



Department of
Environmental
Conservation

State Pollutant Discharge Elimination System (SPDES) DISCHARGE PERMIT

SIC Code: 4941	NAICS Code: 221310	SPDES Number:	NY 026 4652
Discharge Class (CL):	01	DEC Number:	3-9903-0023/00006
Toxic Class (TX):	T	Effective Date (EDP):	01/01/2017
Major-Sub Drainage Basin:	17 - 02	Expiration Date (ExDP):	12/31/2021
Water Index Number:	ER-3-P1063	Item No.: 935.6 - 44	Modification Dates (EDPM): EDPM
Compact Area:	IEC		

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

PERMITTEE NAME AND ADDRESS			
Name:	NYC Department of Environmental Protection	Attention:	Adam W. Reaves, Director
Street:	465 Columbus Avenue, 2nd Floor		
City:	Valhalla	State:	NY Zip Code: 10595
Email:		Phone:	

is authorized to discharge from the facility described below:

FACILITY NAME, ADDRESS, AND PRIMARY OUTFALL							
Name:	Catskill Aqueduct Influent Chamber						
Address / Location:	600 Nannyhagen Rd / Thornwood					County:	Westchester
City:	Mount Pleasant			State:	NY	Zip Code:	10594
Facility Location:	Latitude:	41 ° 07 ' 03 " N	& Longitude:	73 ° 44 ' 51 " W			
Primary Outfall No.:	001	Latitude:	41 ° 07 ' 03 " N	& Longitude:	73 ° 44 ' 51 " W		
Wastewater Description:	Process Water	Receiving Water:	Kensico Reservoir	NAICS:	221310	Class:	AA(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:

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

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

DEFINITIONS FOR PERMIT LIMITS, LEVELS AND MONITORING TERMS

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

PERMIT LIMITS, LEVELS AND MONITORING FOR ALL PERIODS OTHER THAN PERIODS OF ALUM ADDITION (1, 2, 4)

OUTFALL	LIMITATIONS APPLY	RECEIVING WATER	EFFECTIVE	EXPIRING
001	Process Water	Kensico Reservoir	EDPM	12/31/2021

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTE (FN)
pH	Report	Report	SU	1/Month	Grab	

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS			FN	
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.		Eff.
Flow	Monthly Average	Report	MGD			Continuous	Recorder		X	
Flow	Daily Maximum	Report	MGD			Continuous	Recorder		X	
Total Phosphorus	Monthly Average			Report	kg/d	1/Week	Grab		X	
Total Phosphorus	Daily Maximum			Report	kg/d	1/Week	Grab		X	
Total Phosphorus	12-MRA			26	kg/d	1/Month	Calculated		X	3
Turbidity	Daily Maximum			Report	NTU	1/Month	Grab		X	
Total Suspended Solids (TSS)	Monthly Average	Report	mg/L	Report	lbs/d	1/Month	Grab		X	
Total Suspended Solids (TSS)	Daily Maximum	Report	mg/L	Report	lbs/d	1/Month	Grab		X	
Temperature	Daily Maximum	Report	°F			1/Month	Grab		X	

FOOTNOTES:

1. The permittee shall be authorized to add alum and sodium hydroxide to reduce turbidity in the Catskill Aqueduct upon NYSDEC receipt of a copy of a notice from the State Health Department that there is the potential imminent development of a public health hazard related to the discharge of turbid water from the Kensico Reservoir. The State Health Department notification may be received in an electronic format, confirmed in writing. The written notification shall be submitted to the offices on the last page of this permit within 5 days.
2. The permittee shall no longer be authorized to add alum and sodium hydroxide to the Catskill Aqueduct one week after NYSDEC receives a notice from the permittee stating that additions of alum at the Catskill Alum Plant (CATALUM) has terminated. The permittee shall submit a copy of the notice to the offices on the last page of this permit and shall also be submitted to the State Health Department.
3. The 12-month rolling average (12-MRA) is defined as the current monthly average value averaged with the eleven previous months' monthly average values. For the first year of monitoring, each successive month (starting with the first month, then first plus second month, etc.) will be included in the average until twelve months have passed. On the thirteenth month, the rolling average will begin to be calculated.
4. All monitoring shall be performed at CATALUM.

PERMIT LIMITS, LEVELS AND MONITORING DURING PERIODS OF ALUM ADDITION (1,2)

OUTFALL	LIMITATIONS APPLY	RECEIVING WATER	EFFECTIVE	EXPIRING
001	Process Water	Kensico Reservoir	EDPM	12/31/2021

PARAMETER	MINIMUM	MAXIMUM	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FOOTNOTE (FN)
pH	6.0	9.0	SU	1/Month	Grab	6

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.	Eff.	
Flow	Monthly Average	Report	MGD			Continuous	Recorder		X	7
Flow	Daily Maximum	Report	MGD			Continuous	Recorder		X	7
Total Aluminum	Daily Maximum	Report	mg/L			1/Week	Grab		X	4,6,8
Dissolved Aluminum	Daily Maximum	Report	mg/L			1/Week	Grab		X	4,6,8
Total Phosphorus	Monthly Average			Report	kg/d	1/Week	Grab		X	6
Total Phosphorus	Daily Maximum			Report	kg/d	1/Week	Grab		X	6
Total Phosphorus	12-MRA			26	kg/d	1/Month	Calculated		X	5,6
Turbidity	Daily Maximum			Report	NTU	1/Week	Grab		X	3
Total Suspended Solids (TSS)	Monthly Average	Report	mg/L	Report	lbs/d	1/Week	Grab		X	6
Total Suspended Solids (TSS)	Daily Maximum	Report	mg/L	Report	lbs/d	1/Week	Grab		X	6
Temperature	Daily Maximum	Report	°F			1/Week	Grab		X	7

FOOTNOTES on next page.

