358-00012/00003**
Toxic Class (TX):	**T**			Effective Date (EDP):	**EDP**
Major-Sub Drainage Basin:	**13 - 05**			Expiration Date (ExDP):	**ExDP**
Water Index Number:	**H-101-21**	Item No.:	**857 - 089**	Modification Dates (EDPM):	
Compact Area:	**-**				

This SPDES permit is issued in compliance with Title 8 of Article 17 of the Environmental Conservation Law of New York State.

PERMITTEE NAME AND ADDRESS					
Name:	**Village of Millbrook**	Attention:	**Mayor**		
Street:	**35 Merrit Avenue, PO Box 349**				
City:	**Millbrook**	State:	**NY**	Zip Code:	**12545**
Email:	**villageofmillbrookmayor@gmail.com**	Phone:	**(845) 677-3939**		

is authorized to discharge from the facility described below:

FACILITY NAME, ADDRESS, AND PRIMARY OUTFALL																
Name:	**Millbrook Sewage Treatment Plant**															
Address / Location:	**39 North Avenue**											County:	**Dutchess**			
City:	**Millbrook**						State:	**NY**				Zip Code:	**12545**			
Facility Location:		Latitude:	**41**	°	**47**	’	**19.42**	” N	& Longitude:	**73**	°	**41**	’	**49.99**	” W	
Primary Outfall No.:	**001**	Latitude:	**41**	°	**47**	’	**20.51**	” N	& Longitude:	**73**	°	**41**	’	**48.91**	” W	
Outfall Description:	**Treated Sanitary**	Receiving Water:	**East Branch of Wappingers Creek**				Class:	**C**	Standard:	**C(T)**						

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

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

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

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

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SUMMARY OF OVERFLOW RETENTION FACILITIES (ORF) OUTFALLS

In accordance with 6 NYCRR Part 750-2.8(b)(2) and 40 CFR 122.41, bypasses of the collection and treatment system without treatment are prohibited except when (1) the bypass is necessary and unavoidable to prevent loss of life, personal injury, public health hazard, environmental degradation, or severe property damage and (2) there is no feasible alternative to the bypass and (3) the permittee complies with the notice requirements in 6 NYCRR Part 750-2.7. Pursuant to ECL 17-0505, ORF outfalls are required to be listed in permit.

The following ORF outfalls constitute approved anticipated bypasses, provided that the permittee maintains compliance with the attached effluent limits, compliance schedule, and I/I Management Program. The discharges from the listed ORFs are only allowed after the plant's full capacity has been utilized and maximized, and the capacity of the ORF has been reached. The Department reserves the right to modify these requirements.

The following onsite ORFs, which discharge from the POTW, have been identified:

Outfall	Type of Discharge	Outfall Latitude						Outfall Longitude					
002 (internal)	**Partially treated sewage**	**41**	°	**47**	'	**19**	" N	**73**	°	**41**	'	**55**	" W
Receiving Water:	**Internally mixes with chlorine tank influent and discharges through Outfall 001**							Class:		**-**			

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.

INTERIM PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL	LIMITATIONS APPLY	RECEIVING WATER	EFFECTIVE	EXPIRING
001	All year unless otherwise noted	East Branch of Wappingers Creek	EDP	4/30/2028

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location Inf.	Location Eff.	
Flow	12 MRA	0.25	MGD			Continuous	Estimate	X		3
Flow	Monthly Average	Report	MGD			Continuous	Recorder	X		
BOD_5	Monthly Average	15	mg/L	31	lbs/d	Monthly	6-hr. Comp.	X	X	1
BOD_5	7-Day Average	23	mg/L	47	lbs/d	Monthly	6-hr. Comp.		X	
Total Suspended Solids (TSS)	Monthly Average	15	mg/L	31	lbs/d	Monthly	6-hr. Comp.	X	X	1
Total Suspended Solids (TSS)	7-Day Average	23	mg/L	47	lbs/d	Monthly	6-hr. Comp.		X	
Settleable Solids	Daily Maximum	0.1	mL/L			Daily	Grab		X	
pH	Daily Minimum	6.5	SU			Daily	Grab		X	
	Daily Maximum	8.5	SU							
Ammonia (as N)	Monthly Average	5.0	mg/L			Monthly	6-hr. Comp.		X	
Total Phosphorus (as P)	Daily Maximum	Monitor	mg/L			Monthly	Grab		X	
Dissolved Oxygen	Daily Minimum	5.0	mg/L			2/year	Grab		X	
Temperature	Daily Maximum	Monitor	ºF			Daily	Grab		X	
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	
Coliform, Fecal	7-Day Geometric Mean	400	No./ 100 mL			Monthly	Grab		X	
Chlorine, Total Residual	Daily Maximum	0.1	mg/L			Daily	Grab		X	2

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FOOTNOTES:

1. Effluent shall not exceed 15% of influent concentration values for both BOD_5 & TSS.

2. 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 12-month rolling average for Flow is defined as the sum of the current month's monthly average concentration or load added to the monthly averages from the eleven previous months, divided by the number of months for which samples were collected in the 12-month period.

4. There shall be no sewer extensions without prior DEC approval. Any proposed connections for the future will require development and submission of an online capacity assessment as well as demonstration of a 3:1 ratio reduction of excess infiltration & inflow vs proposed new waste flow.

INTERIM PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL	LIMITATIONS APPLY:	RECEIVING WATER	EFFECTIVE	EXPIRING
002 (internal)	During ORF Discharges	Internal to Outfall 001	EDP	4/30/2028

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location Inf.	Location Eff.	
Flow	7-Day Average	Monitor	MGD			Continuous	Recorder	X	X	1,4,5
Flow	Daily Maximum	Monitor	MGD			Continuous	Recorder	X	X	1,3,5
BOD5	Monthly Average	Monitor	mg/L			Daily	Composite		X	6
BOD5	7-Day Average	Monitor	mg/L			Daily	Composite		X	4
Solids, Total Suspended (TSS)	Monthly Average	Monitor	mg/L			Daily	Composite		X	6
Solids, Total Suspended (TSS)	7-Day Average	Monitor	mg/L			Daily	Composite		X	4
Solids, Settleable	Daily Maximum	Monitor	mL/L			Daily	Grab		X	3,6
pH	Daily Minimum	Monitor	SU			Daily	Grab		X	3
	Daily Maximum	Monitor	SU							
Ammonia (as N)	Monthly Average	Monitor	mg/L			Monthly	6-hr. Comp.		X	6
Oil & Grease	Daily Maximum	Monitor	mg/L			Daily	Grab		X	3
Floatable Material	Daily Maximum	Monitor				Daily	Visual Observation		X	3
Precipitation	Daily Maximum	Monitor	inches			Daily	Onsite Rain Gauge			2,3
Effluent Disinfection Required Year-Round										
Coliform, Fecal	30-Day Geometric Mean	Monitor	No./ 100 mL			Monthly	Grab		X	6
Coliform, Fecal	7 Day Geometric Mean	Monitor	No./ 100 mL			Monthly	Grab		X	6
Chlorine, Total Residual	Daily Maximum	Monitor	mg/L			Daily	Grab		X	3,6

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FOOTNOTES:

1. No discharge is permitted except as caused by excess flows above the wet weather capacity of the treatment plant (0.25 MGD) and only after the 0.4 MG capacity for the ORF is exceeded. All flows are reported on the monthly operating report.
2. The permittee shall report daily and monthly total precipitation values in the monthly operating report.
3. Daily max shall be calculated based on the arithmetic mean of samples taken during any calendar day.
4. The seven-day average shall be calculated as the average of the results for each of the discharge days over the seven-day period. For example, if the ORF discharges for three days [or any part of a day] during the period, the average of the three days would constitute the seven-day average for the purposes of compliance.

5. All flow discharged from the ORF shall be continuously recorded and totalized.

6. The permittee shall monitor the combined discharge from the ORF and the WWTP for the above parameters on a daily basis whenever the ORF is discharging. For grab samples, a second grab sample of the combined discharge shall be collected if the daily sample had already been collected prior the ORF discharging.

