

SPDES Permit Fact Sheet New York City DEP Catskill Aqueduct Influent Chamber NY 026 4652



**Department of
Environmental
Conservation**

Contents

Summary of Permit Changes	3
Administrative History	3
Facility Information.....	4
Site Overview	4
Enforcement History.....	5
Existing Effluent Quality.....	6
Receiving Water Information	6
Impaired Waterbody Information.....	6
Mixing Zone and Critical Receiving Water Data.....	6
Permit Requirements	7
Whole Effluent Toxicity (WET) Testing	7
Anti-backsliding	7
Antidegradation	7
Discharge Notification Act Requirements.....	7
Schedule(s) of Compliance.....	7
Special Conditions.....	7
OUTFALL AND RECEIVING WATER SUMMARY TABLE	8
POLLUTANT SUMMARY TABLE.....	8
Outfall 001	8
Appendix: Regulatory and Technical Basis of Permit Authorizations.....	9
Regulatory References.....	9
Outfall and Receiving Water Information	9
Existing Effluent Quality.....	10
Permit Requirements.....	10

Summary of Permit Changes

A State Pollutant Discharge Elimination System (SPDES) permittee-initiated permit modification has been drafted for the Catskill Aqueduct Influent Chamber. The following is a summary of the changes. The details of these changes are specified below and in the permit:

- Updated the cover page format and information, including the permittee contact and address and added the compact area;
- Added a new pH limit range of 6.0 – 9.0 during periods when alum is being added;
- Updated the monitoring location for Total Phosphorus during periods of alum addition;
- Added a protocol for operating the Ashokan Reservoir (Revised Operating Protocol or ROP);
- Updated the Schedule of Compliance by removing several compliance actions, including the alternative analysis, structural modifications, and turbidity reduction measures;
- Updated the Schedule of Compliance by revising the compliance action related to the removal of alum floc;
- Updated the Monitoring Locations section with revised maps of the aqueduct and monitoring locations;
- Added a new General Requirements section;
- Updated the Recording, Reporting and Additional Monitoring Requirements section to include information on submitting monthly DMRs through NetDMR and updating addresses for report submissions.

This factsheet summarizes the information used to determine the effluent limitations and other conditions contained in the permit. General background information about the regulatory basis for the effluent limitations and other conditions contained in this permit are in the [Appendix](#) linked throughout this factsheet.

Administrative History

1/1/2007 The last full technical review was performed and the SPDES permit became effective with the initial five-year term and expiration date of 12/31/2011. This permit has formed the basis of this permit modification.

The permit was administratively renewed in 2012 and again in 2017. The expiration date of the current permit is 12/31/2021.

6/15/2012 The New York City DEP submitted a request to modify the permit to incorporate turbidity control measures, including operation of Ashokan Reservoir in accordance with the interim Ashokan Release Protocol (IRP), and delay of dredging accumulated material (alum floc) from Kensico Reservoir until the completion of certain infrastructure projects. This request was subsequently followed by the 2013 Order on Consent No. D007-0001-11, which required the preparation of an EIS to evaluate the proposed permit modification actions.

5/28/2019 The New York City DEP submitted an updated request to modify the permit in accordance with the Schedule of Compliance within the Order on Consent No. D007-0001-11. This request was a revision of the previous request and reflected the analysis in the draft DEIS.

8/13/2020 The New York City DEP submitted a sufficient NY-2C permit application.

