

State Pollutant Discharge Elimination System (SPDES) DISCHARGE PERMIT

SIC Code: 4941	NAICS Code:	221310	SPDES Number:	NY 028 1042		
Discharge Class (CL):	01		DEC Number:	3-9903-00102/00002		
Toxic Class (TX):	Class (TX): N		Effective Date (EDP):	09/01/2019		
Major-Sub Drainage Basin:	13-01, 02, 03,	06, 07, 17-01	Expiration Date (ExDP):	08/31/2024		
Water Index Number:	H-, ER-	Item No.: Multiple	9	12/15/2020 MOD 1		
Compact Area:	IEC		Modification Dates (EDPM):	09/09/2021 MOD 2 10/07/2021 MOD 3 04/27/2022 MOD 4 11/28/2022 MOD 5 EDPM MOD 6		

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	PERMITTEE NAME AND ADDRESS								
Name:	NYC Department of Environmental Protection	Attention:		Darin DeKoskie, Chief of Water					
Street:	2389 Route 28A		Suppl	Supply Operations					
City:	Olivebridge	State:	NY	Zip Code:	12461				
Email:	dadekoskie@dep.nyc.gov	Phone:	(845) 657-8940						

is authorized to discharge from the facility described below:

FACILITY NAME, AI	FACILITY NAME, ADDRESS, AND PRIMARY OUTFALL											
Name:	NYCDEP Cats	CDEP Catskill Aqueduct										
Address / Location:	See Outfall S	ummary					C	Coun	ty:	See C Sumr		
City:	See Outfall S	ummary			State :	NY	Z	Zip C	ode:			
Facility Location:	Latitude	b :	0	,	" N	& Longitude	e:		0	,		" W
Primary Outfall No.:	Latitude	e:	0	,	" N	& Longitude	e:		0	,		" W
Wastewater Description:	See Outfall Summary	Receiving Water:	See Outfa Summary	II	NAICS	6: 4941	Clas	s: N	lultip	ole		

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

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

DISTRIBUTION:

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Permit Administrator:		
Address:		
Signature:	Date:	11

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SUMMARY OF ADDITIONAL OUTFALLS

Outfall	Wastewa	ter Description	NAICS Code	Ou	tfall	Latitu	ude			Outfall Longitude					
01A	Aqueduc	t Unwatering	4941	41	0	56	,	46.99	" N	74 °	12	21.17 " W			
Municip	ality:	Olive (T)							Cou	unty:	Ulster				
Receivii	ng Water:	Internal Outfall								Class:	-				
Outfall	Wastewa	ter Description	NAICS Code	Outfall Latitude						Outfall	Longitude	:			
01N	Aqueduc	t Unwatering	4941	41	0	45	,	56.24	" N	74 °	07	13.77 " W			
Municip	ality:	New Paltz (T)							Cou	unty:	Ulster				
Receivii	ng Water:	Internal Outfall								Class:	-				
Outfall	Wastewa	ter Description	NAICS Code	Ou	tfall	Latitu	ude			Outfall	Longitude	•			
010	Chlorina	ted Aqueduct Waters	4941	41	0	53	,	48.50	" N	74 °	09	53.59 " W			
Municip	ality:	Marbletown (T)					4		Cou	unty:	Ulster				
Receivii	ng Water:	Esopus Creek					<u> </u>			Class:	B(T)				
Outfall	Wastewa	NAICS Code	Ou	tfall	Latitu	ude			Outfall	Longitude	•				
013	Chlorina	ted Aqueduct Waters	4941	41	0	49	,	38.39	"N	74 °	08	53.24 " W			
Municip	ality:	Marbletown (T)							Cou	unty:	Ulster				
Receivii	Receiving Water: Tributary of Rondout Creek							Class:	Class: C						
Outfall	Wastewater Description NAICS Code Outfall Latitude							Outfall	Longitude	•					
014	Chlorina	ted Aqueduct Waters	4941	41	0	49	,	32.57	" N	74 °	08	47.29 " W			
Municip	ality:	Marbletown (T)		Con					Cou	unty:	Ulster				
Receivii	ng Water:	Tributary of Rondout Creek								Class: C					
Outfall	Wastewa	ter Description	NAICS Code	Ou	tfall	Latitu	ude				Longitude				
015	Chlorina	ted Aqueduct Waters	4941	41	0	49	,	19.53	" N	74 °	08	29.59 " W			
Municip	-	Marbletown (T)							Cou	unty: Ulster					
Receivii	ng Water:	Rondout Creek								Class:	В		_		
Outfall	Wastewa	ter Description	NAICS Code								Longitude				
017	Chlorina	ted Aqueduct Waters	4941	41	0	46	,	13.07	" N	74 °	07	32.88 " W			
Municip	•	New Paltz (T)							Cou	unty:	Ulster				
Receivii	ng Water:	New Paltz Lower Reservoir	r							Class:	AA		_		
Outfall	Wastewa	ter Description	NAICS Code			Latitu	ude				Longitude				
063	Chlorina	ted Aqueduct Waters	4941	41	0	14	,	18.30	" N	73 °	48 '	34.30 " W			
Municip	•	Yorktown (T)							Cou	unty:	Westche	ester			
		New Croton Reservoir								Class: AA					
Outfall		ter Description	NAICS Code								Longitude				
067		ted Aqueduct Waters	4941	41	0	13	,	54.75		73 °		27.56 " W			
Municipality: Yorktown (T) Cou						unty:	Westchester								
Receivii	ng Water:	Tributary of New Croton Rese	rvoir							Class:	В				

Outfall	Wastewat	ter Description	NAICS Code	le Outfall Latitude Outfall Longitude								5 OT 22 V.1.13	
078		t Unwatering	4941	41 °		07		3.47	" N	73 °	44 ,	51.62 " W	
Municip		Pleasantville (V)	1							unty:	Westche		
	<u> </u>	Kensico Reservoir								Class:			
Outfall	Wastewa	ter Description	NAICS Code	Outfa	all L	.atitud	le			Outfall	Longitude)	
096	Chlorinat	ted Aqueduct Waters	4941	41 °		33 ,	Ţ,	47.25	" N	74 °	08	3.73 " W	
Municip	ality:	Montgomery (T)						I	Coi	unty:	Orange	<u> </u>	
Receivii	ng Water:								Class:	В			
Outfall	Wastewa	ter Description	NAICS Code	Outfa	all L	.atitud	le			Outfall	Longitude)	
102	Chlorinat	ted Aqueduct Waters	4941	41 °		20 '		3.55	" N	73 °	53	32.36 " W	
Municip	pality: Cortlandt (T)								Coi	unty:	Putnam		
Receivii	ng Water:	Tributary of Peekskill Hollow	Creek					>		Class:	С		
Outfall	Wastewa	ter Description	NAICS Code	Outfa	all L	.atitud	le			Outfall	Longitude	;	
113	Chlorinat	ted Aqueduct Waters	4941	41 °		45 '	T	55.74	" N	74 °	07	29.42 " W	
Municipality: New Paltz (T)					1				Co	unty:	Ulster		
Receivii	ng Water:	Kleine Kill	•							Class:	С		
Outfall	Wastewa	ter Description	NAICS Code	Outfall Latitude C						Outfall	Longitude)	
114	Chlorinat	ted Aqueduct Waters	4941	41 °		45 '		0.41	" N	74 °	08	35.63 " W	
Municip	ality:	New Paltz (T)							Co	unty:	Ulster		
Receivii	ng Water:	Tributary of Wallkill River							Class: AA				
Outfall	Wastewa	ter Description	NAICS Code	Outfa	all L	.atitud	le			Outfall	Longitude)	
116	Chlorinat	ted Aqueduct Waters	4941	41 °		25		0.11	" N	73 °	56	5.92 " W	
Municip	ality:	Philipstown (T)							Co	unty:	Putnam		
Receivii	ng Water:	Groundwater								Class:	GA		
Outfall	Wastewa	ter Description	NAICS Code	Outfa	all L	.atitud	le			Outfall	Longitude)	
117	Chlorinat	ted Aqueduct Waters	4941	41 °		56		14.1	" N	74 °	12	35.29 " W	
Municip	ality:	Olive (T)							Coi	unty:	Ulster		
Receivii	ng Water:	Groundwater		Class:					GA				
Outfall	Wastewa	ter Description	NAICS Code	Outfall Latitude			Outfall	Longitude	ıgitude				
118	Chlorinat	ted Aqueduct Waters	4941	41 °		50		59.7	" N	74 °	10 '	19.5 " W	
Municip	ality:	Marbletown (T)							Co	unty:	Ulster		
Receivii	ng Water:	Peak Brook								Class: C(T)			