SPECIAL CONDITIONS FOR OPERATION OF OVERFLOW RETENTION FACILITY

a) The facilities shall be operated in conjunction with the tributary sewer system, pump stations and the POTW treatment plant to maximize pollutant removal.

b) The contents of the ORF (i.e. captured wastewater) shall not be delivered to the POTW Treatment Plant at a rate which would exceed the peak daily or peak hourly flow or loading.

c) Flow shall not be delivered to the POTW treatment plant at a rate that will cause an upset as defined by 6 NYCRR Part 750-2, “Operating in Accordance with a SPDES Permit.”

d) See Schedule of Compliance for Inflow and Infiltration Management Plan

FINAL PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL	LIMITATIONS APPLY	RECEIVING WATER	EFFECTIVE	EXPIRING
001	All year unless otherwise noted	East Branch of Wappingers Creek	5/1/2028	ExDP

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location Inf.	Location Eff.	
Flow	Monthly Average	0.25	MGD			Continuous	Recorder	X		
$CBOD_5$	Monthly Average	15	mg/L	31	lbs/d	Monthly	6-hr. Comp.	X	X	1
$CBOD_5$	7-Day Average	23	mg/L	47	lbs/d	Monthly	6-hr. Comp.		X	
Total Suspended Solids (TSS)	Monthly Average	15	mg/L	31	lbs/d	Monthly	6-hr. Comp.	X	X	1
Total Suspended Solids (TSS)	7-Day Average	23	mg/L	47	lbs/d	Monthly	6-hr. Comp.		X	
Settleable Solids	Daily Maximum	0.1	mL/L			1/day	Grab		X	
pH	Daily Minimum	6.5	SU			1/day	Grab		X	
	Daily Maximum	8.5	SU							
Ammonia (as N) Summer	Monthly Average	2.2	mg/L			Monthly	6-hr. Comp.		X	
Ammonia (as N) Winter	Monthly Average	4.4	mg/L			Monthly	6-hr. Comp.		X	
Total Phosphorus (as P)	Daily Maximum	Monitor	mg/L			Monthly	6-hr. Comp.		X	
Dissolved Oxygen	Daily Minimum	5.0	mg/L			Monthly	Grab		X	
Total Mercury	Daily Maximum	50	ng/L			Monthly	Grab	X	X	
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	
Coliform, Fecal	7-Day Geometric Mean	400	No./ 100 mL			Monthly	Grab		X	
Chlorine, Total Residual	Daily Maximum	0.03	mg/L			1/day	Grab		X	2,3
ACTION LEVEL PARAMETERS	Type	Action Level	Units	Action Level	Units	Sample Frequency	Sample Type	Inf.	Eff.	FN
Temperature	Daily Maximum	70	ºF			1/day	Grab		X	4

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FOOTNOTES:

1. Effluent shall not exceed 15% of influent concentration values for both $CBOD_5$ & TSS respectively.
2. 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. This is a Compliance Level. The calculated WQBEL is 0.017 mg/L.

4. Temperature Action Level – Monitoring Program
If the discharge temperature exceeds the Action Level of 70ºF the permittee shall, within one week, undertake the following sampling program. Temperature shall be measured at the following three locations, all within one hour, on the same day, once in the morning and once in the afternoon:

   1. Effluent sample as close as practical to the outfall without interference from the receiving water
   2. Downstream receiving water sample (as specified on the Monitoring Locations page of this permit)
   3. Upstream receiving water sample (as specified on the Monitoring Locations page of this permit)

   The permittee is exempt from this temperature monitoring program whenever conditions at or near the monitoring locations are unsafe due to weather.

   Results shall be appended to the corresponding Discharge Monitoring Report (DMR) and emailed in spreadsheet format to spdes.temperaturedata@dec.ny.gov.

MERCURY MINIMIZATION PROGRAM (MMP) - Type II

1. General - The permittee must develop, implement, and maintain a mercury minimization program (MMP), containing the elements set forth below, to reduce mercury effluent levels with the goal of achieving the WQBEL of 0.7 ng/L.

2. MMP Elements - The MMP must be a written document and must include any necessary drawings or maps of the facility and/or collection system. Other related documents already prepared for the facility may be used as part of the MMP and may be incorporated by reference. At a minimum, the MMP must include the following elements as described in detail below:

   a. Monitoring - Monitoring at Outfall 001, influent and other locations tributary to compliance points shall be performed using either USEPA Method 1631 or another sufficiently sensitive method, as approved under 40 CFR Part 136[1]. Monitoring of raw materials, equipment, treatment residuals, and other non-wastewater/non-stormwater substances may be performed using other methods as appropriate. Monitoring must be coordinated so that the results can be effectively compared between locations.

      Minimum required monitoring is as follows:

      i. Sewage Treatment Plant Influent and Effluent – The permittee must collect samples at the location(s) and frequency as specified in the SPDES permit limitations table.

      ii. *Key Locations* and *Potential Mercury Sources* – The permittee must sample *key locations*, chosen to identify *potential mercury sources*, at least annually. Sampling of discharges from dental facilities in compliance with 6 NYCRR 374.4 is not required.

      iii. Hauled Wastes – The permittee must establish procedures for the acceptance of hauled waste to ensure the hauled waste is not a potential mercury source. Loads which may exceed 500 ng/L,[2] must receive approval from the DEC prior to acceptance.

      iv. Decreased Monitoring Requirements - Facilities with EEQ at or below 12 ng/L are eligible for the following:
         1) Reduced requirements, through a permittee-initiated permit modification
            a) Conduct influent monitoring, sampling semi-annually, in lieu of monitoring within the collection system, such as at *key locations*; and
            b) Conduct effluent compliance sampling semi-annually.
         2) If a facility with reduced requirements reports discharges above 12 ng/L for two of four consecutive effluent samples, the DEC may undertake a Department-initiated modification to remove the allowance of reduced requirements.
         3) Under the decreased permit requirements, the facility must continue to conduct a status report, as applicable in accordance with 2.c of this MMP, to determine if any waste streams have changed.

      v. Additional monitoring must be completed as required elsewhere in this permit (e.g., locations tributary to compliance points).

   b. Control Strategy - The control strategy must contain the following minimum elements:

      i. Pretreatment/Sewer Use Law - The permittee must review pretreatment program requirements and the Sewer Use Law (SUL) to ensure it is up-to-date and enforceable with applicable permit requirements and will support efforts to achieve a dissolved mercury concentration of 0.70 ng/L in the effluent.

      ii. Monitoring and Inventory/Inspections for Outfall -
         1) Monitoring shall be performed as described in 2.a above. As mercury sources are found, the permittee must enforce its sewer use law to track down and minimize these sources.
         2) The permittee must inventory and/or inspect users of its system as necessary to support the MMP.
            a) Dental Facilities
               1. The permittee must maintain an inventory of each dental facility.

[1] Outfall monitoring must be conducted using the methods specified in Table 8 of *DOW 1.3.10.*
[2] A level of 0.2 mg/L (200,000 ng/L) or more is considered hazardous per 40 CFR Part 261.11. 500 ng/L is used here to alert the permittee that there is an unusual concentration of mercury and that it will need to be managed appropriately.

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

2. The permittee must inspect each dental facility at least once every five years to verify compliance with the wastewater treatment operation, maintenance, and notification elements of 6 NYCRR 374.4. Alternatively, the permittee may develop and implement an outreach program,[3] which informs users of their responsibilities, and collect the "Amalgam Waste Compliance Report for Dental Dischargers"[4] form, as needed, to satisfy the inspection requirements. The permittee must conduct the outreach program at least once every five years and ensure the "Amalgam Waste Compliance Report for Dental Dischargers" are submitted by new users, as necessary. The outreach program could be supported by a subset of site inspections.
3. A file shall be maintained containing documentation demonstrating compliance with 2.b.ii.2)a) above. This file shall be available for review by DEC representatives and copies shall be provided upon request.

b) Other *potential mercury sources*
1. The permittee must maintain an inventory of other *potential mercury sources.*
2. The permittee must inspect other *potential mercury sources* once every five years. Alternatively, the permittee may develop and implement an outreach program which informs users of their responsibilities as *potential mercury sources.* The permittee must conduct the outreach program at least once every five years. The outreach program should be supported by a subset of site inspections.
3. A file shall be maintained containing documentation demonstrating compliance with 2.b.ii.2)b) above. This file shall be available for review by DEC representatives and copies shall be provided upon request.

iii. Systems with CSO & Type II SSO Outfalls – Permittees must prioritize *potential mercury sources* upstream of CSOs and Type II SSOs for mercury reduction activities and/or controlled-release discharge.

iv. Equipment and Materials – Equipment and materials (e.g., thermometers, thermostats) used by the permittee, which may contain mercury, must be evaluated by the permittee. As equipment and materials containing mercury are updated/replaced, the permittee must use mercury-free alternatives, if possible.

v. Bulk Chemical Evaluation – For chemicals, used at a rate which exceeds 1,000 gallons/year or 10,000 pounds/year, the permittee must obtain a manufacturer's certificate of analysis, a chemical analysis performed by a certified laboratory, and/or a notarized affidavit which describes the substances' mercury concentration and the detection limit achieved. If possible, the permittee must only use bulk chemicals utilized in the wastewater treatment process which contain <10 ppb mercury.

c. **Status Report - An annual** status report must be developed and maintained on site, in accordance with the Schedule of Additional Submittals, summarizing:

i. All MMP monitoring results for the previous reporting period;
ii. A list of known and *potential mercury sources* for Outfall 001
1) If the permittee meets the criteria for MMP Type IV, the permittee must notify the DEC for a permittee-initiated modification;
iii. All actions undertaken, pursuant to the control strategy, during the previous reporting period;
iv. Actions planned, pursuant to the control strategy, for the upcoming reporting period; and
v. Progress towards achieving a dissolved mercury concentration of 0.70 ng/L in the effluent (e.g., summarizing reductions in effluent concentrations as a result of the control strategy implementation and/or installation/modification of a treatment system).