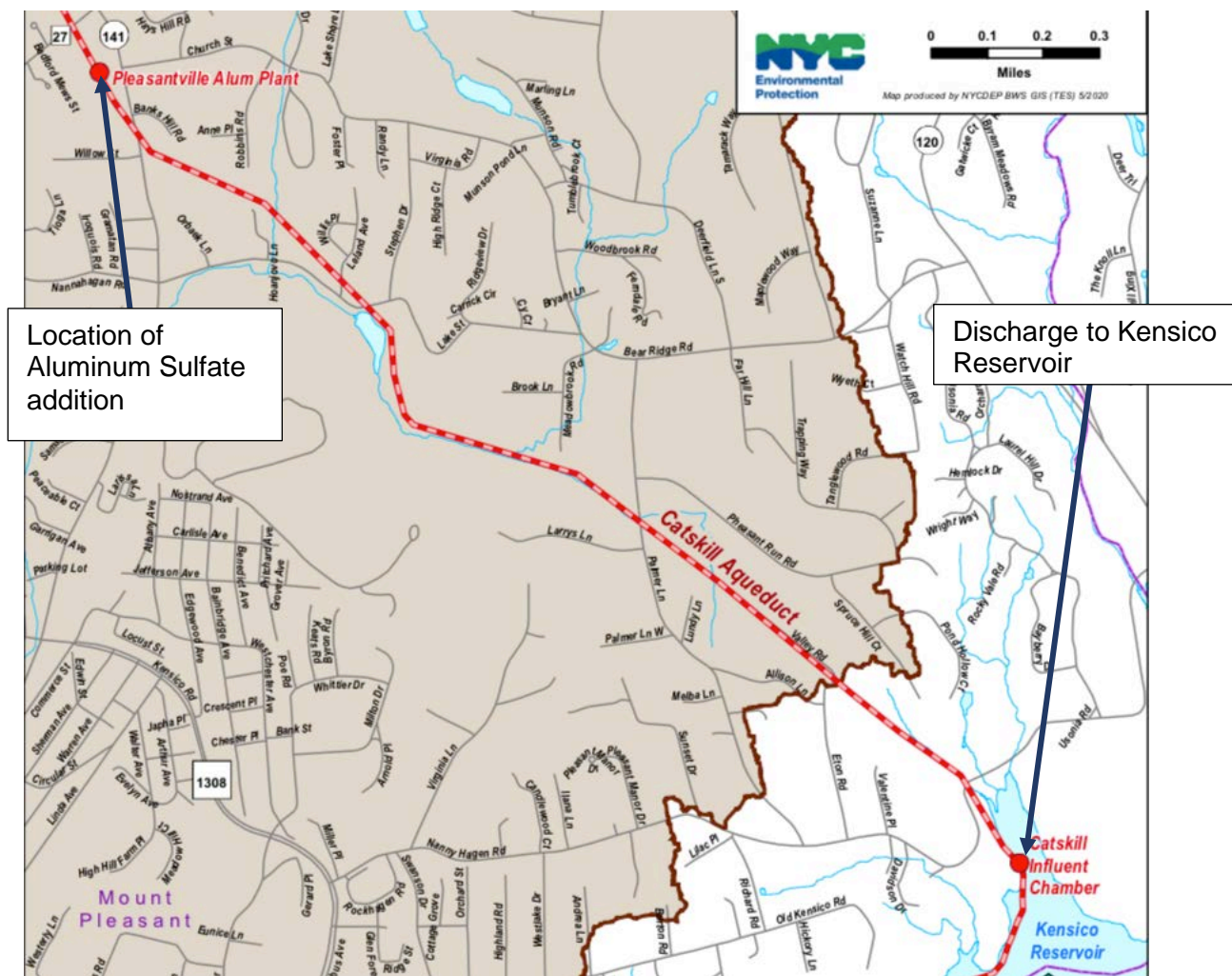
Please see the Notice of Complete Application, published in the Environmental Notice Bulletin and newspapers, for information on the public notice process.

Facility Information

This is a water supply facility that can treat potable water for New York City. During periods of high turbidity (usually >10 NTU) at the CATALUM monitoring site and depending on flows needed for water supply operations, aluminum sulfate and sometimes sodium hydroxide may be added to the flow to remove naturally occurring clay particles and protect water quality within and at the diversions from the Kensico Reservoir.