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DEFINITIONS

TERM	DEFINITION
7-Day Geo Mean	The highest allowable geometric mean of daily discharges over a calendar week.
7-Day Average	The average of all daily discharges for each 7-days in the monitoring period. The sample measurement is the highest of the 7-day averages calculated for the monitoring period.
12-Month Rolling Average (12 MRA)	The current monthly value of a parameter, plus the sum of the monthly values over the previous 11 months for that parameter, divided by the number of months for which samples were collected in the 12-month period.
30-Day Geometric Mean	The highest allowable geometric mean of daily discharges over a calendar month, calculated as the antilog of: the sum of the log of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.
Action Level	Action level means a monitoring requirement characterized by a numerical value that, when exceeded, triggers additional permittee actions and 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 (Chlorinated Aqueduct Waters)

OUTFALL DESCRIPTION		RECEIVING WATER	EFFECTIVE	EXPIRING	
014, 067, 096, 102,113	Chlorinated Aqueduct Waters	See Outfall Summary Table	EDPM	8/31/2024	

	EFFLUENT L	IMITATIC	N	ACTION	LEVEL	MONITO	RING REQUIRE	MEN	TS	
PARAMETER							2	Location		FN
	Туре	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	
E.	Monthly Average	Monitor	000			0 :	- · ·			
Flow	Daily Maximum	Monitor	GPD			Continuous	Estimate		Х	1
m11	Minimum	6.5	-			1/Month	Grab			4 0 0
pH	Maximum	8.5	SU						Х	1,2,3
Tatal Dasidual Chlorina	Monthly Average	Monitor	//			d/0.4 a m th	Crah			1,2,3,
Total Residual Chlorine	Daily Maximum	30	μg/L			1/Month	Grab		Х	4
Chlorina Diavida	Monthly Average			Monitor	mall	1/Month	Crob		Х	105
Chlorine Dioxide	Daily Maximum			0.10	mg/L	I/Month	Grab		۸	1,2,5
Chlorita	Monthly Average			Monitor	Dag/1	1/Month	Crob		_	1 2 5
Chlorite	Daily Maximum			0.20	mg/L	1/Month	Grab		Х	1,2,5

- 1. Monitoring only required during chlorination activities. If there is no discharge from certain outfalls, report "No discharge" on DMR.
- 2. Compliance sampling for Outfalls 014, 067, 096, 102, and 113 will be performed at the High Falls Meter Pit or the Rondout PT Downtake Chamber on the Rondout Pressure Tunnel.
- 3. Reporting and sample frequency will be consistent with those established in the permit for specific outfalls. Reported effluent values for these outfalls will match that of the representative compliance sampling location (see footnote 2).
- 4. Total residual chlorine only monitored when sodium hypochlorite is used for chlorination in lieu of chlorine dioxide.
- 5. Chlorine dioxide and chlorite only monitored during the use of chlorine dioxide for chlorination.

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OUTFALL	OUTFALL DESCRIPTION		EFFECTIVE	EXPIRING
010	Chlorinated Aqueduct Waters	See Outfall Summary Table	EDPM	8/31/2024

	EFFLUENT L	IMITATIO	ON	ACTION	LEVEL	MONITO	RING REQUIRE	MEN	TS	FN
PARAMETER								Loca	Location	
	Туре	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	
Flow	Monthly Average	Monitor	CDD			Continuous	Estimate		Х	2
Flow	Daily Maximum	Monitor	GPD			Continuous	Esumate		۸	2
	Minimum	6.5	-			1/Month	Grab		· ·	4.0
pH	Maximum	8.5	SU						Х	1,2
Tatal Danidual Chlorina	Monthly Average	Monitor	/1			1 /N 1 a m t la	Crah			4 0 0
Total Residual Chlorine	Daily Maximum	30	μg/L			1/Month	Grab		Х	1,2,3
Ohlaria a Dianida	Monthly Average			Monitor		4 (0.4 = 10.4)	Oneh		· ·	0.4
Chlorine Dioxide	Daily Maximum			0.10	mg/L	1/Month	Grab		Х	2,4
Ol-1- vit-	Monthly Average			Monitor		4/04-046	Oneh		· ·	0.4
Chlorite	Daily Maximum			0.20	mg/L	1/Month	Grab		Х	2,4

- 1. Stream is classified for trout.
- 2. Monitoring only required during chlorination activities. If there is no discharge from certain outfalls, report "No discharge" on DMR.
- 3. Total residual chlorine only monitored when sodium hypochlorite is used for chlorination in lieu of chlorine dioxide.
- 4. Chlorine dioxide and chlorite only monitored during the use of chlorine dioxide chlorination.

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OUTFALL	DESCRIPTION	RECEIVING WATER	EFFECTIVE	EXPIRING
013	Chlorinated Aqueduct Waters	See Outfall Summary Table	EDPM	8/31/2024

	EFFLUENT L	IMITATIO	ON	ACTION	LEVEL	MONITO	RING REQUIRE	EMEN	TS	
PARAMETER							0 1	Loca	ation	FN
	Туре	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	
F1	Monthly Average	Monitor	ODD			0	F-4:4-		· ·	4
Flow	Daily Maximum	Monitor	GPD			Continuous	Estimate		Х	1
-11	Minimum	6.5				2/Month	Cuah			4 0 0
РΗ	Maximum	8.5	SU			Z/IVIOITUT	Grab		Х	1,2,3
Total Dacidual Chlorina	Monthly Average	Monitor	/1			O/Manth	Cuah		V	1,2,3,
Total Residual Chlorine	Daily Maximum	30	μg/L			2/Month	Grab		Х	4
Chlarina Diavida	Monthly Average			Monitor		O/Manth	Cuah		V	4 0 5
Chlorine Dioxide	Daily Maximum			0.10	mg/L	2/Month	Grab		Х	1,2,5
Chlorita	Monthly Average			Monitor		2/14 - 14	Crah		V	4 0 5
Chlorite	Daily Maximum			0.20	mg/L	2/Month	Grab		Х	1,2,5

- 1. Monitoring only required during chlorination activities. If there is no discharge from certain outfalls, report "No discharge" on DMR.
- 2. Compliance sampling for Outfall 013 will be performed at the High Falls Meter Pit or the Rondout PT Downtake Chamber on the Rondout Pressure Tunnel.
- 3. Reporting and sample frequency will be consistent with those established in the permit for specific outfalls. Reported effluent values for these outfalls will match that of the representative compliance sampling location (see footnote 2).
- 4. Total residual chlorine only monitored when sodium hypochlorite is used for chlorination in lieu of chlorine dioxide.
- 5. Chlorine dioxide and chlorite only monitored during the use of chlorine dioxide for chlorination.