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

[3] For example, the outreach program could include education about sources of mercury and what to do if a mercury source is found.
[4] The form, "Amalgam Waste Compliance Report for Dental Dischargers," can be found here: https://www.dec.ny.gov/docs/water_pdf/dentalform.pdf

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

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

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

DEFINITIONS:

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

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

DISCHARGE NOTIFICATION REQUIREMENTS

(a) The permittee shall install and maintain identification signs at all outfalls to surface waters listed in this permit, unless the Permittee has obtained a waiver in accordance with the Discharge Notification Act (DNA). Such signs shall be installed before initiation of any 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.

SCHEDULE OF COMPLIANCE

a) The permittee shall comply with the following schedule:

Outfall(s)	Compliance Action	Compliance Date[5]
	DESIGN DOCUMENTS The permittee shall submit approvable[6] Design Documents including a Basis of Design Report (BODR), Plans, Specifications, and Construction Schedule for the upgrade of the WWTP and removal of the ORF. Upgrade of the WWTP will ensure compliance with final effluent limitation(s) for Ammonia, and Total Residual Chlorine.	December 15, 2024
	INTERIM PROGRESS REPORT[7] The permittee shall provide a status update for *Complete Construction*. This report can be submitted as a hard copy or as an email.	EDP + 15 Months EDP + 24 Months EDP + 33 Months
	COMPLETE CONSTRUCTION The permittee shall provide a Construction Completion Certification[8] to the DEC that the disposal system has been fully completed and the ORF removed in accordance with the approved Design Documents.	December 15, 2027
	COMMENCE OPERATION Following receipt of DEC acceptance of the Construction Completion Certification, the permittee shall comply with the final effluent limitation(s) described in this permit for Ammonia, and Total Residual Chlorine. Also, the ORF shall no longer be in use.	May 1, 2028
	INFLOW & INFILTRATION MANAGEMENT PROGRAM The permittee shall continue to monitor, survey, prioritize and repair sewers, manholes, and pump stations as necessary and in accordance with the I&I Program. The permittee shall submit an annual I&I program report to the DEC Region 3 office and to the Bureau of Water Permits for approval each year. The report shall: detail the repairs completed each year; detail the monitoring and surveying that was performed; list the repairs to be completed the next year by priority ranking; and evaluate the effect on the influent flow to the treatment plant. The list of repairs to be completed in each year shall become part of, and enforceable under, the SPDES permit.	February 1, Annually
Unless noted otherwise, the above actions are one-time requirements.		

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.

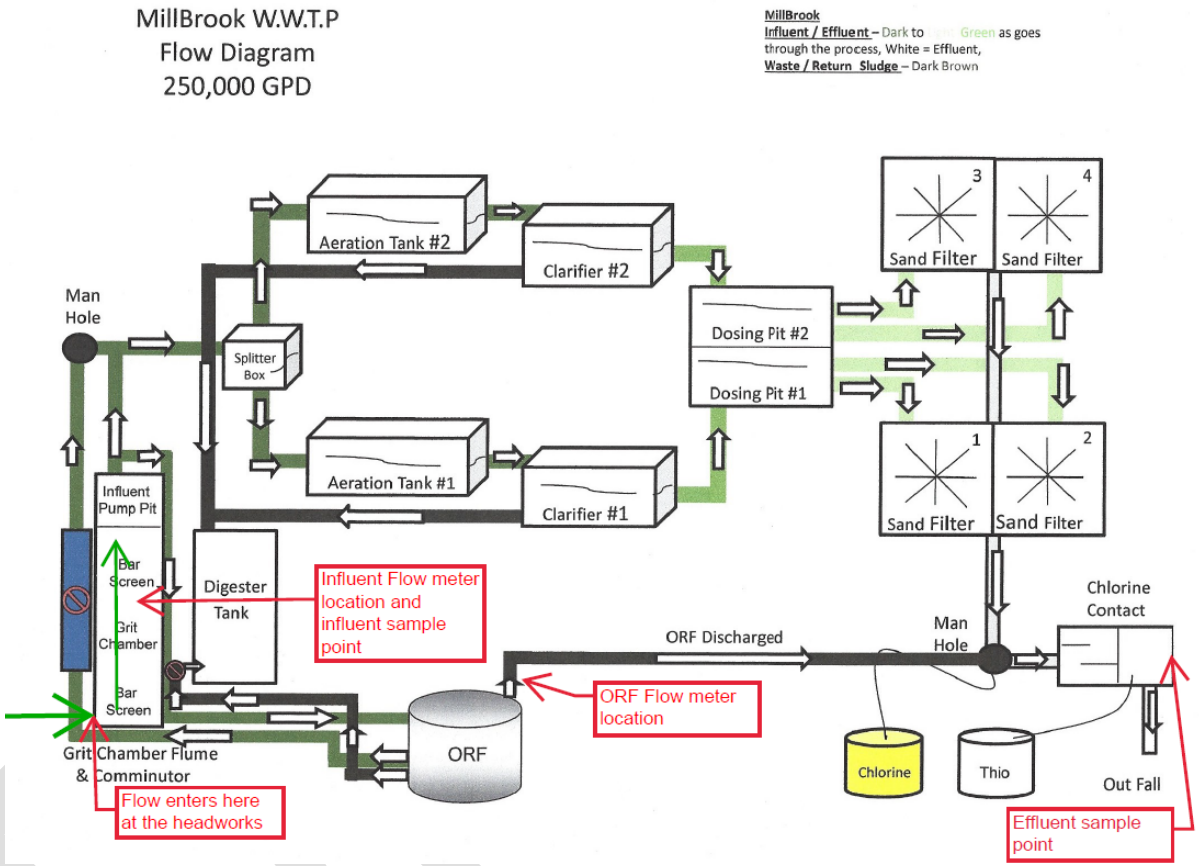
c) The permittee shall submit copies of any document required by the above schedule of compliance to the DEC Regional Water Engineer and to the Bureau of Water Permits.

[5] 6 NYCRR 750-1.14 (a)
[6] 6 NYCRR 750 1.2 (a)(8)
[7] 6 NYCRR 750-1.14 (b)
[8] 6 NYCRR 750-2.10 (c)

MONITORING LOCATIONS

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

Influent: At the influent flow meter location
Effluent: At the point where the flow from the chlorine contact chamber reaches the Outfall



Temperature Action Level – Monitoring Program

If the discharge temperature exceeds the Action Level of 70ºF the permittee shall, within one week, undertake the following sampling program. Temperature shall be measured at the following three locations, all within one hour, on the same day, once in the morning and once in the afternoon:

1. Effluent sample as close as practical to the outfall without interference from the receiving water
2. Downstream receiving water sample approximately 200 feet downstream of Outfall 001
3. Upstream receiving water sample 0 to 10 feet upstream of Outfall 001 (as long as the sampling location is not affected by the effluent and the same location is monitored every time)

The permittee is exempt from this temperature monitoring program whenever conditions at or near the monitoring locations are unsafe due to weather. Results shall be appended to the corresponding Discharge Monitoring Report (DMR) and emailed in spreadsheet format to spdes.temperaturedata@dec.ny.gov.