FOOTNOTES:

1. The permittee shall be authorized to add alum and sodium hydroxide to reduce turbidity in the Catskill Aqueduct upon NYSDEC receipt of a copy of a notice from the State Health Department that there is the potential imminent development of a public health hazard related to the discharge of turbid water from the Kensico Reservoir. The State Health Department notification may be received in an electronic format, confirmed in writing. The written notification shall be submitted to the offices on the last page of this permit within 5 days.
2. The permittee shall no longer be authorized to add alum and sodium hydroxide to the Catskill Aqueduct one week after NYSDEC receives a notice from the permittee stating that additions of alum at the Catskill Alum Plant (CATALUM) has terminated. The permittee shall submit a copy of the notice to the offices on the last page of this permit and shall also be submitted to the State Health Department.
3. Turbidity shall be measured daily at CATALUM and weekly at 5BRK. Both daily maximums shall be reported on the DMR.
4. After review of effluent levels, the NYSDEC may reopen the permit to include limits for these parameters.
5. The 12-month rolling average (12-MRA) is defined as the current monthly average value averaged with the eleven previous months' monthly average values. For the first year of monitoring, each successive month (starting with the first month, then first plus second month, etc.) will be included in the average until twelve months have passed. On the thirteenth month, the rolling average will begin to be calculated.
6. Monitoring shall be done at the 5BRK sampling location.
7. Monitoring shall be done at CATALUM.
8. In months where alum is not used, and there is thus no discharge of aluminum for that month, the permittee shall enter NODI 9 on the appropriate reporting box on the DMR and provide an explanation in the comment section of the DMR.

SPECIAL CONDITIONS

1. The discharge of pollutants that cause or contribute to exceedances of water quality standards in receiving waters is prohibited.
2. The water treatment chemicals, alum and sodium hydroxide, shall be introduced at the lowest possible dosage necessary to maintain a turbidity level of 5 NTUs or less in the water leaving Kensico Reservoir. The lowest possible dosage shall be determined by jar tests, or other DEC-approved process control tests, performed daily during the first week of the turbidity event and weekly thereafter. The results of such tests shall be included in the After Action Report (See the Schedule of Compliance in this permit on page 15).

OPERATING PROTOCOL

Introduction:

DEP can make releases from the Ashokan Reservoir via the Ashokan Reservoir Release Channel. Releases are intended to enhance benefits to the community, improve flood attenuation, and provide better drinking water quality. Reservoir releases from the Ashokan Reservoir shall be in accordance with the following Operating Protocol (items 1-7):

1. Community Release (subject to the Release Exceptions described in item 5 below):

- a. **Purpose:** to provide environmental, recreational and economic benefits to the lower Esopus Creek in a manner that will not adversely impact water supply.
- b. **Minimum Flow:** DEP will make releases from the Ashokan Reservoir through the Ashokan Reservoir Release Channel at the rates prescribed in the following table.

Release Criteria ¹	Summer (May 1 – Oct 31)	Winter (Nov 1 – Apr 30)
Normal Hydrologic Condition	15 MGD	10 MGD
Turbidity >25 NTU	10 MGD	4 MGD
Turbidity >100 NTU	0 MGD	0 MGD
Drought Warning Condition	10 MGD	4 MGD
Turbidity >100 NTU	0 MGD	0 MGD
Drought Condition	0	0

Note 1: Hydrologic Condition is based on the combined storage in the Cannonsville, Pepacton and Neversink Reservoirs.

- c. **Turbidity:** When substantial contrast in turbidity exists with varying depths in the west basin of the Ashokan Reservoir, DEP will make reasonable efforts to make releases from the elevation with the least turbidity.
- d. **Action Stage Shutdown:** The community release shall be shutdown when the U.S. Geographical Survey (USGS) gage on the Esopus Creek at Mount Marion (Lower Esopus) is within 2 feet of the Action Stage (18') and is forecasted to reach the Action Stage, as predicted on the National Weather Service's (NWS's) Advanced Hydrologic Prediction Service web page.

2. Spill Mitigation Release (subject to the Release Exceptions described in item 5 below):

- a. **Purpose:** In order to enhance flood mitigation provided by the Ashokan Reservoir, DEP will utilize the established Conditional Seasonal Storage Objective (CSSO) rule curve depicted in Figure 1. Consistent with good practices for water supply reservoirs, and in order to ensure that sufficient resources are available during an extended dry period to support water supply needs, it is essential to ensure that the

Ashokan Reservoir is filled on or around June 1st every year. To accomplish this, the CSSO must be limited and ramped. For the duration of the SPDES permit DEP shall endeavor, to the maximum extent possible without impacting water supply reliability, to maintain reservoir levels at the CSSO, thus creating a high probability of maintaining a fifteen (15) percent void space from November 1 through the following February 1 to help mitigate flooding events. In determining the releases needed to maintain the CSSO, DEP will consider the following parameters in the evaluation: forecasted inflows over the next seven (7) days including inflow from snow water equivalent as forecast by the NWS Hydrological Ensemble Forecasting System (HEFS), anticipated diversions over the next seven (7) days, and the current usable reservoir storage. Based on any projected seven (7) day storage surplus, DEP will calculate total release volumes to progress toward the CSSO and allocate those volumes over the upcoming seven 7-day period. In making releases, DEP will consider reasonable requests from Ulster County for a release modification related to a downstream release concern, within the limitations of the release works for the Ashokan Reservoir Release Channel and subject to DEC concurrence. Spill Mitigation Releases are designed to help mitigate the effects of potential for flooding immediately below the Ashokan Reservoir to the lower Esopus Creek communities.