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OUTFALL	DESCRIPTION	RECEIVING WATER	EFFECTIVE	EXPIRING
015, 017, 114	Chlorinated Aqueduct Waters	See Outfall Summary Table	EDPM	8/31/2024

	EFFLUENT L	IMITATIO	ON	ACTION	LEVEL	MONITO	RING REQUIRE	MEN	TS	
PARAMETER								Loca	ation	FN
	Туре	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	
Flow	Monthly Average	Monitor	CDD			Continuous	Catimata		_	1
Flow	Daily Maximum	Monitor	GPD			Continuous	Estimate		Х	1
m11	Minimum	6.5	CLI			1/10/2016	Cuah			4 0 0
pH	Maximum	8.5	SU			1/Week	Grab		Х	1,2,3
Total Basidual Chlorina	Monthly Average	Monitor	//			1/1/10014	Crob		X	1,2,3,
Total Residual Chlorine	Daily Maximum	30	μg/L			1/Week	Grab		^	4
Chlarina Diavida	Monthly Average			Monitor		1/0/2016	Cuah			4.0.5
Chlorine Dioxide	Daily Maximum			0.10	mg/L	1/Week	Grab		Х	1,2,5
Chlarita	Monthly Average			Monitor	, , , , , , , , , , , , , , , , , , ,	100/2-1	Cuah			4.0.5
Chlorite	Daily Maximum			0.20	mg/L	1/Week	Grab		Х	1,2,5

- 1. Monitoring only required during chlorinated activities. If there is no discharge from certain outfalls, report "No discharge" on DMR.
- 2. Compliance sampling for Outfalls 015, 017, and 114 will be performed at the High Falls Meter Pit or the Rondout PT Downtake Chamber on the Rondout Pressure Tunnel.
- 3. Reporting and sample frequency will be consistent with those established in the permit for specific outfalls. Reported effluent values for these outfalls will match that of the representative compliance sampling location (see footnote 2).
- 4. Total residual chlorine only monitored when sodium hypochlorite is used for chlorination in lieu of chlorine dioxide.
- 5. Chlorine dioxide and chlorite only monitored during the use of chlorine dioxide for chlorination.

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OUTFALL	DESCRIPTION	RECEIVING WATER	EFFECTIVE	EXPIRING
063	Chlorinated Aqueduct Waters	See Outfall Summary Table	EDPM	8/31/2024

	EFFLUENT L	IMITATIO	ON	ACTION	LEVEL	MONITO	RING REQUIRE	MEN	TS	
PARAMETER								Loca	ation	FN
	Туре	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	
Flow	Monthly Average	Monitor	CDD			Continuous	Catimata		_	1
Flow	Daily Maximum	Monitor	GPD			Continuous	Estimate		Х	1
-11	Minimum	6.0	CLI			4 // // / /	Crah			4 0 0
pH	Maximum	9.0	SU			1/Week	Grab		Х	1,2,3
Tatal Danidual Chlorina	Monthly Average	Monitor	/1			4 // // / /	Crah		Х	1,2,3,
Total Residual Chlorine	Daily Maximum	50	μg/L			1/Week	Grab		۸	4
Ohlaria - Diavida	Monthly Average			Monitor		100/1-	Onele		V	4.0.5
Chlorine Dioxide	Daily Maximum			0.10	mg/L	1/Week	Grab		Х	1,2,5
Ol-1- vit-	Monthly Average			Monitor		400/-	Oneh		V	4.0.5
Chlorite	Daily Maximum			0.20	mg/L	1/Week	Grab		Х	1,2,5

- 1. Monitoring only required during chlorinated activities. If there is no discharge from certain outfalls, report "No discharge" on DMR.
- 2. Compliance sampling for Outfalls 063 will be performed at the High Falls Meter Pit or the Rondout PT Downtake Chamber on the Rondout Pressure Tunnel.
- 3. Reporting and sample frequency will be consistent with those established in the permit for specific outfalls. Reported effluent values for these outfalls will match that of the representative compliance sampling location (see footnote 2).
- 4. Total residual chlorine only monitored when sodium hypochlorite is used for chlorination in lieu of chlorine dioxide.
- 5. Chlorine dioxide and chlorite only monitored during the use of chlorine dioxide for chlorination.

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OUTFALL	DESCRIPTION	RECEIVING WATER	EFFECTIVE	EXPIRING
078	Chlorinated Aqueduct Waters	See Outfall Summary Table	EDPM	8/31/2024

	EFFLUENT L	IMITATIO	ON	ACTION	LEVEL	MONITO	RING REQUIRE	EMEN	TS	
PARAMETER								Loca	ation	FN
	Туре	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	
Flave	Monthly Average	Monitor	CDD			Cantinuaua	Cation at a			0
Flow	Daily Maximum	Monitor	GPD			Continuous	Estimate		Х	2
-11	Minimum	6.5	011			4/5	0		, ,	4.0
рН	Maximum	8.5	SU			1/Day	Grab		Х	1,2
Tatal Danidual Chlorina	Monthly Average	Monitor	/1			1/D=v	Cuah		Х	4 0 0
Total Residual Chlorine	Daily Maximum	30	μg/L			1/Day	Grab		۸	1,2,3
Chlarina Diavida	Monthly Average			Monitor		1/Day	Cuah			0.4
Chlorine Dioxide	Daily Maximum			0.10	mg/L	1/Day	Grab		Х	2,4
Chlarita	Monthly Average			Monitor		1/00/	Cuah		V	0.4
Chlorite	Daily Maximum			0.20	mg/L	1/Day	Grab		Х	2,4

- 1. Stream is classified for trout.
- 2. Monitoring only required during chlorination activities. If there is no discharge from certain outfalls, report "No discharge" on DMR.
- 3. Total residual chlorine only monitored when sodium hypochlorite is used for chlorination in lieu of chlorine dioxide.
- 4. Chlorine dioxide and chlorite only monitored during the use of chlorine dioxide for chlorination.

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OUTFALL	DESCRIPTION	RECEIVING WATER	EFFECTIVE	EXPIRING
116	Chlorinated Aqueduct Waters	See Outfall Summary Table	EDPM	8/31/2024

DADAMETER	EFFLUENT LIMITATION				MONITORING REQUIREMENTS					
PARAMETER								Loca	ation	FN
	Туре	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	
	Monthly Average	Monitor				Cantinuaua	Cation at a		\ \	4
Flow	Daily Maximum	Monitor	GPD			Continuous	Estimate		^	ı
-11	Minimum	6.5	CLI			1 /N 4 a va t la	Cuah		Х	1,2,3,
pH	Maximum	8.5	SU			1/Month	Grab			4

- 1. Monitoring only required during chlorination activities. If there is no discharge from certain outfalls, report "No discharge" on DMR.
- 2. Discharge of Outfall 116 is to groundwater.
- 3. Compliance sampling for Outfall 116 will be performed at the High Falls Meter Pit or the Rondout PT Downtake Chamber on the Rondout Pressure Tunnel.
- 4. Reporting and sample frequency will be consistent with those established in the permit for specific outfalls. Reported effluent values for these outfalls will match that of the representative compliance sampling location (see footnote 3).