GENERAL REQUIREMENTS

A. The regulations in 6 NYCRR Part 750 are hereby incorporated by reference and the conditions are enforceable requirements under this permit. The permittee shall comply with all requirements set forth in this permit and with all the applicable requirements of 6 NYCRR Part 750 incorporated into this permit by reference, including but not limited to the regulations in paragraphs B through I as follows:

B. General Conditions

1.	Duty to comply	6 NYCRR 750-2.1(e) & 2.4
2.	Duty to reapply	6 NYCRR 750-1.16(a)
3.	Need to halt or reduce activity not a defense	6 NYCRR 750-2.1(g)
4.	Duty to mitigate	6 NYCRR 750-2.7(f)
5.	Permit actions	6 NYCRR 750-1.1(c), 1.18, 1.20 & 2.1(h)
6.	Property rights	6 NYCRR 750-2.2(b)
7.	Duty to provide information	6 NYCRR 750-2.1(i)
8.	Inspection and entry	6 NYCRR 750-2.1(a) & 2.3

C. Operation and Maintenance

1.	Proper Operation & Maintenance	6 NYCRR 750-2.8
2.	Bypass	6 NYCRR 750-1.2(a)(17), 2.8(b) & 2.7
3.	Upset	6 NYCRR 750-1.2(a)(94) & 2.8(c)

D. Monitoring and Records

1.	Monitoring and records	6 NYCRR 750-2.5(a)(2), 2.5(a)(6), 2.5(c)(1), 2.5(c)(2), & 2.5(d)
2.	Signatory requirements	6 NYCRR 750-1.8 & 2.5(b)

E. Reporting Requirements

1.	Reporting requirements	6 NYCRR 750-2.5, 2.7 & 1.17
2.	Anticipated noncompliance	6 NYCRR 750-2.7(a)
3.	Transfers	6 NYCRR 750-1.17
4.	Monitoring reports	6 NYCRR 750-2.5(e)
5.	Compliance schedules	6 NYCRR 750-1.14(d)
6.	24-hour reporting	6 NYCRR 750-2.7(c) & (d)
7.	Other noncompliance	6 NYCRR 750-2.7(e)
8.	Other information	6 NYCRR 750-2.1(f)
9.	Additional conditions applicable to a POTW	6 NYCRR 750-2.9

F. Planned Changes

1. The permittee shall give notice to the 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)

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

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

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

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

H. SPDES Permit Program Fee
   The permittee shall pay to the Department an annual SPDES permit program fee within 30 days of the date of the first invoice, unless otherwise directed by the 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 (electronic submission preferred):

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

Department of Environmental Conservation
Regional Water Engineer, Region 3
dow.r3@dec.ny.gov
21 South Putt Corners Road, New Paltz, New York, 12561-1696 Phone: (845) 256-3000

Dutchess County Health Department
85 Civic Center Plaza, Suite 106, Poughkeepsie, NY 12601

D. Bypass and Sewage Pollutant Right to Know Reporting: In accordance with the Sewage Pollutant Right to Know Act (ECL § 17-0826-a), Publicly Owned Treatment Works (POTWs) are required to notify DEC and Department of Health within two hours of discovery of an untreated or partially treated sewage discharge and to notify the public and adjoining municipalities within four hours of discovery. Information regarding reporting and other requirements of this program may be found on the DEC's website. In addition, POTWs are required to provide a five-day incident report and supplemental information to the DEC in accordance with Part 750-2.7(d) by utilizing the Division of Water Report of Noncompliance Event form unless waived by DEC on a case-by-case basis.

E. Schedule of Additional Submittals:

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

SCHEDULE OF ADDITIONAL SUBMITTALS		
Outfall(s)	**Required Action**	**Due Date**
	EMERGING CONTAMINANT SHORT-TERM MONITORING PROGRAM The permittee shall collect grab samples of both the influent and effluent from the facility's treatment system(s) associated with the identified outfall for Per-and Polyfluoroalkyl Substances (PFAS) and 1,4-Dioxane (1,4-D), unless permittee receives written notification from the DEC during this time that sampling can be discontinued. Samples must be analyzed utilizing EPA draft analytical method 1633 and EPA Method 8270D SIM or 8270E SIM, respectively. The samples must represent normal discharge conditions and treatment operations and shall be obtained on a quarterly basis for at least 4 consecutive quarters, unless written notification from the DEC indicates otherwise. The results shall be reported through the "Emerging Contaminants Survey for POTWs" found at: https://www.dec.ny.gov/chemical/127939.html. The permittee shall initiate track down of potential sources by completing the "Emerging Contaminants Investigation Checklist for POTWs" available at the above link. The DEC may periodically request updates or additional monitoring to check progress on track down investigations. Elements of the checklist may be used as permit conditions in future permit modifications.	EDP + 18 months Within 90 days of DEC written notification
	WATER TREATMENT CHEMICAL (WTC) ANNUAL REPORT FORM The permittee shall submit a completed WTC Annual Report Form each year that Water Treatment Chemicals are used. The form shall be attached to the December DMR.	
	ANNUAL FLOW CERTIFICATION The permittee shall submit an Annual Flow Certification form each year in accordance with 750-2.9(C)(4). The form shall be attached to the February DMR or submitted through nForm.	February DMR (March 28th)
	SHORT-TERM HIGH-INTENSITY MONITORING PROGRAM The permittee shall collect 10 samples representative of normal discharge conditions and treatment operations over 6 months for the Total Dissolved Solids parameter. The permittee shall use approved EPA analytical method with the lowest possible detection limit as promulgated under 40CFR Part 136 for the determination of the concentrations of this parameter. The permittee shall submit a summary of the results.	EDP + 6 months
	STORMWATER NO EXPOSURE CERTIFICATION Permittee must recertify every five years a condition of no exposure to stormwater in order to continue to qualify for the no exposure exclusion. The No Exposure Certification Form can be found on the DEC website.	3/18/2024, and every 5 years thereafter
	MERCURY MINIMIZATION PLAN The permittee must complete and maintain onsite an annual mercury minimization status report in accordance with the requirements of this permit.	***Maintained Onsite*** EDP + 12 months, annually thereafter

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

F. Monitoring and analysis shall be conducted using sufficiently sensitive test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

G. More frequent monitoring of the discharge(s), monitoring point(s), or waters of the State than required by the permit, where analysis is performed by a certified laboratory or where such analysis is not required to be performed by a certified laboratory, shall be included in the calculations, and recording of the data on the corresponding DMRs.

H. Calculations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

I. Unless otherwise specified, all information recorded on the DMRs shall be based upon measurements and sampling carried out during the most recently completed reporting period.

J. Any laboratory test or sample analysis required by this permit for which the State Commissioner of Health issues certificates of approval pursuant to section 502 of the Public Health Law shall be conducted by a laboratory which has been issued a certificate of approval. Inquiries regarding laboratory certification should be directed to the New York State Department of Health, Environmental Laboratory Accreditation Program.

SPDES Permit Fact Sheet
Village of Millbrook
Millbrook Sewage Treatment Plant
NY0025429

NEW YORK STATE | Department of Environmental Conservation

Contents

Summary of Permit Changes

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

- Updated permit format, definitions, and general conditions
- The new permit includes interim limits for outfall 001 that are effective until 4/30/2028 when the final limits become effective 5/1/2028
- Changed the toxic class (TX) from N to T, due to Mercury Minimization Program
- Changed the receiving water for Outfall 002 to "Internally mixes with chlorine tank influent and discharges through Outfall 001"
- Changed Flow limit of 0.25 MGD from a 12 month rolling average limit to a monthly average limit
- Changed the BOD_5 limits to $CBOD_5$ limits
- Changed limit for Nitrogen, Ammonia (N) from 5.0 mg/L to 2.2 mg/L for summer months
- Added an Ammonia limit in winter months of 4.4 mg/L
- Changed limit for Total Residual Chlorine (TRC) from 0.1 mg/L to MDL of 0.03 mg/L
- Added a daily maximum limit for Total Mercury equal of 50 ng/L
- Added a temperature action level monitoring program and a temperature action level limit of 70 degrees Fahrenheit
- Sampling frequency for Dissolved Oxygen (DO) has changed from twice per year to monthly
- Removed the 8.0 mg/L limit for Total Kjeldahl Nitrogen (TKN)
- Added a table of temporary (interim) limits for the Overflow Retention Facility that will stay in effect until it is removed
- Added a Schedule of Compliance for facility upgrade and overflow retention facility (ORF) removal
- Added an Infiltration and Inflow Management Program to the Schedule of Compliance
- Changed the diagram used for the Monitoring Locations page
- Added a Schedule of Additional Submittals with a list of the following submittals:
  - A short-term monitoring program for emerging contaminants
  - A Water Treatment Chemical Annual Report Form
  - An Annual Flow Certification form
  - Short term high-intensity monitoring requirements for Total Dissolved Solids
  - A Stormwater No Exposure Certification
  - A type II Mercury Minimization Program (MMP) maintained onsite

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

10/1/2007 The last full technical review was performed and the SPDES permit became effective with a new five-year term and expiration date of 9/30/2012. The 2007 permit, along with all subsequent modifications, has formed the basis of this permit.

The permit was administratively renewed in 2012 and again in 2017. The current permit administrative renewal is effective until 11/30/2022.

11/30/2022 The current permit was allowed to stay in effect pursuant to SAPA[1].

8/31/2021 DEC issued a Request for Information (RFI) to modify and renew the SPDES permit due to the facility's EBPS score[2]. At the time of the RFI, the facility had an EBPS score of 117 and ranking of 28.

7/28/2023 The Village of Millbrook submitted a NY-2A permit application.