- b. **Maximum Flow:** The maximum flow from the Release Channel shall not exceed 600 MGD. DEP will throttle releases as necessary so the combined flow for Ashokan spill and Ashokan Reservoir Release Channel discharge does not exceed 1,000 MGD. In addition, DEP will shut down the Release Channel when the USGS gage on the Esopus Creek at Mount Marion (Lower Esopus) is within 2 feet of the Action Stage (18') and is forecasted to reach Action Stage, as predicted on the NWS's Advanced Hydrologic Prediction Service web page. DEP shall endeavor to achieve the CSSO in a manner that minimizes the need for maximum flow, large volume releases.
- c. **Turbidity:** When substantial contrast in turbidity exists with varying depths in the west basin of the Ashokan Reservoir, DEP will make reasonable efforts to make releases from the elevation with the least turbidity. The frequency of intake changes shall be limited to no more than once per week.

i. **Dates:** Year Round

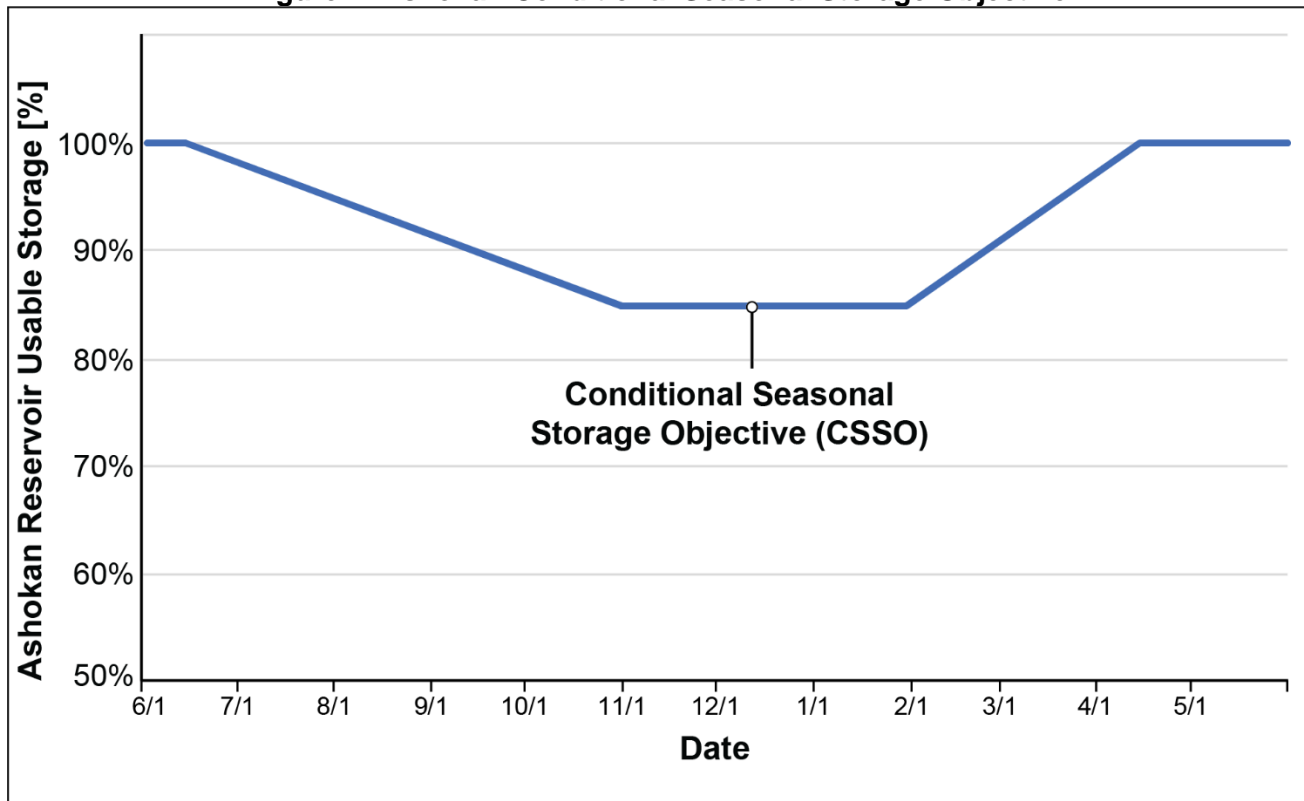
Turbidity	Duration	Comments
0-25 NTU	Unlimited	
>26-50 NTU	12 Days	At the end of the 12-day discharge, flushing for 36 hours when best available water from one of the two basins is <25 NTU* , prior to resuming additional Spill Mitigation Releases.
>50 NTU	5 Days	At the end of the 5-day discharge, flushing for 36 hours when best available water from one of the two basins is <25 NTU* , prior to resuming additional Spill Mitigation Releases.