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OUTFALL	DESCRIPTION	RECEIVING WATER	EFFECTIVE	EXPIRING
117	Chlorinated Aqueduct Waters	See Outfall Summary Table	EDPM	8/31/2024

	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				
PARAMETER								Location		FN
	Туре	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	
	Monthly Average	Monitor				Cantinuaua	Catina ata		_	4
Flow	Daily Maximum	Monitor	GPD			Continuous	Estimate		^	ı
-11	Minimum	6.5	CLI			1 /N / a in the	Cuah			1,2,3,
pH	Maximum	8.5	SU			1/Month	Grab		Х	4

- 1. Monitoring only required during chlorination activities. If there is no discharge from certain outfalls, report "No discharge" on DMR.
- 2. Discharge of Outfall 117 is to groundwater.
- 3. Compliance sampling for Outfall 117 will be performed at the Ashokan Sampling Shed.
- 4. Reporting and sample frequency will be consistent with those established in the permit for specific outfalls. Reported effluent values for these outfalls will match that of the representative compliance sampling location (see footnote 3).

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OUTFALL	DESCRIPTION	RECEIVING WATER	EFFECTIVE	EXPIRING
118	Chlorinated Aqueduct Waters	See Outfall Summary Table	EDPM	8/31/2024

	EFFLUENT L	IMITATIO	ON	ACTION	LEVEL	MONITO	RING REQUIRE	MEN	TS	
PARAMETER					Commis			Loca	ation	FN
	Туре	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	
Flave	Monthly Average	Monitor	CDD			Cantinua	Fatiments.		V	0 0
Flow	Daily Maximum	Monitor	GPD			Continuous	Estimate		Х	2, 3
-11	Minimum	6.5	011			0.004	0		x	
pH	Maximum	8.5	SU			3/Week	Grab		۸	2
Tatal Danidual Chlorina	Monthly Average	Monitor	//			2/\//==\	Crah		Х	4 4
Total Residual Chlorine	Daily Maximum	30	μg/L			3/Week	Grab		۸	1, 4
Ohlaria - Diavida	Monthly Average			Monitor		2004	Onele		V	0.5
Chlorine Dioxide	Daily Maximum			0.10	mg/L	3/Week	Grab		Х	2, 5
Chlavita	Monthly Average			Monitor	, , , , , , , , , , , , , , , , , , ,	2/1/2-1-	Crah		V	0.5
Chlorite	Daily Maximum			0.20	mg/L	3/Week	Grab		Х	2, 5

- 1. Stream is classified for trout.
- 2. Monitoring only required during chlorination activities. If there is no discharge from certain outfalls, report "No discharge" on DMR.
- 3. Discharges at this location would only be anticipated to occur at aqueduct flows equal to or greater than 620 MGD.
- 4. Total residual chlorine only monitored when sodium hypochlorite is used for chlorination in lieu of chlorine dioxide.
- 5. Chlorine dioxide and chlorite only monitored during the use of chlorine dioxide for chlorination.

PERMIT LIMITS, LEVELS AND MONITORING (Aqueduct Unwatering)

OUTFALL	DESCRIPTION	RECEIVING WATER	EFFECTIVE	EXPIRING
01A, 01N, 078	Aqueduct Unwatering	See Outfall Summary Table	EDPM	8/31/2024

DADAMETER	EFF	LUENT L	IMITATIO	ON		MONITO	RING REQUIRE	MEN	TS	
PARAMETER							0	Loca	ation	FN
	Туре	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Inf.	Eff.	
Flow	Monthly Average	Monitor	GPD			Continuous	Estimate		Х	1,2,3, 5
Flow	Daily Maximum	Monitor	GPD			Continuous	Esumate		^	5
T	Monthly Average	Monitor	/1			4/5	Crah			4.5
Total Residual Chlorine	Daily Maximum	Monitor	μg/L			1/Event	Grab		Х	4,5
Chlarina Diavida	Monthly Average	Monitor	,,,,,,,/I			1/Event	Cuah			F C
Chlorine Dioxide	Daily Maximum	Monitor	mg/L			1/Event	Grab		Х	5,6
Chlavita	Monthly Average	Monitor	/I			1/5	Orah			F C
Chlorite	Daily Maximum	Monitor	mg/L			1/Event	Grab		Х	5,6

- 1. These sampling points are representative of aqueduct conditions prior to unwatering.
- 2. Permittee shall provide DEC a minimum of 3 days' notice prior to planned unwatering activities.
- 3. Estimate total volume of water released during aqueduct unwatering.
- 4. Total residual chlorine only monitored when sodium hypochlorite is used for chlorination in lieu of chlorine dioxide. Sample shall be taken prior to aqueduct unwatering. If sample is below 30 μg/L, aqueduct unwatering may commence.
- 5. Compliance sampling for Outfall 01N will be performed in the aqueduct upstream of the outfall.
- 6. Chlorine dioxide and chlorite only monitored during the use of chlorine dioxide for chlorination. Sample shall be taken prior to aqueduct unwatering. If sample is below 0.10 mg/L for chlorine dioxide and 0.20 mg/L for chlorite, aqueduct unwatering may commence.

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SPECIAL CONDITIONS ACTION LEVELS AND TIERED ACTIONS

Action Levels have been established for the monitoring of chlorine dioxide and chlorite, which do not have existing water quality standards, as part of this permit. In the event that measured values exceed the Action Levels, NYCDEP would implement the following measures based upon the measured concentrations and/or the recurrence of ongoing elevated values.

Tier Level	Chlorine Dioxide	Chlorite	Actions
Tier 1	0.10-0.20 mg/L	0.20-0.25 mg/L	 Review sampling results, laboratory QC data and field notes, and perform data check. Review Ashokan Chemical Treatment Facility (ACTF) daily concentration monitoring records for potential anomalies. Review ACTF operating logs for variances/upsets related to target dosing. Review ACTF calibration logs. Perform recalibration if required. Persistent exceedance would be considered Tier 2: Action Level is exceeded in three (3) or more consecutive sampling events.
Tier 2	>0.20-0.25 mg/L	>0.25-0.30 mg/L	 Implement Tier 1 measures. Conduct five (5) days or additional sampling. Determine if in compliance with applicable Action Level(s). Persistent exceedance would be considered Tier 3: Action Level is exceeded throughout five (5) days of additional sampling.
Tier 3	>0.25 mg/L	>0.30 mg/L	 Implement Tier 1 measures. Implement Tier 2 measures. If measured values exceed these concentrations, operation of the ACTF will be temporarily ceased until applicable Action Levels can be met.

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BEST MANAGEMENT PRACTICES (BMPs) FOR INDUSTRIAL FACILITIES

Note that for some facilities, especially those with few employees or limited industrial activities, some of the below BMPs may not be applicable. It is acceptable in these cases to indicate "Not Applicable" for the portion(s) of the BMP Plan that do not apply to your facility, along with an explanation.