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

Facility Information

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

The current 0.25 MGD treatment plant consists of:

- Preliminary Treatment: Bar Screen and Grit Chamber
- Primary Treatment: Primary Clarification
- Secondary Treatment: Activated Sludge in two extended aeration tanks with two secondary clarifiers
- Tertiary Treatment: Sand Filtration
- Disinfection: Chlorination and Dechlorination

Sludge is digested aerobically, dried in drying beds, and hauled to landfill. Some liquid sludge is hauled to a processing facility.

The primary outfall (Outfall 001) is discharging treated water into the East branch of the Wappingers Creek. The 8'' diameter Outfall pipe extends 10' from the bank into the waterbody with no diffuser.

The facility is planning the following upgrades/improvements:

- The removal of Outfall 002
- Upgrading the facility by replacing treatment components at the end of their natural life and increasing the facility's flow capacity (will not change the 0.25 MGD design flow)

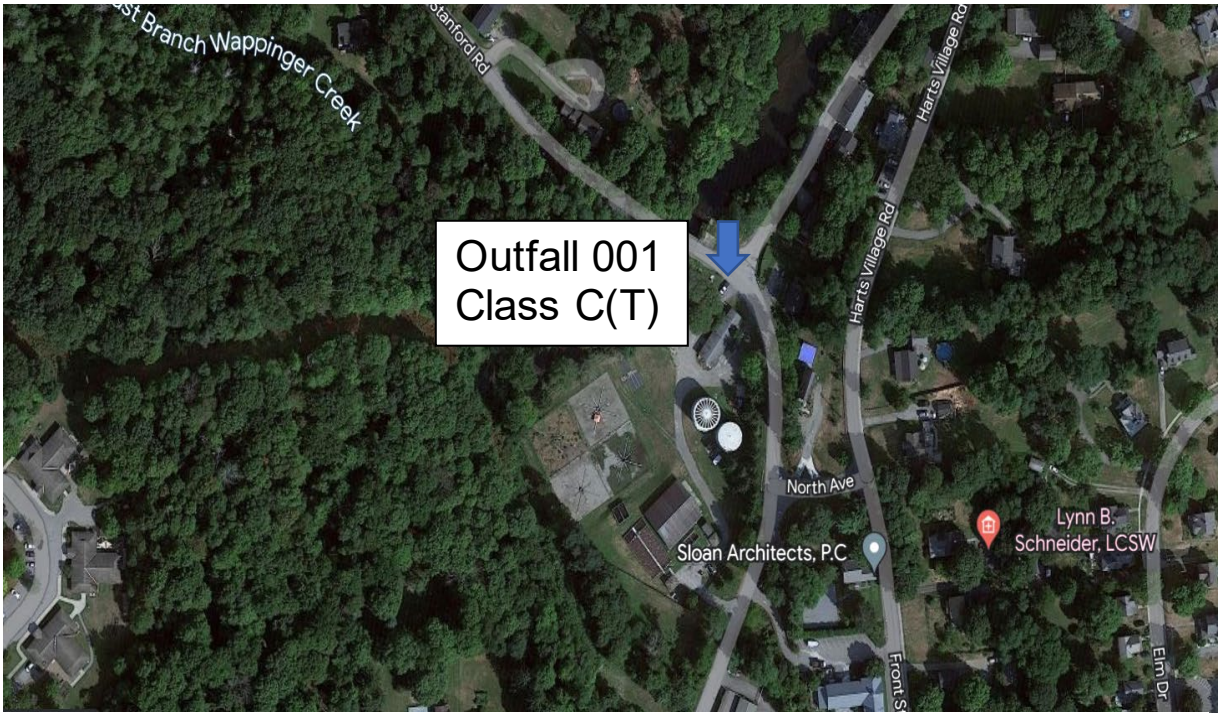
The facility accepts wastewater from the following municipalities:

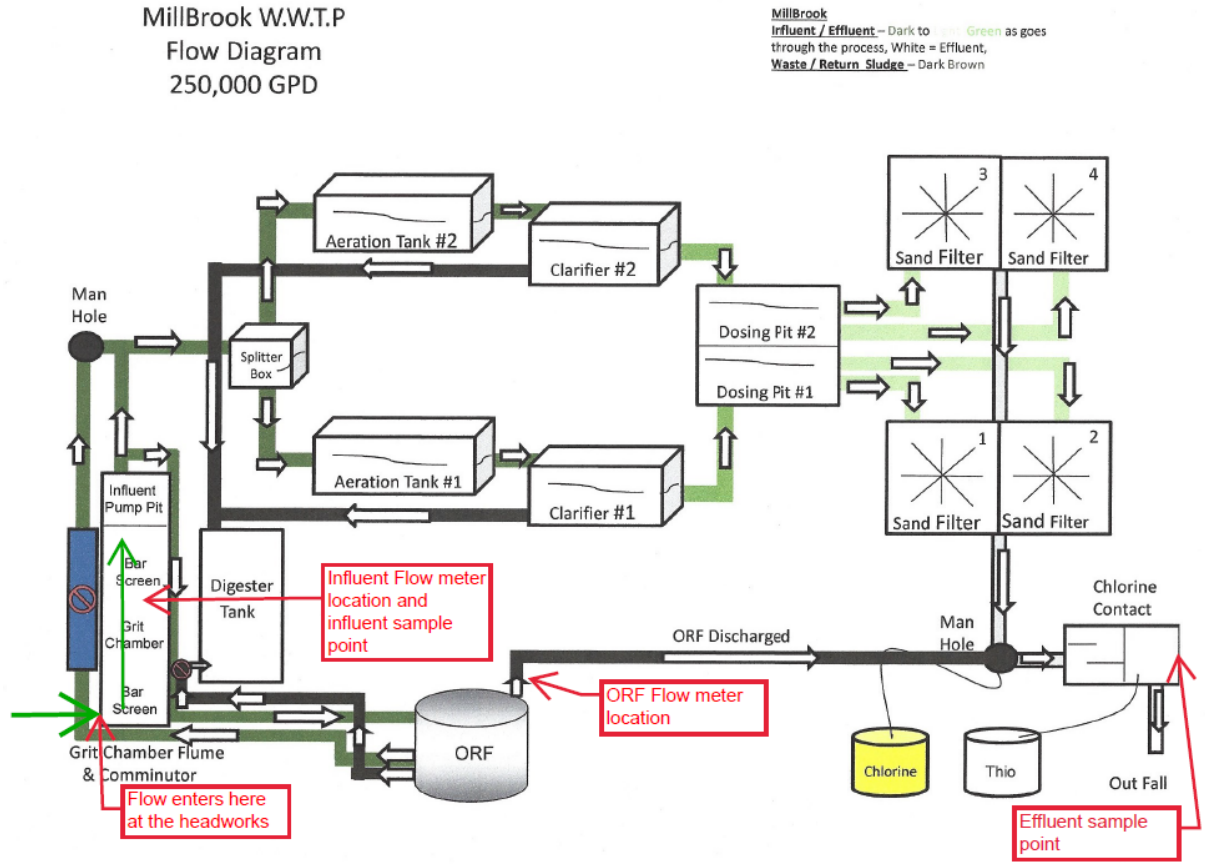
Municipality	POSS # or SPDES #	Collection System
Village of Millbrook	NY0025429	Separate

The permittee also has known Sanitary Sewer Overflow (SSO) discharges. Type II SSOs are classified as discharges of partially treated sewage from an onsite Overflow Retention Facility (ORF) (Outfall 002). ORFs are wastewater storage facilities designed to retain excessive flows that would otherwise be bypassed. The ORF has a design capacity of 0.4 million gallons. Treatment provided includes chlorination. Discharge from the ORF is prohibited except as noted in 6 NYCRR 750-2.8(b)(2) and 40 CFR 122.41. Discharge from the ORF is blended with the Outfall 001 pre-treated flow before disinfection.