***When turbidity in both basins is >25 NTU, flushing would be replaced by a period of 36 hours with no releases**

- d. **Ramping Rates:** All changes in water release rates will be conducted in accordance with the following schedule:
 - i. **Flow Increases:**
 1. For flows greater than 0 and up to 80 MGD: 20 MGD/hour
 2. For flows greater than 80 MGD and up to 200 MGD: 40 MGD/hour
 3. For flows greater than 200 MGD: 40 MGD/half-hour
 - ii. **Flow Decreases:**
 1. For flows greater than 200 MGD: 40 MGD/half-hour
 2. For flows from 200 to 80 MGD: 40 MGD/hour
 3. For flows from 80 to 0 MGD: 20 MGD/hour

e. **Void Target:** Conditional Seasonal Storage Objective (CSSO) as per Figure 1

Figure 1. Ashokan Conditional Seasonal Storage Objective



Note: The CSSO is in effect year-round.

3. Operational Release (subject to the Release Exceptions described in item 5 below):

- a. **Purpose:** To prevent or mitigate the spilling of more turbid west basin waters into the east basin of the Ashokan Reservoir in order to protect water quality and enhance the flood mitigation benefit that the reservoir already provides to the lower Esopus Creek communities.
- b. **Maximum Flow:** The maximum flow from the Release Channel shall not exceed 600 MGD. The release will be throttled as necessary so the combined flow for Ashokan spill and Ashokan Reservoir Release Channel discharge does not exceed 1,000 MGD. In addition, shutdown when the USGS gage on the Esopus Creek at Mount Marion (Lower Esopus) is within 2 feet of the Action Stage (18') and is forecasted to reach Action Stage, as predicted on the NWS's Advanced Hydrologic Prediction Service web page. Because the Lower Esopus Creek is used for various recreational and agricultural purposes, it may be necessary, at times, to limit the flow rate to be protective of those uses. Therefore, for the period from June 1 through October 1, the maximum flow rate through the release channel for operational releases shall be limited to no more than 300 MGD unless a larger release rate is necessary to prevent overspill of poor quality water from the west basin into the east basin of the Ashokan Reservoir.
- c. **Void Target:** To be determined based on current and predicted hydrologic conditions to protect water quality and ensure reservoir refill.
- d. **Ramping Rates:** All changes in water release rates will be conducted in accordance with the following schedule:
 - i. **Flow Increases:**
 1. For flows greater than 0 and up to 80 MGD: 20 MGD/hour
 2. For flows greater than 80 MGD and up to 200 MGD: 40 MGD/hour

3. For flow greater than 200 MGD: 40 MGD/half-hour

ii. **Flow Decreases:**

1. For flows greater than 200 MGD: 40 MGD/half-hour
2. For flows from 200 to 80 MGD: 40 MGD/hour
3. For flows from 80 to 0 MGD: 20 MGD/hour

e. **Turbidity:** When substantial contrast in turbidity exists with varying depths in the west basin of the Ashokan Reservoir, DEP will make reasonable efforts to make releases from the elevation with the least turbidity. The frequency of intake changes shall be limited to no more than once per week.

i. **November 1 through April 30:**

Turbidity	Duration	Comments
0-25 NTU	Unlimited	
>26-50 NTU	12 Days	At the end of the 12-day discharge, flushing for 36 hours when best available water from one of the two basins is <25 NTU* , prior to resuming additional Spill Mitigation Releases.
>51-100 NTU	5 Days	At the end of the 5-day discharge, flushing for 36 hours when best available water from one of the two basins is <25 NTU* , prior to resuming additional Operational Releases.
>100 NTU	(see Note 1)	

***When turbidity in both basins is >25 NTU, flushing would be replaced by a period of 36 hours with no releases.**

Note 1: The discharge of water with turbidity >100 NTU shall be allowed only on those days where the Esopus Creek, flowing in to the Ashokan Reservoir, has turbidity >100 NTU. If releases are being made and the turbidity of the Esopus Creek flowing into the Ashokan Reservoir drops below 100 NTU, DEP shall commence ramping down the releases rate on the next day and shall cease the release as soon as practicable (considering ramping rate requirements contained herein) after the turbidity in the creek fell below such threshold. DEP shall conduct daily turbidity monitoring for the period during which such releases are being made.

ii. **May 1 through October 31:**

Turbidity	Duration
0-25 NTU	Unlimited
>25 NTU	The discharge of water with turbidity >25 NTU shall be allowed only on those days where the Esopus Creek, flowing in to the Ashokan Reservoir, has turbidity >25 NTU. If releases are being made and the turbidity of the Esopus Creek flowing into the Ashokan Reservoir drops below 25 NTU, DEP shall commence ramping down the releases rate on the next day and shall cease the release as soon as practicable (considering ramping rate requirements contained herein) after the turbidity in the creek fell below such threshold. DEP shall conduct daily turbidity monitoring for the period during which such releases are being made.

4. Notification:

- a. Report all operational changes of the release channel to the Ulster County Emergency Management office, Ulster County Department of the Environment, and DEC.
- b. Continue to send operational data to Ulster County and Town officials on a daily basis and provide turbidity data to Ulster County upon written request.

- c. Report all water quality data to DEC promptly after receipt.

5. Release Exceptions:

As noted in items 1,2 and 3 of this Operating Protocol, DEP may also make changes to the releases if any of the following conditions are met:

- a. DEP, with concurrence by DEC, determines that additional resources are reasonably necessary for reservoir balancing, for refill of the Ashokan Reservoir, for proper water supply management, or in the case of drought watch, warnings or emergencies.
- b. DEC in accordance with DEC's existing legal authority directs an emergency action or DEP takes an emergency action.
- c. DEC, or DEP with concurrence by DEC, determines that releases must be changed or interrupted as necessary for inspection, maintenance, testing and repairs (including Delaware Aqueduct repairs).
- d. DEP, with concurrence by DEC, responds to a spill mitigation request (release or request not to release) from Ulster County provided that requested release or cessation of release will not adversely impact water supply.
- e. DEP responds to a spill mitigation request (release or request not to release) from DEC provided the requested release or cessation of release will not adversely impact water supply.

