State Pollutant Discharge Elimination System (SPDES) DISCHARGE PERMIT

Department of Environmental Conservation

SIC Code:	**9999**	NAICS Code:	**999999**	SPDES Number:	**NY0281280**
Discharge Class (CL):	**01**			DEC Number:	**3-5554-00119/00014**
Toxic Class (TX):	**N**			Effective Date (EDP):	**TBD**
Major-Sub Drainage Basin:	**13 - 01**			Expiration Date (ExDP):	**TBD**
Water Index Number:	**H-55-11-P179**	Item No.:	**864 - 615**	Modification Dates (EDPM):	**-**
Compact Area:	**IEC**				

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

PERMITTEE NAME AND ADDRESS					
Name:	**Mohegan Lake Improvement District**	Attention:	**Kenneth Belfer, President**		
Street:	**P.O. Box 484**				
City:	**Mohegan Lake**	State:	**NY**	Zip Code:	**10547**
Email:	**Kenbelfer1@gmail.com**	Phone:	**(914) 364-0905**		

is authorized to discharge from the facility described below:

FACILITY NAME, ADDRESS, AND PRIMARY OUTFALL															
Name:	**Lake Mohegan Biological Treatments**														
Address / Location:	**3092 High Street**											County:	**Westchester**		
City:	**Yorktown**						State:	**NY**				Zip Code:	**10547**		
Facility Location:		Latitude:	**41**	°	**18**	’	**51.9**	” N	& Longitude:	**73**	°	**50**	’	**54.6**	” W
Primary Outfall No.:	**001**	Latitude:	**41**	°	**18**	’	**40.1**	” N	& Longitude:	**73**	°	**50**	’	**59.1**	” W
Wastewater Description:	**Biological Lake Treatment**	Receiving Water:	**Lake Mohegan**				NAICS:	**999999**	Class:	**B**		Standard:	**B**		

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:

Permit Administrator:	Rebecca S. Crist
Address:	21 South Putt Corners Road New Paltz, NY 12561
Signature	Date

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SUMMARY OF ADDITIONAL OUTFALLS

Outfall	Wastewater Description	NAICS Code	Outfall Latitude	Outfall Longitude
002	**Biological Lake Treatment**	**999999**	**41** ° **19** ' **3.8** " N	**73** ° **51** ' **0.3** " W
Receiving Water:	**Lake Mohegan**		Class:	**B**

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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 DEC.
Daily Discharge	The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for the purposes of sampling. For pollutants expressed in units of mass, the 'daily discharge' is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the 'daily discharge' is calculated as the average measurement of the pollutant over the day.
Daily Maximum	The highest allowable Daily Discharge.
Daily Minimum	The lowest allowable Daily Discharge.
Effective Date of Permit (EDP or EDPM)	The date this permit is in effect.
Effluent Limitations	Effluent limitation means any restriction on quantities, quality, rates and concentrations of chemical, physical, biological, and other constituents of effluents that are discharged into waters of the state.
Expiration Date of Permit (ExDP)	The date this permit is no longer in effect.
Instantaneous Maximum	The maximum level that may not be exceeded at any instant in time.
Instantaneous Minimum	The minimum level that must be maintained at all instants in time.
Monthly Average	The highest allowable average of daily discharges over a calendar month, calculated as the sum of each of the daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.
Outfall	The terminus of a sewer system, or the point of emergence of any waterborne sewage, industrial waste or other wastes or the effluent therefrom, into the waters of the State.
Range	The minimum and maximum instantaneous measurements for the reporting period must remain between the two values shown.
Receiving Water	The classified waters of the state to which the listed outfall discharges.
Sample Frequency / Sample Type / Units	See DEC's "DMR Manual for Completing the Discharge Monitoring Report for the SPDES" for information on sample frequency, type and units.