- 1. <u>General</u> The permittee shall develop, maintain, and implement a Best Management Practices (BMP) plan to prevent releases of significant amounts of pollutants to the waters of the State through plant site runoff; spillage and leaks; sludge or waste disposal; and stormwater discharges including, but not limited to, drainage from raw material storage. The BMP plan shall be documented in narrative form and shall include the 13 minimum BMPs and any necessary plot plans, drawings, or maps. Other documents already prepared for the facility such as a Safety Manual or a Spill Prevention, Control and Countermeasure (SPCC) plan may be used as part of the plan and may be incorporated by reference. A copy of the current BMP plan shall be submitted to the Department as required in item (2.) below and a copy must be maintained at the facility and shall be available to authorized Department representatives upon request.
- 2. Compliance Deadlines The initial BMP plan was received by the Department on February 20, 2020. The BMP plan shall be reviewed annually and shall be modified whenever (a) changes at the facility materially increase the potential for releases of pollutants; (b) actual releases indicate the plan is inadequate, or (c) a letter from the Department identifies inadequacies in the plan. The permittee shall certify in writing, as an attachment to the December Discharge Monitoring Report (DMR), that the annual review has been completed. Subsequent modifications to or renewal of this permit does not reset or revise these deadlines unless a new deadline is set explicitly by such permit modification or renewal.
- 3. Facility Review The permittee shall review all facility components or systems (including but not limited to material storage areas; in-plant transfer, process, and material handling areas; loading and unloading operations; storm water, erosion, and sediment control measures; process emergency control systems; and sludge and waste disposal areas) where materials or pollutants are used, manufactured, stored or handled to evaluate the potential for the release of pollutants to the waters of the State. In performing such an evaluation, the permittee shall consider such factors as the probability of equipment failure or improper operation, cross-contamination of storm water by process materials, settlement of facility air emissions, the effects of natural phenomena such as freezing temperatures and precipitation, fires, and the facility's history of spills and leaks. The relative toxicity of the pollutant shall be considered in determining the significance of potential releases. The review shall address all substances present at the facility that are identified in the SPDES application Form NY-2C (available at https://www.dec.ny.gov/docs/permits ej operations pdf/form2c.pdf) or that are required to be monitored for by the
- https://www.dec.ny.gov/docs/permits ej operations pdf/form2c.pdf) or that are required to be monitored for by the SPDES permit.
- 4. 13 Minimum BMPs: Whenever the potential for a release of pollutants to State waters is determined to be present, the permittee shall identify BMPs that have been established to prevent or minimize such potential releases. Where BMPs are inadequate or absent, appropriate BMPs shall be established. In selecting appropriate BMPs, the permittee shall consider good industry practices and, where appropriate, structural measures such as secondary containment and erosion/sediment control devices and practices. USEPA guidance for development of stormwater elements of the BMP is available in *Developing Your Stormwater Pollution Prevention Plan A Guide for Industrial Operators*, February 2009, EPA 833-B-09-002. As a minimum, the plan shall include the following BMPs:

1. BMP Pollution Prevention Team

2. Reporting of BMP Incidents

3. Risk Identification & Assessment

4. Employee Training

5. Inspections and Records

6. Security

7. Preventive Maintenance

8. Good Housekeeping

9. Materials/Waste Handling, Storage, & Compatibility

10. Spill Prevention & Response

11. Erosion & Sediment Control

12. Management of Runoff

13. Street Sweeping

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DISCHARGE NOTIFICATION REQUIREMENTS

The permittee has obtained a waiver for the installation of signs at outfalls 01A, 01N, 017, 067, and 114. The waiver was submitted and accepted on September 7, 2022.

For all other outfalls listed in this permit:

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

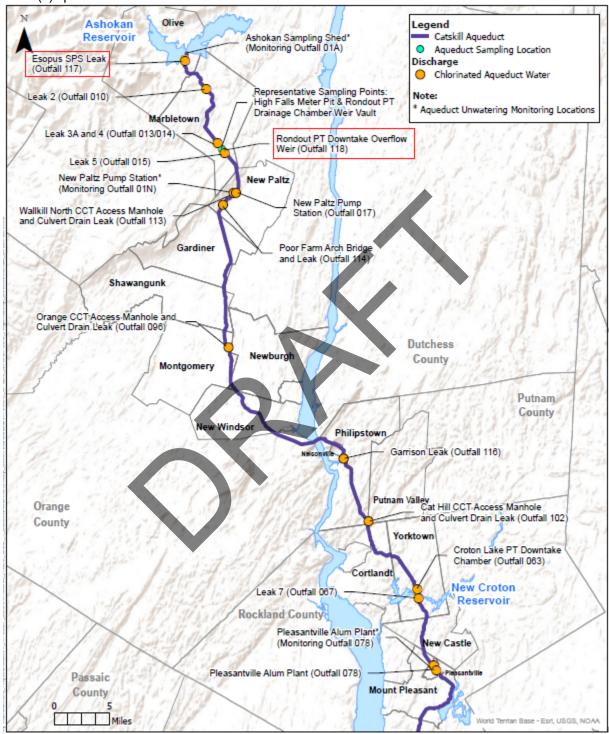
The signs shall have **minimum** dimensions of eighteen inches by twenty-four inches (18" x 24") and shall have white letters on a green background and contain the following information:

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

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

MONITORING LOCATIONS

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



Basemap Source: World Terrain Base - Esri, USGS, NOAA



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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) Permit actions 6 NYCRR 750-1.1(c), 1.18, 1.20 & 2.1(h) Property rights 6 NYCRR 750-2.2(b) 6. 7. Duty to provide information 6 NYCRR 750-2.1(i) Inspection and entry 6 NYCRR 750-2.1(a) & 2.3 8.

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

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

E. Reporting Requirements

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. 6 NYCRR 750-1.17 **Transfers** 6 NYCRR 750-2.5(e) 4. Monitoring reports 6 NYCRR 750-1.14(d) 5. Compliance schedules 6 NYCRR 750-2.7(c) & (d) 24-hour reporting 6. Other noncompliance 7. 6 NYCRR 750-2.7(e) 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 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 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

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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. <u>Discharge Monitoring Reports (DMRs):</u> Completed DMR forms shall be submitted for each <u>one (1)</u> 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 accepted 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. Additional information required to be submitted by this permit shall be summarized and reported to the Regional Water Engineer and Bureau of Water Permits at the following addresses:

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

Department of Environmental Conservation
Regional Water Engineer, Region 3
220 White Plains Road, Suite 110, Tarrytown, New York, 10591, Phone: (914) 803-8157

Phone: (518) 402-8111

- 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.

Facility: Catskill Aqueduct SPDES Number: NY0281042

USEPA Non-Major/Class 01 Industrial

Date: June 20, 2023 v.1.17 Permit Writer: Kirsten Jedd-Barry

SPDES Permit Fact Sheet New York City Department of Environmental Protection Catskill Aqueduct NY0281042



Permittee: New York City Department of Environmental Protection Facility: Catskill Aqueduct

SPDES Number: NY0281042

USEPA Non-Major/Class 01 Industrial

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Date: June 20, 2023 v.1.17 Permit Writer: Kirsten Jedd-Barry

Facility: Catskill Aqueduct SPDES Number: NY0281042

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Summary of Permit Changes

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

Date: June 20, 2023 v.1.17

Permit Writer: Kirsten Jedd-Barry

- Updated permit format, definitions, and general conditions
- Updated permittee contact and address
- Removed Outfalls 003, 008, 018, 022, 033, 042, 047, 050, 053, 055, 058, 062, 064, 076, 084, 091, 093, 113 (Biofilm and Construction Wash Waters only), and 115
- Added Outfall 117 with monitoring for flow and pH
- Added Outfall 118 with monitoring for flow, pH, total residual chlorine, chlorine dioxide, and chlorite.
- Updated the Discharge Notification Requirements to include outfalls for which the permittee obtained a waiver
- Updated the Monitoring Locations map

This factsheet 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 factsheet.