6. Utilization of the Shandaken Tunnel:

During Spill Mitigation Releases and after reservoir storage has been reduced to meet the CSSO objectives, the use of the Shandaken Tunnel to provide water to the Ashokan Reservoir will be minimized in keeping with the existing Shandaken SPDES Permit and consistent with proper water supply management. In particular from May 1st through February 1st, for determinations in accordance with footnote 2.J. in the Shandaken Tunnel SPDES permit, the unfilled storage capacity within the Ashokan Reservoir will be calculated from the CSSO curve rather than the spillway elevation for the period.

7. Monitoring Plan:

a. Water Flow:

- i. Monitor continuously by the DEP Water Supply Control Center via the Supervisory Control and Data Acquisition System with telemetry from release channel gages.
- ii. During periods of inoperable continuous monitoring – perform visual gage readings at least once daily and as flow is changed.

b. Water Quality:

i. Monitoring Objective

- i. To monitor water quality in the Upper Esopus Creek and turbidity contributions from Ashokan Reservoir to the Lower Esopus Creek.

ii. Monitoring Sites

- i. **Condition: Release Channel Not Operating** (Routine monitoring conducted at these sites, regardless of reservoir spill status)
 - 1. Upper Esopus Stream Site
 - a. Esopus Creek (E16i) – last sampling point prior to entry into Ashokan Reservoir
 - 2. Limnology Sites
 - a. Ashokan Reservoir Limnology Stations (1EA-4EA) – multiple depths in water column, both basins (reservoir conditions permitting, March-December)
 - 3. Keypoint Sites

- a. Ashokan Upper Gatehouse – water at the east and west basin intake levels as follows:
 - i. ES – East Surface
 - ii. EM – East Middle
 - iii. EB – East Bottom
 - iv. WS – West Surface
 - v. WM – West Middle
 - vi. WB – West Bottom
- b. Ashokan Effluent Sampling Station (EARCM) – final effluent leaving Ashokan via Catskill Aqueduct

- ii. **Condition: Release Channel Operating** - In addition to sites listed above, add these sites:
 - 1. Ashokan Release Channel (M-1) – water released through the release channel to the lower Esopus Creek
 - 2. Lower Esopus Stream Sites
 - a. Lomontville Gage
 - b. Mt. Marion Gage
- iii. **Condition: Release Channel Operating & Ashokan Spilling** (In addition to sites listed above, add this site):
 - 1. Lower Esopus Stream Sites
 - a. Ashokan Spill (ASP) – Ashokan Reservoir spill channel below spillway

iii. Monitoring Frequency and Analytes

- i. **Condition: Release Channel Not Operating** (Routine monitoring at these sites)

Site Type	Sites	Analytes	Frequency
Upper Esopus Creek	E16i	Turbidity, Temperature	Weekly
		Total Suspended Solids	Monthly
Limnology	1EA-4EA	Turbidity, Temperature	2x/Month*
		Total Suspended Solids	Monthly*
Keypoints	EARCM	Turbidity, Temperature	5 Days/Week
		Total Suspended Solids	Monthly
Keypoints	ES, EM, EB, WS, WM, WB	Turbidity, Temperature	Weekly

* Reservoir conditions permitting (March – December)