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PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL	DESCRIPTION	RECEIVING WATER	EFFECTIVE	EXPIRING
001 & 002	Biological Lake Treatment	Lake Mohegan	EDP	ExDP

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location Inf.	Location Eff.	
Flow	Daily Maximum	Monitor	MGD	-	-	Continuous	Meter	-	X	
pH	Daily Minimum	6.5	SU	-	-	1/month	Grab	-	X	
	Daily Maximum	8.5	SU	-	-					
Temperature	Daily Maximum	Monitor	ºF	-	-	1/month	Grab	X	X	
Dissolved Oxygen	Daily Minimum	Monitor	mg/L	-	-	1/month	Grab	X	X	
Ammonia (as N)	Daily Maximum	Monitor	mg/L	-	-	1/month	Grab	X	X	
Ammonia (as N), Net	Daily Maximum	Monitor	mg/L	-	-	1/month	Calculated	-	-	1
Total Nitrogen (as N)	Daily Maximum	Monitor	mg/L	-	-	1/month	Grab	X	X	
Total Nitrogen (as N), Net	Daily Maximum	Monitor	mg/L	-	-	1/month	Calculated	-	-	1
Total Kjeldahl Nitrogen (TKN) (as N)	Daily Maximum	Monitor	mg/L	-	-	1/month	Grab	X	X	
Total Kjeldahl Nitrogen (TKN) (as N), Net	Daily Maximum	Monitor	mg/L	-	-	1/month	Calculated	-	-	1
Nitrogen, Nitrate (as N)	Daily Maximum	Monitor	mg/L	-	-	1/month	Grab	X	X	
Nitrogen, Nitrate (as N), Net	Daily Maximum	Monitor	mg/L	-	-	1/month	Calculated	-	-	1
Nitrogen, Nitrite (as N)	Daily Maximum	Monitor	mg/L	-	-	1/month	Grab	X	X	
Nitrogen, Nitrite (as N), Net	Daily Maximum	Monitor	mg/L	-	-	1/month	Calculated	-	-	1
Total Phosphorus (as P)	Daily Maximum	Monitor	mg/L	-	-	1/month	Grab	X	X	
Total Phosphorus (as P), Net	Daily Maximum	Monitor	mg/L	-	-	1/month	Calculated	-	-	1
Orthophosphate (as P)	Daily Maximum	Monitor	mg/L	-	-	1/month	Grab	X	X	
Orthophosphate (as P), Net	Daily Maximum	Monitor	mg/L	-	-	1/month	Calculated	-	-	1
Total Aluminum	Daily Maximum	Monitor	mg/L	-	-	1/month	Grab	X	X	
Total Aluminum, Net	Daily Maximum	Monitor	mg/L	-	-	1/month	Calculated	-	-	1
Total Copper	Daily Maximum	Monitor	mg/L	-	-	1/month	Grab	X	X	
Total Copper, Net	Daily Maximum	Monitor	mg/L	-	-	1/month	Calculated	-	-	1

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FOOTNOTES:

1. Single Intake Source Net Limits
   The footnoted parameter is subject to net limits. Each time the outfall is monitored for the parameter, the intake source water must also be monitored by collecting a grab sample for the parameter at a point after mechanical screening/filtration and prior to the addition of any water treatment chemicals. For each parameter, the value reported on the corresponding Discharge Monitoring Report shall be the concentration in the outfall minus the intake concentration. If the source water is not monitored, the intake concentration shall be assumed to be zero. If the

intake concentration is greater than the outfall concentration (resulting in a negative net value), the value reported on the Discharge Monitoring Report shall be zero.

If the concentration in the outfall exceeds the intake concentration, an additional monitoring requirement is triggered, and the permittee shall undertake a short-term, high-intensity, monitoring program for the footnoted parameter(s). Samples identical to those required for routine monitoring purposes shall be taken on each of at least three consecutive days and analyzed. Results shall be expressed in concentration. If levels higher than the intake concentration are confirmed in the concentration of the outfall, the permittee shall evaluate the treatment system operation and identify and employ actions to reduce concentrations present in the discharge. The permit may be reopened by the DEC for consideration of effluent limits. Monitoring results and the effectiveness of the actions taken shall be summarized and submitted with the DMR data.