Administrative History

9/1/2019	The last full technical review was performed and the SPDES permit became
	effective with a new five-year term and expiration date of 8/31/2024. The 2019
	permit, along with all subsequent modifications, has formed the basis of this permit.

- 12/15/2020 Permit was modified to include ten (10) new discharge outfalls that were not originally planned or included in the original application.
- 9/9/2021 Permit was modified to reconfigure the sampling points for 11 discharge outfalls that were not originally planned or included in the original application, and to remove two (2) outfalls from the permit since the leaks have been fixed and there is no longer any discharge.
- 10/7/2021 Permit was modified to change flow units of measure from gallons per day to million gallons per day.
- 4/27/2022 Permit was modified to include one (1) new discharge outfall that was not originally planned or included in the original application.
- 11/28/2022 Permit was modified to add action levels for chlorine dioxide and chlorite, to require total residual chlorine (TRC) monitoring to apply only when sodium hypochlorite is used, and to add an alternate representative sampling point at the Rondout Downtake Chamber (RDC) Weir Vault.
- The New York City Department of Environmental Protection (NYCDEP) submitted a request to modify the permit as part of the Catskill Aqueduct Repair and Rehabilitation (CAT-RR) project. This request includes adding two (2) new discharge locations recently identified, removing 19 regulated outfalls in relation to construction completion, and correcting the name of the representative compliance sampling point.

Facility: Catskill Aqueduct SPDES Number: NY0281042

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

Date: June 20, 2023 v.1.17

Permit Writer: Kirsten Jedd-Barry

Facility Information

The NYCDEP completed a multi-year project to support the Water for the Future (WFF) program. This program includes the NYCDEP's CAT-RR project. Discharges may result from some activities related to operating the Catskill Aqueduct.

After construction and rehabilitation activities were completed, NYCDEP identified two new discharge locations: the Esopus Steel Pipe Siphon (SPS) Leak (new Outfall 117) and the Rondout Pressure Tunnel (PT) Downtake Overflow Weir release (new Outfall 118). With the reactivation of chlorine dioxide addition at the Ashokan Chemical Treatment Facility (ACTF), there will be treated water released at the siphon location and the potential of treated water released at the Downtake overflow weir.

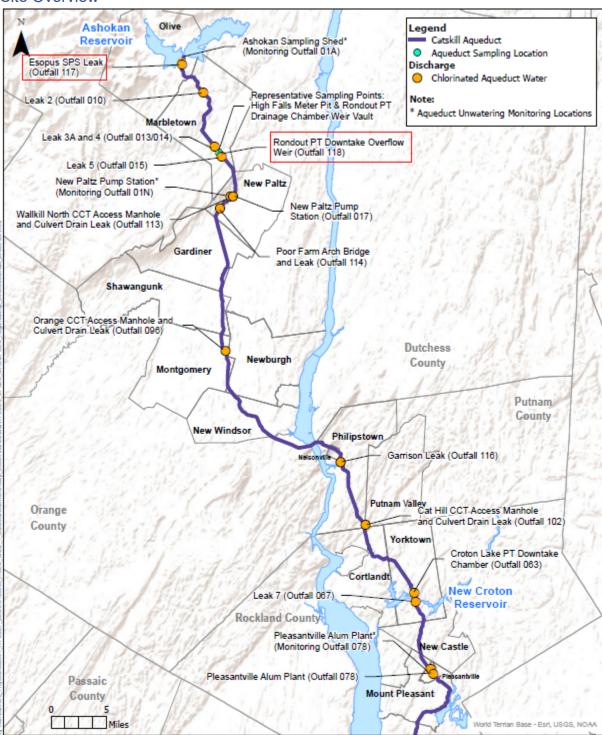
The Rondout PT Downtake allows direct access into the Catskill Aqueduct and contains a weir that allows the release of water from the northern portion of the Catskill Aqueduct to avoid pressurization of the aqueduct when the flows inside the aqueduct are equal to or greater than 620 million gallons per day (MGD). At these flows, treated aqueduct water is released to an overflow drainage conduit which connects to a drainage ditch that flows to the Peak Brook.

Additionally, 19 outfalls will be removed from the SPDES permit: 18 construction and biofilm wash wastewater outfalls and one (1) leak. These outfalls are no longer present as applicable construction activities associated with the CAT-RR project that generated these wastewaters are now complete and the aqueduct leak has been repaired. No further discharge of biofilm and construction wash waters or chlorinated aqueduct waters are anticipated at these locations.

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Site Overview



Date: June 20, 2023 v.1.17

Permit Writer: Kirsten Jedd-Barry

Basemap Source: World Terrain Base - Esri, USGS, NOAA



Permittee: New York City Department of Environmental Protection Facility: Catskill Aqueduct

SPDES Number: NY0281042

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Receiving Water Information

The following is a list of the outfalls affected by this permit modification:

Outfall No.	SIC Code	Wastewater Type	Receiving Water
003	4941	Biofilm and Construction Wastewaters	None, removing outfall from permit
008	4941	Biofilm and Construction Wastewaters	None, removing outfall from permit
018	4941	Biofilm and Construction Wastewaters	None, removing outfall from permit
022	4941	Biofilm and Construction Wastewaters	None, removing outfall from permit
033	4941	Biofilm and Construction Wastewaters	None, removing outfall from permit
042	4941	Biofilm and Construction Wastewaters	None, removing outfall from permit
047	4941	Biofilm and Construction Wastewaters	None, removing outfall from permit
050	4941	Biofilm and Construction Wastewaters	None, removing outfall from permit
053	4941	Biofilm and Construction Wastewaters	None, removing outfall from permit
055	4941	Biofilm and Construction Wastewaters	None, removing outfall from permit
058	4941	Biofilm and Construction Wastewaters	None, removing outfall from permit
062	4941	Biofilm and Construction Wastewaters	None, removing outfall from permit
064	4941	Biofilm and Construction Wastewaters	None, removing outfall from permit
076	4941	Biofilm and Construction Wastewaters	None, removing outfall from permit
084	4941	Biofilm and Construction Wastewaters	None, removing outfall from permit
091	4941	Biofilm and Construction Wastewaters	None, removing outfall from permit
093	4941	Biofilm and Construction Wastewaters	None, removing outfall from permit
113*	4941	Biofilm and Construction Wastewaters	None, removing outfall from permit

Date: June 20, 2023 v.1.17 Permit Writer: Kirsten Jedd-Barry

Facility: Catskill Aqueduct SPDES Number: NY0281042

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115	4941	Chlorinated Aqueduct Waters	None, removing outfall from permit
117	4941	Chlorinated Aqueduct Waters	Groundwater, Class GA
118	4941	Chlorinated Aqueduct Waters	Peak Brook, Class C(T)

Date: June 20, 2023 v.1.17

Permit Writer: Kirsten Jedd-Barry

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

Permit Requirements

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

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. <u>Appendix Link</u>

Antidegradation

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

Discharge Notification Act Requirements

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

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

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^{*}Outfall 113 to remain active for discharge of chlorinated aqueduct waters. Only the discharge of biofilm and construction wash waters will be removed from the permit.