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

Site Overview





Existing Effluent Quality

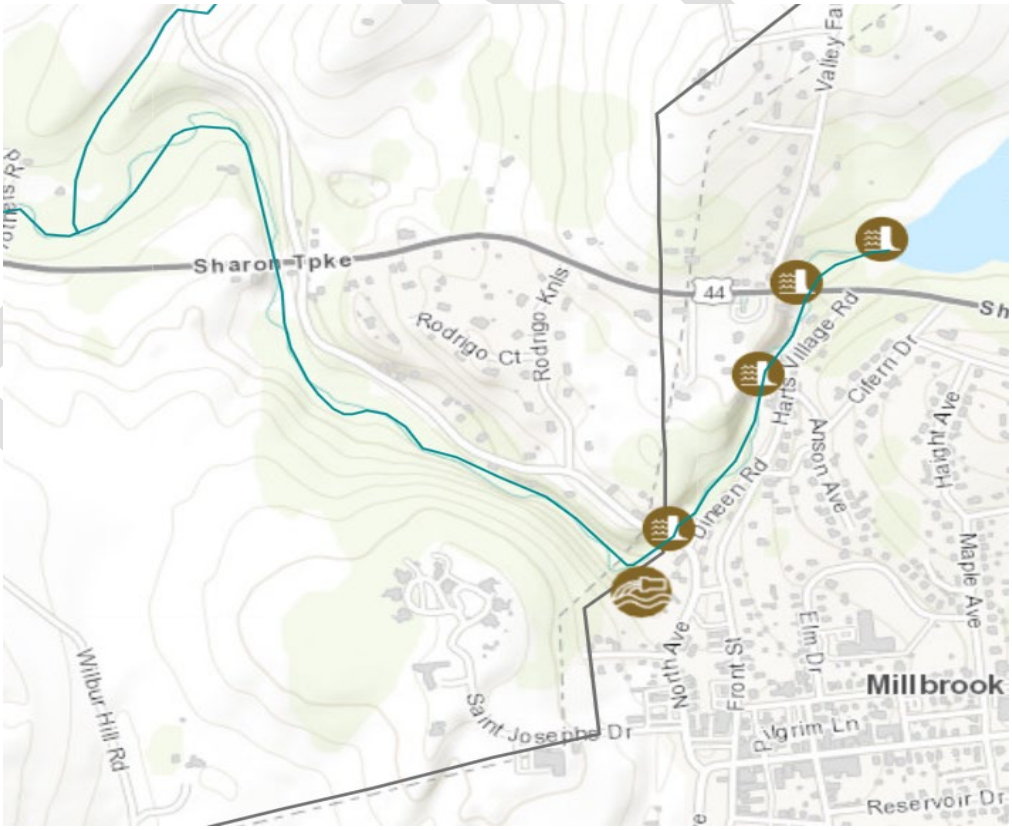
The Pollutant Summary Table presents the existing effluent quality and effluent limitations. The existing effluent quality was determined from Discharge Monitoring Reports submitted by the permittee for the period 1/31/2017 to 1/31/2022. Appendix Link

Receiving Water Information

The facility discharges via the following outfalls:

Outfall No.	SIC Code	Wastewater Type	Receiving Water
001	4952	Treated Sanitary Sewage	East Branch of the Wappingers Creek, Class C(T)
002 (internal)		Partially Treated Sewage	Internally mixes with chlorine tank influent and discharges through Outfall 001

Reach Description: The East Branch of the Wappinger Creek is a tributary of the Wappingers Creek. The Classification of the segment at the point of discharge is C(T) (6NYCRR 857.4 – Table I – Item 89, PWL ID: 1305-0022, WIN: H-101-21). The stream reach assessed for this permitting action is from the discharge to a confluence with a B(T) standard stream approximately 0.97 miles downstream of discharge.



There is a RIBS station and USGS gauge directly upstream of the mouth of the Wappingers creek, approx. 6 miles downstream of the discharge point. There is also a RIBS station on Shaw Brook approximately 2.6 miles upstream of the discharge and a RIBS station on the Mill Brook approximately 3.2 miles upstream of the discharge point. This permit was developed using the data from the Shaw Brook in Washington RIBS Station (ID# 13-SHAB-0.3).

See the Outfall and Receiving Water Summary Table and Appendix for additional information.

Impaired Waterbody Information

The East Branch of Wappingers Creek segment (PWL No. 1305-0022) 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. This discharge is upstream of Wappingers Lake (PWL No. 1305-0001) which is listed on the 303d list, but no TMDL has been developed.

Critical Receiving Water Data & Mixing Zone

The low flow condition for the East Branch of Wappingers Creek was obtained from a drainage basin ratio analysis with USGS gage station 01372100, East Branch Wappinger Creek near Clinton Corners located near Clinton Corners, NY. The 7Q10 flow and drainage area at the gage were found from the USGS/NYSDEC Bulletin 74, 1979. The 1Q10 flow was estimated as half the 7Q10 and the 30Q10 flow was estimated as 1.2 x 7Q10.

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

Gage Name: East Branch Wappinger Creek near Clinton Corners
Gage ID: 01372100
Drainage Area at Gage (mi^2): 33.6
Drainage Area at Facility (mi^2): 13.1
7Q10 Flow at Gage (CFS): 0.94 Source: Bulletin 74
Calculated 7Q10 Flow at Facility (CFS): 0.94
Estimated 1Q10 (CFS): 0.47
Estimated 30Q10 (CFS): 1.12

The 1Q10, 7Q10, and 30Q10 flows were used to calculate the acute, chronic, and human, aesthetic, wildlife (HEW) dilution ratios, respectively.

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

Outfall No.	Acute Dilution Ratio A(A)	Chronic Dilution Ratio A(C)	Human, Aesthetic, Wildlife Dilution Ratio (HEW)	Basis
001	2.2:1	3.4:1	3.9:1	TOGS 1.3.1

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

Permit Requirements

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

Whole Effluent Toxicity (WET) Testing

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

Anti-backsliding

The limitations contained in the permit are at least as stringent as the previous permit limits and there are no instances of backsliding. The removal of the permit limit for TKN is not an instance of backsliding because a TKN limit exists to calculate an Ultimate Oxygen Demand (UOD) limit in the permit. Since there is no UOD limit, a TKN limit is not necessary.

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)[3] 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.

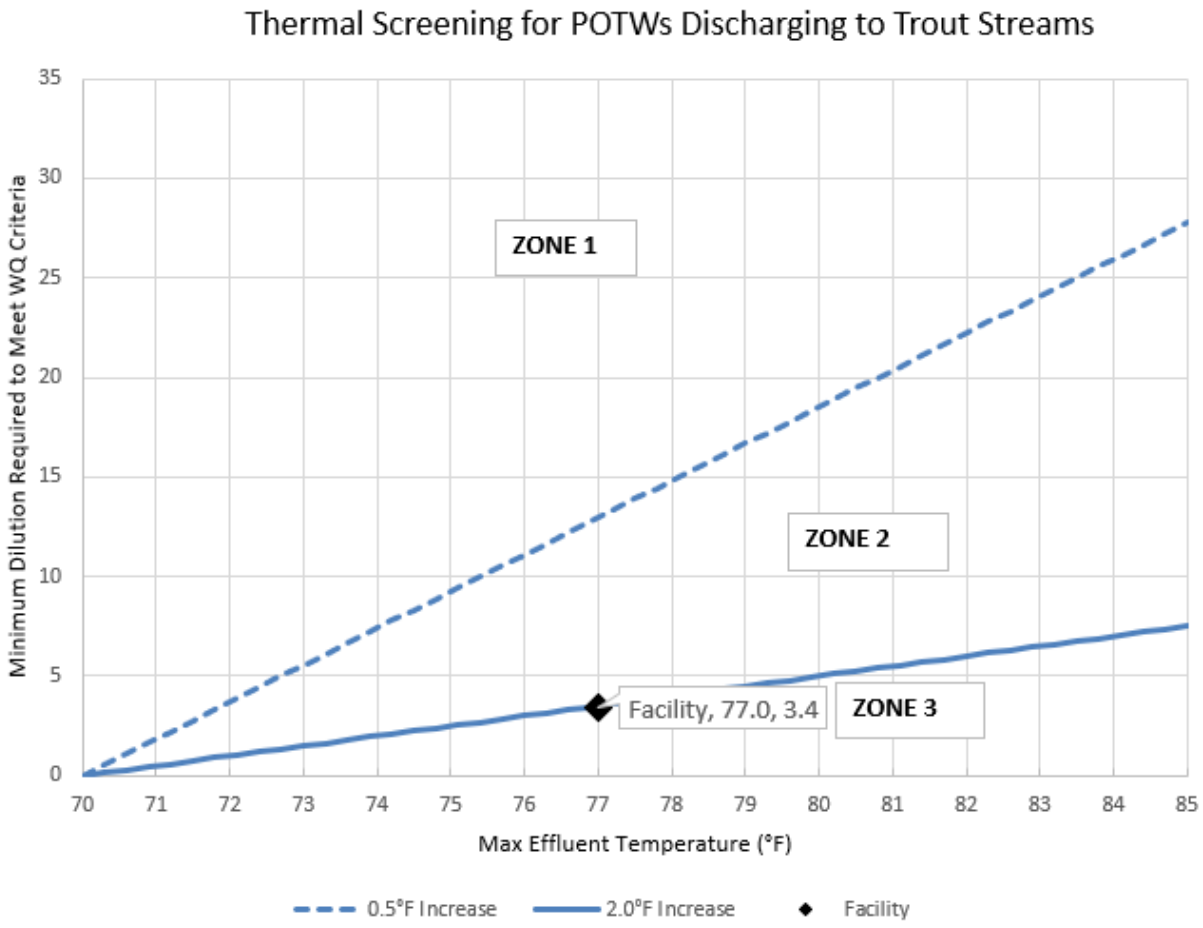
Additionally, the permit contains a requirement to make the DMR sampling data available to the public upon request. This requirement is being continued from the previous permit.