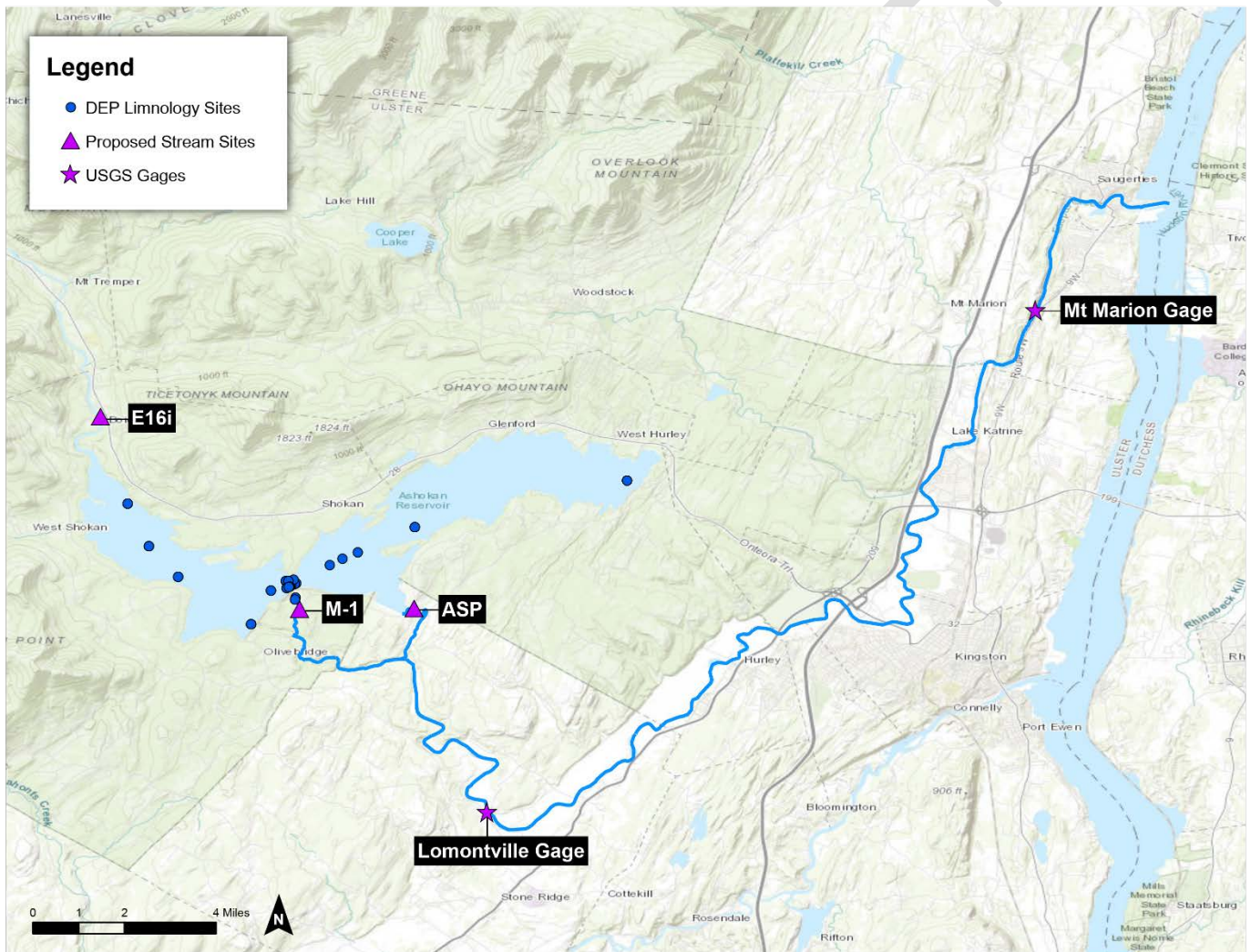
- ii. **Condition: Release Channel Operating** (In addition to sites listed above, add these sites)

Site Type	Sites	Analytes	Frequency
Keypoints	M-1	Turbidity, Temperature, Total Suspended Solids, Flow	Weekly
Lower Esopus Creek	Lomontville and Mt. Marion Gages	Turbidity, Flow	Continuous (15- minute USGS Gage Data)

iii. **Condition: Release Channel Operating & Ashokan Spilling** (In addition to sites listed above, add this site)

Site Type	Sites	Analytes	Frequency
Key Points	ASP	Turbidity, Flow	Weekly

Proposed Monitoring Sites



DISCHARGE NOTIFICATION REQUIREMENTS

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

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

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

- (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.
- (g) If the permittee believes that any outfall which discharges wastewater from the permitted facility meets any of the DNA waiver criteria, notification must be made to the Department's Bureau of Water Permits. Provided there is no objection by the Department, a sign for the involved outfall(s) are not required. This notification must include the facility's name, address, telephone number, contact, permit number, outfall number(s), and reason why such outfall(s) is waived from the requirements of discharge notification. The Department may evaluate the applicability of a waiver at any time and take appropriate measures to assure that the ECL and associated regulations are complied with.

SCHEDULE OF COMPLIANCE

a) The permittee shall comply with the following schedule:

Outfall(s)	Compliance Action	Due Date
001	<p><u>AFTER ACTION REPORT</u> The permittee shall submit a copy of the After Action Report required by the State Health Department to the DEC. The report must contain a summary of the daily dosages of alum and sodium hydroxide that were used and the daily flows from the Catskill Aqueduct into the Kensico Reservoir. The report must also include the cumulative estimate of total solids deposited in Kensico Reservoir for all alum treatment events from April 5, 2005 forward ("Total Dredging Mass").</p>	<p>Within 60 days of the end of each continuous period of alum addition</p>
001	<p><u>REMOVAL OF ALUM FLOC</u> The permittee is required to remove alum floc deposits from the Kensico Reservoir in accordance with an Article 15 dredging permit. To determine the extent of alum floc deposits to be removed, the permittee shall develop and submit an approvable Bathymetric/Benthic Report for the purposes of establishing a scientific basis for the need to remove alum floc deposits from the Kensico Reservoir. The report must include, at a minimum, a survey of the area; location, volume and mass of alum floc deposits; an assessment of the quantity and composition of the deposited materials; and a benthic and sediment characterization. Upon approval, the report will be incorporated into and become enforceable, pursuant to the permit.</p> <p>The dredging schedule is as follows, unless upon review of the Bathymetric/Benthic Report, DEC determines that dredging is not necessary:</p> <p>1)The Permittee shall initiate procurement to complete dredging design (Dredging Design Procurement Date).</p> <p>2)The Permittee shall issue a Notice to Proceed with the design for the dredging proposal.</p> <p>3)The Permittee shall submit plans (Dredging Plans) for the removal of the Total Dredging Mass.</p> <p>4)The Permittee shall initiate dredging (Dredging Commencement Date)</p>	<p>Within three years after either (a) the New York State Department of Health ("DOH") or the United States Environmental Protection Agency ("EPA") directs the city to filter the Catskill/Delaware water supply; or: (b) the City provides written notice to DOH or EPA that the City will no longer seek filtration avoidance.</p> <p>Ten years after either (a) DOH or EPA directs the city to filter the Catskill/Delaware water supply; or: (b) the City provides written notice to DOH or EPA that the City will no longer seek filtration avoidance.</p> <p>Fourteen (14) months after the Dredging Design Procurement Date in paragraph 1 above</p> <p>Fifty (50) months after the Dredging Design Procurement Date in paragraph 1 above</p> <p>The later of (a) one year after DEC provides written approval of the City's Dredging Plan or (b) one year after DOH issues a Completed Works Approval as set forth in 10 NYCRR 5-1.22 (d), for filtration facilities for Catskill/Delaware water supply.</p>