¹ As prescribed by 6 NYCRR Part 617

Permittee: New York City Department of Environmental Protection Facility: Catskill Aqueduct SPDES Number: NY0281042

USEPA Non-Major/Class 01 Industrial

Date: June 20, 2023 v.1.17 Permit Writer: Kirsten Jedd-Barry

OUTFALL AND RECEIVING WATER SUMMARY TABLE

			Receiving Water	Water	Water Index No. / Priority	Major /	Hardness	1Q10	7Q10	30Q10	Critical Effluent	Dil	ution R	atio
Outfall	Latitude	Longitude	Name	Class	Waterbody Listing (PWL) No.	Sub Basin	(mg/l)	(MGD)	(MGD)	(MGD)	Flow (MGD)			
003	-	-	None, removing outfall from permit	-	-	-	-	ı	i	-	ı	ı	ı	-
800	-	-	None, removing outfall from permit	-	-	-	-	-	-	-	-	-	-	-
018	-	-	None, removing outfall from permit	-	-	-	-	-	-	-	-	-	-	-
022	-	-	None, removing outfall from permit	-	-	-	-	-	-	-	-	-	-	-
033	-	-	None, removing outfall from permit	-	-	-	-	-	-	-	-	-	-	-
042	-	-	None, removing outfall from permit	-	-	-	-	-	-	-	-	-	-	-
047	-	-	None, removing outfall from permit	-	-	-	-	-	-	-	-	-	-	-
050	-	-	None, removing outfall from permit	-	-	-	-	-	-	-	-	-	-	-
053	-	-	None, removing outfall from permit	-	-	-	-	-	-	-	-	-	-	-
055	-	-	None, removing outfall from permit	-	-	-	-	-	-	-	-	-	-	-
058	-	-	None, removing outfall from permit	-	-	-	-	-	-	-	-	-	-	-
062	1	-	None, removing outfall from permit	ı	-	-	-	ı	i	-	ı	•	ı	-
064	-	-	None, removing outfall from permit	-	-	-	-	1	i	-	1	-	1	-
076	-	-	None, removing outfall from permit	-	-	-	-	ı	ı	-		-	ı	-
084	-	-	None, removing outfall from permit	-	-	-	-	-	-	-	-	-	ı	-
091	-	-	None, removing outfall from permit	-	-	-	-	-	-	-	-	-	-	-
093	-	-	None, removing outfall from permit	-	-	-	-	-	-	-	-	-	-	-
113*	-	-	None, removing outfall from permit	-	-	-	-	-	-	-	-	-	-	-
115	-	-	None, removing outfall from permit	-	-	-	-	-	-	-	-	-	-	-
117	41° 56' 14.1" N	74° 12' 35.29" W	Groundwater	GA	-	13 / 07	-	-	-	-	0.005	-	-	_

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	_ / Nitron-iviajon/	Jiaoo o i iiiaaoti	iui											
118	41° 50' 59.7" N	74° 10' 19.5" W	Peak Brook	C(T)	H-139-14-12 portion and all tribs PWL: 1306-0099	13 / 06	-	-	-	1	7.71	-	ı	-

^{*}Outfall 113 to remain active for the discharge of chlorinated aqueduct waters. Only the discharge of biofilm and construction wash waters will be removed from the permit.

POLLUTANT SUMMARY TABLE

Outfall 117

Outfall #	117	Description of Wastewater: Chlorinated Aqueduct Water													
		Type of Treatment: Oxidation via chemical injection (chlorine dioxide)													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs			Water Quality Data & WQBELs						Dania fan
			Permit Limit	Existing Effluent Quality ²	# of Data Points Detects / Non- Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	ML	Basis for Permit Requirement
General Notes: 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 Daily Max	-	-	-	Monitor	TOGS 1.2.1	Narrative: No alterations that will impair the waters for their best usages.						TBEL	
	Flow will be monitored for informational purposes and to calculate pollutant loadings.														
рН	SU	Minimum	-	-	-	6.0	TOGS 1.2.1	-	-	6.5 – 8.5	Dange	65 95	703.3		WOREL
		Maximum	-	-	-	9.0					Range	6.5 - 8.5	103.3	-	WQBEL
	Consistent with TOGS 1.2.1, TBELs reflect the available treatment technology listed in Attachment C. Given that adequate dilution is not available, an effluent equal to the WQS is appropriate.									effluent limitation					

² Existing Effluent Quality: Daily Max = 99% lognormal; Monthly Avg = 95% lognormal (for datasets with ≤3 nondetects); Daily Max = 99% delta-lognormal; Monthly Avg = 95% delta-lognormal (for datasets with >3 nondetects)

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POLLUTANT SUMMARY TABLE

Outfall 118

Outrail 11	0	Г														
Outfall #	118	Description	Description of Wastewater: Chlorinated Aqueduct Water													
Outian #		Type of Treatment: Oxidation via chemical injection (chlorine dioxide)														
		s Averaging Period	Existing Discharge Data			TBELs			Water Quality Data & WQBELs						Basis for	
Effluent Parameter	Units		Permit Limit	Existing Effluent Quality ³	# of Data Points Detects / Non- Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	ML	Permit Requirement	
General Notes: All applicable water quality standards were reviewed for development of the WQBELs. The standard and WQBEL shown below represent the most stringent.											ent.					
Flow Rate	MGD Avg		-	-	-	Monitor	TOGS 1.2.1	Narrative: No alterations that will impair the waters for their best usages. 703.2							TBEL	
	Flow will be monitored for informational purposes and to calculate pollutant loadings.															
	SU	Minimum	-	-	-	6.0	TOGS 1.2.1		-	6.5 – 8.5	Range	6.5 - 8.5	703.3		WQBEL	
рН		Maximum	ı	-	-	9.0		_								
		tent with TOo the WQS is			eflect the ava	ilable treat	ment technology	listed in A	ttachment	C. Given t	nat adequat	e dilution is r	ot available	e, an e	ffluent limitation	
	mg/L	Daily Max	-	-	-	2.0	TOGS 1.3.3	-	-	0.005	A(C)	0.005	703.5	0.03	ML	
Total Residual Chlorine (TRC)	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.															
							n through the add permit will require								trol biofilm, TRC	
Action Levels																
	mg/L	Monthly Avg	-	-	-	Monitor	750.1-13 Monitor	-	-	-	-	-	-	-	Action Level	
Chlorine		Daily Max	•	-	-	0.10	NYCDEP Study		-	-	-	-	-	-		
Dioxide	whole e	effluent toxici hat measure	ty (WET) d values	testing, an	nd a review o e action leve	of available I, NYCDEP	ng a previous chi toxicity data, NY would implemen ditions section o	CDEP is p it a tiered p	roposing th olan based	e action le	vel of 0.10 r	mg/L daily ma	aximum for	chlorin	e dioxide. In the	
Chlorite	mg/L	Monthly Avg	-	-	-	Monitor	750.1-13 Monitor		-	-	-	-	-	-	Action Level	
0.1101110	1119/12	Daily Max	-	-	-	0.20	NYCDEP Study	-	-	-	-	-	-	-		

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

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Outfall #	118	Description of Wastewater: Chlorinated Aqueduct Water													
		Type of Treatment: Oxidation via chemical injection (chlorine dioxide)													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			-	ΓBELs	Water Quality Data & WQBELs							Basis for
			Permit Limit	Existing Effluent Quality ³	# of Data Points Detects / Non- Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL	ML	
	Based upon a review of available sampling data collected during a previous chlorine dioxide-based chlorination efforts in June 2021 and August 2021, the results of prior whole effluent toxicity (WET) testing, and a review of available toxicity data, NYCDEP is proposing the action level of 0.20 mg/L daily maximum for chlorine dioxide. In the event that measured values exceed the action level, NYCDEP would implement a tiered plan based upon the measured concentrations and/or the recurrence of ongoing elevated values. This plan can be found under the Special Conditions section of the SPDES permit.														