Site Overview





Enforcement History

Order on Consent D007-0001-11, dated October 4, 2013, addressed multiple violations in regard to the 2007 SPDES permit and compliance items listed within the permit's Schedule of Compliance (SOC). This includes SOC item "c" (alum floc removal from the Kensico Reservoir in accordance with an Article 15 dredging permit), SOC item "d" (structural modifications report for turbidity reduction), and SOC item "e" (non-structural turbidity reduction measures). Before the issuance of Order on Consent D007-0001-11, the permittee completed the requirements related to non-structural turbidity reduction measures, resolving the violations of SOC item "e".

The 2013 Order on Consent required the following compliance actions:

- Implementation of alum floc dredging at the Kensico Reservoir in accordance with a specified schedule;
- Implementation of structural turbidity reduction measures, including the IRP;
- Identification and evaluation of potential significant adverse environmental impacts associated with a modification of the 2007 SPDES permit;
- Continued implementation of non-structural turbidity reduction measures;
- Request of a modification of the 2007 SPDES permit.

The Order was modified in October 2018 to authorize alum additions in accordance with specified criteria for use of alum during DEP’s planned shutdown of the Rondout-West Branch Tunnel and during DEP’s repair and rehabilitation of the Catskill Aqueduct. Another modification to the Order was done in March 2020, directing DEP to include analysis in the Draft Environmental Impact Statement (DEIS) of an alternate schedule for dredging and to suspend several subsections within SOC Paragraph III pending completion of the environmental review in SOC Paragraph VI.

Environmental regulatory compliance and enforcement information for this facility can be found on the Enforcement and Compliance History Online at <https://echo.epa.gov>.

Existing Effluent Quality

The [Pollutant Summary Table](#) presents the existing effluent quality and permit limitations for discharges from the facility that are changing within this permit modification. Concentration and mass data are presented, based on Discharge Monitoring Reports submitted by the permittee for the period 8/1/2015 to 8/31/2020. In addition, data from the NY-2C application submitted by the permittee was used to supplement this information. [Appendix Link](#)

Receiving Water Information

The facility discharges via the following outfalls:

Outfall No.	SIC Code	Wastewater Type	Receiving Water
001	4941	Process Water	Kensico Reservoir

This facility is within the IEC (Long Island Sound) compact area.

The location of the outfall(s), and the name, classification, and index numbers of the receiving waters are indicated in the [Outfall and Receiving Water Summary Table](#) at the end of this fact sheet. [Appendix Link](#)

Impaired Waterbody Information

The Kensico Reservoir segment (PWL No. 1702-0059) is not listed on the 2016 New York State Section 303(d) List of Impaired/TMDL Waters, and therefore, there are no applicable wasteload allocations (WLAs) for this discharge.

Mixing Zone and Critical Receiving Water Data

The facility discharges to Kensico Reservoir, which is a ponded waterbody and therefore a chronic dilution ratio of 10:1 is applicable. The acute dilution ratio of 10:1 was also applied.

Outfall No.	Acute Dilution Ratio A(A)	Chronic Dilution Ratio A(C)	Human, Aesthetic, Wildlife Dilution Ratio (HEW)	Basis
001	10:1	10:1	10:1	TOGS 1.3.1 (for ponded or tidal waterbodies)

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

Permit Requirements

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

Whole Effluent Toxicity (WET) Testing

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

Anti-backsliding

The limitations contained in the permit are at least as stringent as the previous permit limits and there are no instances of backsliding. [Appendix Link](#)

Antidegradation

The permit contains effluent limitations which ensure that the designated best use of the receiving waters will be maintained. Please see the Environmental Notice Bulletin for 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. The permit also contains a requirement that the permittee make the sampling data available, upon request, to the public.