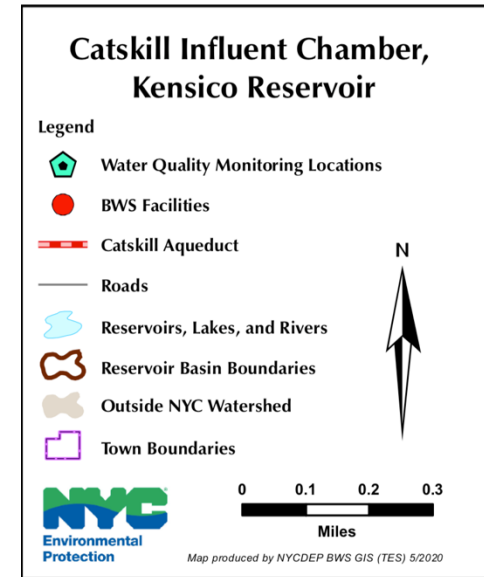
	5)The Permittee shall complete dredging.	Three (3) years after the Dredging Commencement Date in paragraph 4 above.
001	<p>SCHEDULE OF COMPLIANCE STATUS REPORTS The permittee shall submit interim status reports on the progress related to meeting the specified final limits.</p>	<p>The first report is due 9 months after either (a) the New York State Department of Health ("DOH") or the United States Environmental Protection Agency ("EPA") directs the city to filter the Catskill/Delaware water supply; or: (b) the City provides written notice to DOH or EPA that the City will no longer seek filtration avoidance. Subsequent reports are due every 9 months thereafter.</p>
<p>The above compliance actions are one-time requirements. The permittee shall comply with the above compliance actions to the Department's satisfaction once. When this permit is administratively renewed by NYSDEC letter entitled "SPDES NOTICE/RENEWAL APPLICATION/PERMIT," the permittee is not required to repeat the submission(s) noted above. The above due dates are independent from the effective date of the permit stated in the "SPDES NOTICE/RENEWAL APPLICATION/PERMIT" letter.</p>		

- b) The permittee shall submit a written notice of compliance or non-compliance with each of the above schedule dates no later than 14 days following each elapsed date, unless conditions require more immediate notice as prescribed in 6 NYCRR Part 750-1.2(a) and 750-2. All such compliance or non-compliance notification shall be sent to the locations listed under the section of this permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS. Each notice of non-compliance shall include the following information:
 1. A short description of the non-compliance;
 2. A description of any actions taken or proposed by the permittee to comply with the elapsed schedule requirements without further delay and to limit environmental impact associated with the non-compliance;
 3. Any details which tend to explain or mitigate an instance of non-compliance; and
 4. An estimate of the date the permittee will comply with the elapsed schedule requirement and an assessment of the probability that the permittee will meet the next scheduled requirement on time.
- c) The permittee shall submit copies of any document required by the above schedule of compliance to the NYSDEC Regional Water Engineer and to the Bureau of Water Permits.
- d) The definition of "approvable" is found in 6 NYCRR 750-1.2(a)(8).