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Appendix: Regulatory and Technical Basis of Permit Authorizations

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

Regulatory References

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

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

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

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

Outfall and Receiving Water Information

Impaired Waters

The NYS 303(d) List of Impaired/TMDL Waters identifies waters where specific best usages are not fully supported. The state must consider the development of a Total Maximum Daily Load (TMDL) or other strategy to reduce the input of the specific pollutant(s) that restrict waterbody uses, in order to restore and protect such uses. SPDES permits must include effluent limitations necessary to implement a 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

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

Interstate Water Pollution Control Agencies

Some POTWs may be subject to regulations of interstate basin/compact agencies including: Interstate Sanitation Commission (ISC), International Joint Commission (IJC), Delaware River Basin Commission (DRBC), Ohio River Valley Water Sanitation Commission (ORSANCO), and the Susquehanna River Basin Commission (SRBC). Generally, basin commission requirements focus principally on water quality and not treatment technology. However, interstate/compact agency regulations for the ISC, IJC, DRBC and NYC Watershed contain explicit effluent limits which must be addressed during permit drafting. 6 NYCRR 750-2.1(d) requires SPDES permits for discharges that originate within the jurisdiction of an interstate water pollution control agency, to include any applicable effluent standards or water quality standards (WQS) promulgated by that interstate agency.

Existing Effluent Quality

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

Permit Requirements

Basis for Effluent Limitations

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

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

Anti-backsliding

Anti-backsliding requirements are specified in the CWA sections 402(o) and 303(d)(4), ECL 17-0809, and regulations at 40 CFR 122.44(/) and 6 NYCRR 750-1.10(c) and (d). Generally, the relaxation of effluent limitations in permits is prohibited unless one of the specified exceptions applies, which will be cited on a case-by-case basis in this factsheet. Consistent with current case law⁴ and USEPA interpretation⁵ anti-backsliding requirements do not apply should a revision to the final effluent limitation take effect before the scheduled date of compliance for that final effluent limitation.

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

⁵ U.S. EPA, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; 65 Fed. Reg. 31682, 31704 (May 18, 2000); Proposed Water Quality Guidance for the Great Lakes System, 58 Fed. Reg. 20802, 20837 & 20981 (April 16, 1993)

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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.

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Effluent Limitations

In developing a permit, the Department determines the technology-based effluent limitations (TBELs) and then evaluates the water quality expected to result from technology controls to determine if any exceedances of water quality criteria in the receiving water might result. If there is a reasonable potential for exceedances of water quality criteria to occur, water quality-based effluent limitations (WQBELs) are developed. A WQBEL is designed to ensure that the water quality standards of receiving waters are met. In general, the CWA requires that the effluent limitations for a particular pollutant are the more stringent of either the TBEL or WQBEL.

Technology-based Effluent Limitations (TBELs) for Industrial Facilities

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

USEPA Effluent Limitation Guidelines (ELGs) Applicable to Facility

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

Best Professional Judgement (BPJ)

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

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. 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 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,

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1.3.2, 1.3.5 and 1.3.6. The Department 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 Department 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:

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"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 Department;
- 2) identify water quality criteria applicable to these pollutants;
- 3) determine if WQBELs are necessary (i.e. reasonable potential analysis (RPA)). The RPA will utilize the procedure outlined in Chapter 3.3.2 of EPA's Technical Support Document (TSD). As outlined in the TSD, for parameters with limited effluent data the RPA may include multipliers to account for effluent variability; and,
- 4) calculate WQBELs (if necessary). Factors considered in calculating WQBELs include available dilution of effluent in the receiving water, receiving water chemistry, and other pollutant sources.

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The Department uses modeling tools to estimate the expected concentrations of the pollutant in the receiving water and develop WQBELs. These tools were developed in part using the methodology referenced above. If the estimated concentration of the pollutant in the receiving water is expected to exceed the ambient water quality standard or guidance value (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 Department uses a model which incorporates the Streeter-Phelps equation. The equation relates the decomposition of inorganic and organic materials along with oxygen reaeration rates to compute the downstream dissolved oxygen concentration for comparison to water quality standards.

A Watershed Maximum Daily Load (WMDL) may be developed by the Department to account for the cumulative effect of multiple discharges of conservative toxic pollutants to ensure water quality standards are met in downstream segments. The WMDL uses a simple dilution model, assuming full mix in the receiving stream, to calculate the maximum allowable pollutant load that can be discharged and still meet water quality standards during critical low flow in downstream segments such as those with sensitive receptors (e.g. public water supply) or higher water classification. WQBELs are established to ensure that the cumulative mass load from point source discharges does not exceed the maximum allowable load to ensure permit limits are protective of water quality.

Whole Effluent Toxicity (WET) Testing:

WET tests use small vertebrate and invertebrate species to measure the aggregate toxicity of an effluent. There are two different durations of toxicity tests: acute and chronic. Acute toxicity tests measure survival over a 96-hour test exposure period. Chronic toxicity tests measure reductions in survival, growth, and reproduction over a 7-day exposure. TOGS 1.3.1 includes guidance for determining when aquatic toxicity testing should be included in SPDES permits. The authority to require toxicity testing is in 6NYCRR 702.9. TOGS 1.3.2 describes the procedures which should be followed when determining whether to include toxicity testing in a SPDES permit and how to implement a toxicity testing program. Per TOGS 1.3.2, WET testing may be required when any one of the following seven criteria are applicable:

- 1. There is the presence of substances in the effluent for which ambient water quality criteria do not exist.
- There are uncertainties in the development of TMDLs, WLAs, and WQBELs, caused by inadequate ambient and/or discharge data, high natural background concentrations of pollutants, available treatment technology, and other such factors.
- 3. There is the presence of substances for which WQBELs are below analytical detectability.
- 4. There is the possibility of complex synergistic or additive effects of chemicals, typically when the number of metals or organic compounds discharged by the permittee equals or exceeds five.
- 5. There are observed detrimental effects on the receiving water biota.
- 6. Previous WET testing indicated a problem.
- 7. POTWs which exceed a discharge of 1 MGD. Facilities of less than 1 MGD may be required to test, e.g., POTWs <1 MGD which are managing industrial pretreatment programs.

Minimum Level of Detection

Pursuant to 40 CFR 122.44(i)(1)(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

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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.

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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

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.

Best Management Practices (BMP) for Industrial Facilities

BMP plans are authorized for inclusion in NPDES permits pursuant to Sections 304(e) and 402 (a)(1) of the Clean Water Act, and 6 NYCRR 750-1.14(f). The regulations pertaining to BMPs are promulgated under 40 CFR Part 125, Subpart K. These regulations specifically address surface water discharges.