Schedule(s) of Compliance

A Schedule of Compliance is being included in the permit. Items in the Schedule of Compliance include:

- Submittal of an After Action Report containing a summary of the daily dosages of alum and sodium hydroxide used during the continuous period of alum/sodium hydroxide addition, and the daily flows from the Catskill Aqueduct into the Kensico Reservoir. This requirement is being continued from the previous permit.
- Submittal of an approvable Bathymetric/Benthic Report for the purposed of establishing a scientific basis for the need to remove alum floc deposits from the Kensico Reservoir. The Schedule of Compliance also requires dredging of alum floc, unless upon review of the Bathymetric/Benthic Report, DEC determines that dredging is not necessary. This requirement is revised from the previous permit.

Special Conditions

The Revised Operating Protocol (ROP) updates the IRP, which DEP has been implementing pursuant to the October 2013 Order on Consent. Like the IRP, this ROP for the Ashokan Reservoir is intended to enhance benefits to the community, improve flood attenuation, and provide better water quality on an interim basis.

This ROP, which includes a revised monitoring plan, has been informed by lessons learned during implementation of the IRP, and by the modeling and analysis conducted in connection with the Draft Environmental Impact Statement prepared to support the Modification of the Catalum SPDES Permit #3-9903-00023/00006: SPDES No.: NY-0264652.

¹ As prescribed by 6 NYCRR Part 617

OUTFALL AND RECEIVING WATER SUMMARY TABLE

Outfall	Latitude	Longitude	Receiving Water Name	Water Class	Water Index No. / Priority Waterbody Listing (PWL) No.	Major / Sub Basin	Hardness (mg/l)	1Q10 (MGD)	7Q10 (MGD)	30Q10 (MGD)	Critical Effluent Flow (MGD)	Dilution Ratio		
												A(A)	A(C)	HEW
001	41° 07' 03" N	73° 44' 51" W	Kensico Reservoir	AA(T)	ER-3-P 1063 PWL: 1702-0059	17 / 02	- ²	-	-	-	610	10:1	10:1	10:1

POLLUTANT SUMMARY TABLE

Outfall 001

Outfall #	001	Description of Wastewater: Process Water														
		Type of Treatment: During periods of high turbidity, aluminum sulfate and sodium hydroxide														
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement	
			Permit Limit	Existing Effluent Quality ³	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL			
General Notes: Existing discharge data from August 1, 2015 to August 1, 2020 was obtained from Discharge Monitoring Reports provided by the permittee.																
Flow Rate	MGD	Monthly Avg	Report	392 Actual Average	61 / 0	Report	Antibacksliding	Narrative: No alterations that will impair the waters for their best usages.						703.2	-	TBEL
	Flow will continue to be monitored for informational purposes and to calculate pollutant loadings.															
pH	SU	Minimum	Report	6.7 Actual Average	61 / 0	6.0	TOGS 1.2.1	-	-	6.5 – 8.5	Range	-	703.3	-	TBEL	
		Maximum	Report	7.2 Actual Average	61 / 0	9.0										
During periods of alum addition, pH is currently reported. Consistent with TOGS 1.2.1, TBELs reflect the available treatment technology listed in Attachment C. Aluminum is toxic in its soluble form and remains insoluble at pH values above 6.0. To ensure that aluminum will remain insoluble and nontoxic and given that adequate dilution is available, a pH range limitation equivalent to the TBEL is specified. This limitation range is only applicable during period of alum addition.																

² Hardness data is not necessary for determining pH limitations.

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)

Appendix: Regulatory and Technical Basis of Permit Authorizations

The information presented in the Appendix is meant to supplement the factsheet for multiple types of permits and may not be applicable to this specific permit.

Regulatory References

The requirements included in SPDES permits are based on both federal and state laws, regulations, policies, and guidance.