Temperature Requirements for Municipal Discharges to Trout Streams

For municipal discharges to streams classified as trout (T) or trout spawning (TS), the Department has reviewed the dilution and maximum reported effluent temperature.

The facility will require a temperature action level. While the discharge temperature is not expected to contravene the standard in 6 NYCRR Part 704, the 70ºF action level will provide data to assess the actual effect of the discharge. As described in the permit, if the action level is exceeded, the permittee will be required to collect ambient stream temperature data both upstream and downstream of the outfall during the exceedance. Data collected by this monitoring program may be used later to determine the applicability of additional limitations or modifications in accordance with 6 NYCRR 704.4.

[3] As prescribed by 6 NYCRR Part 617



Mercury[4]

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

The facility is not located in the Great Lakes Basin, has a mercury source, and is a municipal facility with a design flow of less than 1 MGD. Therefore, the facility is a MMP Type II and the permit includes requirements for the implementation of MMP Type II.

Based on 1 data point(s) of average daily mercury discharge and 5.7 ng/L collected as part of the application the facility is expected to meet the new daily max permit limit of 50 ng/L (with monthly sampling frequency). The limit represents the general level currently achievable (GLCA). The data collected will be used to establish an additional 12-month rolling average effluent limit during the next permit review.

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

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

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

Schedule of Compliance

A Schedule of Compliance is being included[5] for the following items (Appendix Link):

- Compliance schedule for removal of the ORF and facility upgrade. The permittee has agreed to remove the ORF from the facility's treatment system as a part of their facility upgrade project after several ORF discharges due to heavy rainfall. The new permit limits will be put in effect following the completion of the upgrade and removal of the ORF.
- An Inflow/Infiltration Management Program. The ORF was incorporated into the treatment system in order to alleviate the I/I entering the facility. This plan serves to ensure that there will be continual control of I/I after the ORF is removed.

Emerging Contaminant Monitoring

Emerging Contaminants, such as Perfluorooctanoic acid (PFOA), Perfluorooctanesulfonic acid (PFOS), and 1,4-Dioxane (1,4-D), have been used in a wide variety of consumer and industrial product as well as in manufacturing processes for decades. These contaminants do not break down easily, therefore their presence in wastewater can remain a concern for years following their discontinued use. As the science surrounding these contaminants is still evolving, additional monitoring is needed to better understand potential sources and background levels. For more information on emerging contaminants, please see the DEC Division of Water web page: https://www.dec.ny.gov/chemical/127939.html.

Pursuant to 6 NYCRR Part 750-1.13(b), the permit includes a short-term monitoring program listed in the Schedule of Additional Submittals to evaluate the influent and effluent discharge levels of Per-and Polyfluoroalkyl Substances (PFAS) and 1,4-Dioxane. This monitoring program is consistent with guidance released in EPA guidance memos dated April 28, 2022, and December 5, 2022.

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

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

Schedule of Additional Submittals

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

- Emerging contaminant short term monitoring program. See Emerging Contaminant Monitoring section above.
- Water Treatment Chemical Annual Report Form
- Annual Flow Certification
- Short term high-intensity monitoring program for total dissolved solids (TDS). This pollutant has reasonable potential to exceed water quality standards. If the concentration for each STHIM sample of TDS is below that of the original sample that was taken for the application, the reasonable potential will disappear.
- Stormwater no exposure certification
- MMP Type II, maintain on site. See Mercury section of this factsheet.

[5] Pursuant to 6 NYCRR 750-1.14

Special Conditions for operation of overflow retention facilities

1. The facilities shall be operated in conjunction with the tributary sewer system, pump stations and the POTW Treatment Plant to maximize pollutant removal.
2. The contents of the ORF (i.e. captured wastewater) shall not be delivered to the POTW Treatment Plant at a rate which would exceed the peak daily or peak hourly flow or loading.
3. Flow shall not be delivered to the POTW Treatment Plant at a rate that will cause an upset as defined by 6 NYCRR Part 750-2, "Operating in Accordance with a SPDES Permit."
4. The permittee shall continue to monitor, survey, prioritize and repair sewers, manholes, and pump stations as necessary and in accordance with the I&I Program. The permittee shall submit an annual I&I program report to the DEC Region 3 office and to the Bureau of Water Permits for approval each year. The report shall: detail the repairs completed each year; detail the monitoring and surveying that was performed; list the repairs to be completed the next year by priority ranking; and evaluate the effect on the influent flow to the treatment plant. The list of repairs to be completed in each year shall become part of, and enforceable under, the SPDES permit.

This facility has an overflow retention facility (ORF). The special conditions for operation of an ORF in the current permit will be carried over to the new permit. These special conditions will apply until the ORF is removed, with the exception of Special Condition #4. Special condition #4 requires the facility to continue, and identify, sources of inflow and infiltration (I/I) in their collection system to ensure that I/I is controlled.

Permittee: Village of Millbrook
Facility: Millbrook Sewage Treatment Plant
SPDES Number: NY0025429
USEPA Non-Major/Class 07 Municipal

Date: April 1, 2024 v.1.25
Permit Writer: Nicholas Mustico
Water Quality Reviewer: Nicholas Mustico
Full Technical Review

OUTFALL AND RECEIVING WATER SUMMARY TABLE

Outfall	Latitude	Longitude	Receiving Water Name	Water Class	Water Index No. / Priority Waterbody Listing (PWL) No.	Major / Sub Basin	Hardness (mg/l)	1Q10 (MGD)	7Q10 (MGD)	30Q10 (MGD)	Critical Effluent Flow (MGD)	Dilution Ratio		
												A(A)	A(C)	HEW
001	41° 47.00' 20.51" N	73° 41.00' 48.91" W	East Wappinger Creek	C(T)	H-101-21 PWL: 1305-0022	13/05	119[6]	0.47	-	-	0.25	2.2:1	3.4:1	3.9:1
002 (internal)	41° 47.00' 19.00" N	73° 41.00' 55.00" W	Internal to 001	-	-	-/-	-	-	-	-	-	-	-	-

POLLUTANT SUMMARY TABLE

Outfall 001

Outfall #	001	**Description of Wastewater:** Treated Sanitary Sewage
		Type of Treatment: Bar screen, grit removal, Extended aeration, secondary clarification, tertiary sand filtration, and Chlorination

Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[7]	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
General Notes: Existing discharge data from 6/1/2018 to 5/31/2023 was obtained from Discharge Monitoring Reports provided by the permittee. All applicable water quality standards were reviewed for development of the WQBELs. The standard and WQBEL shown below represent the most stringent.															
Flow Rate	MGD	Monthly Avg	**0.25**	0.18 Actual Average	60/0	-	-	Narrative: No alterations that will impair the waters for their best usages.					703.2	-	Design Flow
	The flow limit is set at the design flow of the wastewater treatment facility.														
pH	SU	Minimum	6.5	7.0 Actual Min	60/0	6.0	TOGS 1.3.3	8.0[8]	-	6.5 – 8.5	Range	**6.5 - 8.5**	703.3	-	WQBEL
		Maximum	8.5	8.5 Actual Max	60/0	9.0									
	Consistent with TOGS 1.3.3 for POTWs, TBELs reflect secondary treatment standards. Given the available dilution, an effluent limitation equal to the WQS is appropriate.														
Temperature	°C	Daily Max	Monitor	25 Actual Max	60/0	-	-	-	**Narrative (Trout): No discharge at a temperature over 70F (21C) shall be permitted at any time to streams classified for trout**				704.2	-	Action Level

[6] Ambient hardness was calculated from RIBs station 13-SHAB-0.3, located ~2.6 miles upstream, using 1 sample collected from 2017.
[7] Existing Effluent Quality: Unless otherwise stated, Daily Max = 99% lognormal; Monthly Avg = 95% lognormal (for datasets with ≤3 nondetects); Daily Max = 99% delta-lognormal; Monthly Avg = 95% delta-lognormal (for datasets with >3 nondetects)
[8] Ambient pH calculated from RIBs station 13-SHAB-0.3, located ~2.6 miles upstream, using 1 sample collected from 2017.