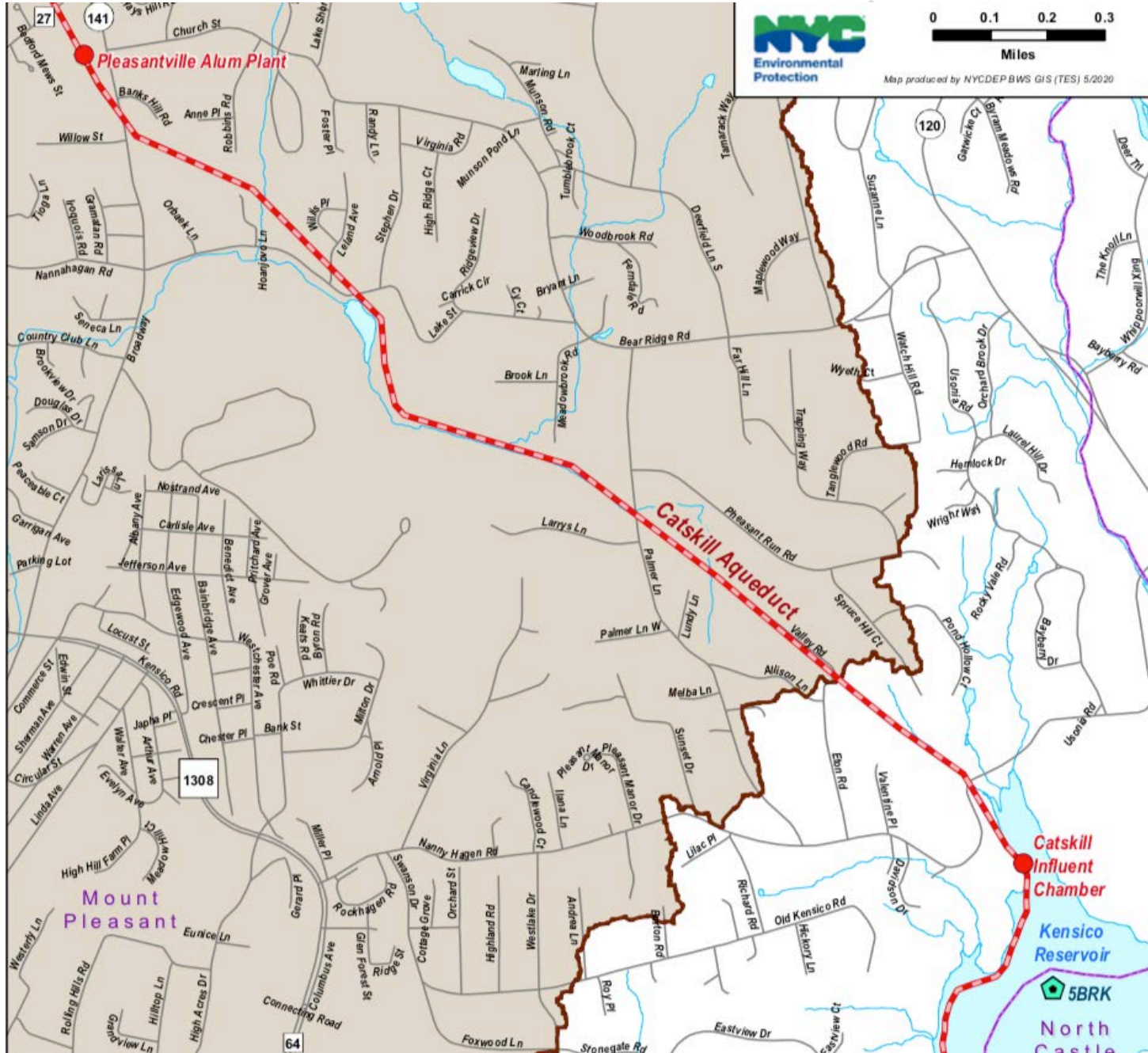
MONITORING LOCATIONS

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

During periods of alum addition, monitoring of aluminum, turbidity, phosphorus, pH, and total suspended solids shall be performed at 5BRK (see following page for location). All other monitoring shall be performed at the Pleasantville Alum Plant (CATALUM).



MONITORING LOCATIONS (cont.)



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 H 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 for non-POTWs | 6 NYCRR 750-2.5, 2.6, 2.7, & 1.17 |
| 2. Anticipated noncompliance | 6 NYCRR 750-2.7(a) |
| 3. Transfers | 6 NYCRR 750-1.17 |
| 4. Monitoring reports | 6 NYCRR 750-2.5(e) |
| 5. Compliance schedules | 6 NYCRR 750-1.14(d) |
| 6. 24-hour reporting | 6 NYCRR 750-2.7(c) & (d) |
| 7. Other noncompliance | 6 NYCRR 750-2.7(e) |
| 8. Other information | 6 NYCRR 750-2.1(f) |
- F. Sludge Management
The permittee shall comply with all applicable requirements of 6 NYCRR Part 360.
- G. SPDES Permit Program Fee
The permittee shall pay to the Department an annual SPDES permit program fee within 30 days of the date of the first invoice, unless otherwise directed by the Department, and shall comply with all applicable requirements of ECL 72-0602 and 6 NYCRR Parts 480, 481 and 485. Note that if there is inconsistency between the fees specified in ECL 72-0602 and 6 NYCRR Part 485, the ECL 72-0602 fees govern.
- H. Water Treatment Chemicals (WTCs)
New or increased use and discharge of a WTC requires prior Department review and authorization. At a minimum, the permittee must notify the Department in writing of its intent to change WTC use by submitting a completed *WTC Notification Form* for each proposed WTC. The Department will review that submittal and determine if a SPDES permit modification is necessary or whether WTC review and authorization may proceed outside of the formal permit administrative process. The majority of WTC authorizations do not require SPDES permit modification. In any event, use and discharge of a WTC shall not proceed without prior authorization from the Department. Examples of WTCs include biocides, coagulants, conditioners, corrosion inhibitors, defoamers, deposit control agents, flocculants, scale inhibitors, sequestrants, and settling aids.
1. WTC use shall not exceed the rate explicitly authorized by this permit or otherwise authorized in writing by the Department.
 2. The permittee shall maintain a logbook of all WTC use, noting for each WTC the date, time, exact location, and amount of each dosage, and, the name of the individual applying or measuring the chemical. The logbook must also document that adequate process controls are in place to ensure that excessive levels of WTCs are not used.
 3. The permittee shall submit a completed WTC Annual Report Form each year that they use and discharge WTCs. This form shall be submitted in electronic format and attached to either the December DMR or the annual monitoring report required below. The *WTC Notification Form* and *WTC Annual Report Form* are available from the Department's website at: <http://www.dec.ny.gov/permits/93245.html>

RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

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

DMRs must be submitted electronically using the electronic reporting tool (NetDMR) specified by NYSDEC. Instructions on the use of NetDMR can be found at <https://www.dec.ny.gov/chemical/103774.html>. **Hardcopy paper DMRs will only be received at the address listed below for the Bureau of Water Permits, if a waiver from the electronic submittal requirements has been granted by DEC to the facility.**

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. The monitoring information required by this permit shall be summarized and reported to the RWE and Bureau of Water Permits at the following addresses:

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

Phone: (518) 402-8111

Department of Environmental Conservation
Regional Water Engineer, Region 3

100 Hillside Avenue, Suite 1W, White Plains, New York, 10603-2860 Phone: (914) 428-2505

- D. 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.
- E. 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.
- F. Calculations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.
- G. 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.
- H. 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.