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

The following is a quick guide to the references used within the 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 (TOGS 1.3.10)
Mixing Zone and Critical Water Information	TOGS 1.3.1 & Amendments
PCB Minimization Program	40 CFR Part 132 Appendix F Procedure 8, 6 NYCRR 750-1.13(a) and 750-1.14(f), and TOGS 1.2.1
Pollutant Minimization Program (PMP)	6 NYCRR 750-1.13(a), 750-1.14(f), TOGS 1.2.1
Schedules of Compliance	6 NYCRR 750-1.14
Sewage Pollution Right to Know (SPRTK)	NYS ECL 17-0826-a, 6 NYCRR 750-2.7
State Administrative Procedure Act (SAPA)	State Administrative Procedure Act Section 401(2), 6 NYCRR 621.11(l)
State Environmental Quality Review (SEQR)	6 NYCRR Part 617
USEPA Effluent Limitation Guidelines (ELGs)	40 CFR Parts 405-471
USEPA National CSO Policy	33 USC Section 1342(q)
Whole Effluent Toxicity (WET) Testing	TOGS 1.3.2
General Provisions of a SPDES Permit Department Request for Additional Information	NYCRR 750-2.1(i)

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.

Outfall and Receiving Water Information

Impaired Waters

The NYS 303(d) List of Impaired/TMDL Waters (<http://www.dec.ny.gov/chemical/31290.html>) identifies waters where specific designated uses are not fully supported and for which the state must consider the development of a 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 for the development of the TMDL, and to allow the Department to accurately determine the existing capabilities of the wastewater treatment plant to assure that wasteload allocations (WLAs) are allocated equitably.

Existing Effluent Quality

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

Permit Requirements

Basis for Effluent Limitations

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

When conducting a full technical review of an existing permit, the previous permit limitations form the basis for the next permit. Existing effluent quality is evaluated against the existing permit 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(l) and 6 NYCRR 750-1.10(c) and (d). Generally, the relaxation of effluent limitations in permits is prohibited unless one of the specified exceptions applies, which will be cited on a case-by-case basis in this 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.

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

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); Preamble to the Great Lakes Water Quality Initiative, 50 Fed. Reg. 20837, 20981 (April 16, 1993)

the antidegradation policy, SPDES applications have been reviewed in accordance with the State Environmental Quality Review Act (SEQR) as prescribed by 6 NYCRR Part 617.

Effluent Limitations

In developing a permit, the Department determines the technology-based effluent limitations (TBELs) and then evaluates the water quality expected to result from technology controls to determine if any exceedances of water quality criteria in the receiving water might result. If there is a reasonable potential for exceedances of water quality criteria to occur, water quality-based effluent limitations (WQBELs) are developed. A WQBEL is designed 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)

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 Table](#).

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 insure 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 700-704 and 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. 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, 1.3.2, 1.3.5 and 1.3.6.

Mixing Zone Analyses

Mixing zone analyses are conducted in accordance with the following:

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

Critical Flows

In accordance with TOGS 1.2.1 and 1.3.1, water quality-based effluent limitations 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.

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, 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.

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 Part 702.16(b) of Chapter X, Title 6 of the New York State Codes, Rules, and Regulations. 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.
2. 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), SPDES permits must contain monitoring requirements using sufficiently sensitive test procedures approved under 40 CFR Part 136. A method is "sufficiently sensitive" when the method's minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant parameter; or the lowest ML of the analytical methods approved under 40 CFR Part 136. The ML represents the lowest level that can be measured within specified limitations of precision and accuracy during routine laboratory operations on most effluent matrices. When establishing effluent limitations for a specific parameter (based on technology or water quality requirements), it is possible that the calculated limitation will fall below the ML established by the approved analytical method(s). In these instances, the calculated limitation is included in the permit with a compliance level set equal to the ML of the most sensitive method.

Monitoring Requirements

CWA section 308, 40 CFR 122.44(i), and 6 NYCRR 750-1.13 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

Permittee: New York City DEP
Facility: Catskill Aqueduct Influent Chamber
SPDES Number: NY 026 4652
USEPA Non-Major/Class 01 Industrial

Date: December 11, 2020 v.1.0
Permit Writer: Alison Wasserbauer
Water Quality Reviewer: Alison Wasserbauer

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.