Outfall #	001	**Description of Wastewater:** Treated Sanitary Sewage **Type of Treatment:** Bar screen, grit removal, Extended aeration, secondary clarification, tertiary sand filtration, and Chlorination													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data: Permit Limit	Existing Discharge Data: Existing Effluent Quality[7]	Existing Discharge Data: # of Data Points Detects / Non-Detects	TBELs: Limit	TBELs: Basis	Water Quality Data & WQBELs: Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	ML	Basis for Permit Requirement
	See the Temperature Requirements for Municipal Discharges to Trout Streams section of the fact sheet for a full discussion.														
Dissolved Oxygen (DO)	mg/L	Daily Min	5.0	9.33	10/0	-	-	-	5.64 Critical Point	**(T) 5.0 mg/L**	Narrative	No Reasonable Potential	703.3	-	WQBEL
(DO)	The downstream DO concentration was modeled using the Streeter-Phelps equations and the following assumptions: Effluent DO = 5.0 mg/l (previous permit limit), Effluent UOD = 49.58 mg/L (Calculation based on BOD limit and NOD), Effluent BOD_5 = 23.0 mg/L (daily max permit limit), Effluent NOD = 15.93 mg/L (from new Ammonia limit). Reach Description: The model includes the discharge point at the WWTP and the confluence with a B(T) standard stream approximately 0.97 miles downstream of discharge. Note: Streeter-Phelps uses CBOD to calculate UOD since the correlation between BOD and CBOD is such that for a given BOD, the corresponding CBOD would be lower assuming the BOD value as the CBOD value for the analysis is conservative, and the new will permit will be written in CBOD.														
5-day Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)	mg/L	Monthly Avg	**15**	8.69	60 /0	30	40 CFR 133.102	-	See Dissolved Oxygen			No Reasonable Potential	703.3	-	WQBEL
		7 Day Avg	**23**	12.59	60/0	45	40 CFR 133.102					-			
	lbs/d	Monthly Avg	**31**	14.55	60/0	-	-					-			
		7 Day Avg	**47**	22.49	60/0	-	-					-			
	% Rem	Minimum	**85**	100	60/0	85	40 CFR 133.102					-			
	Consistent with 40 CFR Part 133.102 and TOGS 1.3.3 for POTWs, TBELs reflect secondary treatment standards. See justification for Dissolved Oxygen. The BOD_5 limitation has been replaced with a water quality based effluent limit for $CBOD_5$. The new $CBOD_5$ concentration limit is more stringent than the previous BOD_5 limit and is sufficiently protective of the dissolved oxygen water quality standard. Note: The existing EEQ is given in BOD, no problems are indicated.														
Total Suspended Solids (TSS)	mg/L	Monthly Avg	**15**	4.73	60 /0	30	40 CFR 133.102	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages.				703.2	-	Antibacksliding
		7 Day Avg	**23**	7.90	60/0	45	40 CFR 133.102								
	lbs/d	Monthly Avg	**31**	7.80	60/0	-	-								
		7 Day Avg	**47**	13.41	60/0	-	-								
	% Rem	Minimum	**85**	100	60/0	85	40 CFR 133.102								
	Consistent with 40 CFR Part 133.102 and TOGS 1.3.3 for POTWs, TBELs reflect secondary treatment standards. Previous permit limits for TSS were given at less than the TBEL and anti-backsliding will continue those limits.														

Outfall #	001	**Description of Wastewater:** Treated Sanitary Sewage **Type of Treatment:** Bar screen, grit removal, Extended aeration, secondary clarification, tertiary sand filtration, and Chlorination													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[7]	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
Settleable Solids	mL/L	Daily Max	0.1	<0.1	1 /57	**0.1**	TOGS 1.3.3	-	Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages				703.2	-	TBEL
	Consistent with TOGS 1.3.3 the effluent limitation is equal to the TBEL of 0.1 mL/L for POTWs providing secondary treatment and filtration. Given that adequate dilution is available the TBEL is protective of the WQS.														
Nitrogen, Ammonia (as N) SUMMER 6/1 – 10/31	mg/L	Monthly Avg	5.0	1.21	13 /12	-	-	0.0129	3.374	0.57	A(C)	**2.2**	703.5	-	WQBEL
WINTER 11/1 – 5/31	mg/L	Monthly Avg	-	-	-	-	-	0.0129	9.079	1.13	A(C)	**4.4**			
	The WQS for Ammonia was determined from NYCRR 703.5 from a pH of 8 and a summer temperature of 24.29 °C. The temperature of the receiving waterbody was an assumed value and consistent with NYCRR 703.5.														
Total Phosphorus	mg/L	Daily Max	Monitor	9.36	60 /0	-	-	-	Narrative: None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usages.				703.2	-	Monitor
	The Wappingers Lake (PWL ID# 1305-0001), which is downstream of the discharge point, is listed in the 2018 303(d) List of Impaired Waters for phosphorus. Therefore, monitoring will be required for phosphorus.														
Total Mercury	ng/L	Daily Max	-	-	-	-	-	-	-	0.7	H(FC)	**50**	GLCA	-	DOW 1.3.10
	See Mercury section of this fact sheet.														
Coliform, Fecal	#/100 ml	30d Geo Mean	200	2.68	16 /14	**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	3.32	16 /14	**400**	TOGS 1.3.3	-							
	Consistent with 6 NYCRR 703.4(c)(2) and the class of the waterbody, the fecal coliform standards shall be met during all periods because the DEC determines it necessary to protect human health.														
Total Residual Chlorine (TRC)	mg/L	Daily Max	0.1	0.15	30 /0	2.0	TOGS 1.3.3	-	0.035	0.005	A(C)	0.017	40CFR 122.44 (RSAT)	**0.03**	ML
	Effluent disinfection is currently required seasonally and will remain a permit requirement. Due to the low dilution, the calculated WQBEL is less than the TBEL and less than the minimum level of detection. Therefore, an effluent limitation equal to the minimum level of detection of 0.030 mg/L is appropriate.														

Outfall #	001	**Description of Wastewater:** Treated Sanitary Sewage **Type of Treatment:** Bar screen, grit removal, Extended aeration, secondary clarification, tertiary sand filtration, and Chlorination													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[7]	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
Additional Pollutants Detected															
Total Dissolved Solids	mg/L	-	-	-	-/-	-	-	-	1574.5	500	A(C)	1700	703.3	-	Monitor
	The projected instream concentration was calculated using the maximum reported effluent concentration of 868 mg/L, a multiplier of 6.20, the chronic dilution ratio, and an assumed negligible upstream ambient concentration. The multiplier was selected from EPA's Technical Support Document Chapter 3.3 to account for the number of samples. Very limited data is available to confirm the presence or absence of this parameter and evaluate reasonable potential to cause or contribute to a WQS violation. Consistent with TOGS 1.3.3, short-term high-intensity monitoring (STHIM) is being required for TDS to generate the data necessary to perform a future reasonable potential analysis. See Special Conditions and the Schedule of Additional Submittals. A comparison of the projected instream concentration to the WQS indicates a reasonable potential to cause or contribute to a WQS violation and therefore a WQBEL is specified.														

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(*l*) and 6 NYCRR 750-1.10(c) and (d). Generally, the relaxation of effluent limitations in permits is prohibited unless one of the specified exceptions applies, which will be cited on a case-by-case basis in this fact sheet. Consistent with current case law[9] and USEPA interpretation[10] 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

[9] American Iron and Steel Institute v. Environmental Protection Agency, 115 F.3d 979, 993 n.6 (D.C. Cir. 1997)
[10] 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.

Other Conditions

Mercury

The multiple discharge variance (MDV) for mercury was developed in accordance with 6 NYCRR 702.17(h) "to address widespread standard or guidance value attainment issues including the presence of a ubiquitous pollutant or naturally high levels of a pollutant in a watershed." The first MDV was issued in October 2010, and subsequently revised and reissued in 2015; each subsequent iteration of the MDV is designed to build off the previous version, to make reasonable progress towards the water quality standard (WQS) of 0.7 ng/L dissolved mercury. The MDV is necessary because human-caused conditions or sources of mercury prevent attainment of the WQS and cannot be remedied (i.e., mercury is ubiquitous in New York waters at levels above the WQS and compliance with a water quality based effluent limitation (WQBEL) for mercury cannot be achieved with demonstrated effluent treatment technologies). The DEC has determined that the MDV is consistent with the protection of public health, safety, and welfare. During the effective period of this MDV, any increased risks to human health are mitigated by fish consumption advisories issued periodically by the NYSDOH.

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

Schedules of Compliance

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

Schedule(s) of Additional Submittals

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

Pollutant Minimization Programs

Pollutant Minimization Programs are included when a pollutant is being discharged from the facility at detectable levels and the ML for the most sensitive method is greater than the calculated WQBEL. These programs typically include an on-going potential source identification, evaluation, and prioritization program to demonstrate progress towards meeting the goal of the WQBEL. Pollutant Minimization Plan requirements are based on 40 CFR Part 132 Appendix F Procedure 8, 6 NYCRR 750-1.13(a) and 750-1.14(f), and TOGS 1.2.1.