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STORMWATER POLLUTION PREVENTION REQUIREMENTS

NO EXPOSURE CERTIFICATION

The permittee submitted a Conditional Exclusion for No Exposure Form on June 11, 2026, certifying that all industrial activities and materials are completely sheltered from exposure to rain, snow, snowmelt, and stormwater runoff except as allowed under 40 CFR 122.26(g)(2). The permittee must maintain a condition of no exposure for the exclusion to remain applicable. If conditions change resulting in the exposure of materials and activities to stormwater, the permittee must notify the Regional Water Engineer. The permittee must recertify a condition of no exposure every five years by completing the "No Exposure Certification Form" found on the DEC website.

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. **General** - 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 DEC as required in item (2.) below and a copy must be maintained at the facility and shall be available to authorized DEC representatives upon request.

2. **Compliance Deadlines** – The permittee shall develop and submit an initial BMP plan in accordance with the Schedule of Submittals to the Regional Water Engineer. The permittee shall implement the BMP plan within 6 months of submission, unless a different time frame is approved by the Department through a permit modification. Annually, the permittee **shall review** and modify the BMP plan 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 DEC identifies inadequacies in the plan. The permittee shall certify that the annual review has been completed in accordance with the Schedule of Submittals. 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 permittee shall consider relative toxicity of the pollutant 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 SPDES Application Procedures and Forms - NYSDEC) 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:

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BMPs FOR INDUSTRIAL FACILITIES (continued)

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

5. **Stormwater Discharges from Construction Activity to Surface Waters** – Pursuant to Section 402 of the Clean Water Act (CWA), and 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), stormwater discharges from certain construction activities (including discharges through a municipal separate storm sewer system) are unlawful unless they are authorized by a SPDES permit. Prior to initiating such construction associated with this facility, the permittee must obtain coverage under the current version of the SPDES General Permit for Stormwater Discharges from Construction Activity (CGP) or a separate individual stormwater construction SPDES permit, if not eligible for the CGP.
6. **Required Sampling For "Hot Spot" Identification** – The permittee's development of the BMP plan shall include sampling of waste stream segments for the purpose of pollutant "hot spot" identification. The economic achievability of effluent limits will not be considered until plant site "hot spot" sources have been identified, contained, removed or minimized through the imposition of site specific BMPs or application of internal facility treatment technology. For the purposes of this permit condition a "hot spot" is a segment of an industrial facility (including but not limited to soil, equipment, material storage areas, sewer lines etc.) which contributes elevated levels of problem pollutants to the wastewater or stormwater collection system of that facility. For the purposes of this definition, problem pollutants are substances for which treatment to meet a water quality or technology requirement may, considering the results of waste stream segment sampling, be deemed unreasonable. For the purposes of this definition, an elevated level is a concentration or mass loading of the pollutant in question which is sufficiently higher than the concentration of that same pollutant at the compliance monitoring location so as to allow for an economically justifiable removal, isolation, or B.A.T. treatment of wastewaters emanating from the segment.

MERCURY MINIMIZATION PROGRAM (MMP) - Type IV

On June 11, 2026, the permittee submitted a Conditional Exclusion Certification, certifying that the facility does not have any of the mercury sources listed in Part III.E. of DOW 1.3.10.

1. General - To reduce mercury effluent levels with the goal of achieving the water quality standard of 0.7 ng/L, the permittee must develop, implement, and maintain a written MMP plan, which includes the elements set forth below.
2. Conditional Exclusion Certification – A certification (Appendix C of DOW 1.3.10), signed in accordance with 6 NYCRR 750-1.8, must be submitted once every 5 years to the Regional Water Engineer and to the Bureau of Water Permits, certifying that the facility is neither a mercury source nor receives flows from a mercury source. Criteria to determine if a facility has a mercury source are as follows:
    - The facility is, or receives flow from, a Combined Sewer System (CSS) or sanitary sewer system with Type II Sanitary Sewer Overflows (SSO[1]);
    - One or more effluent samples exceed 12 ng/L, including samples taken as a result of the SPDES application process;
    - Internal or tributary waste stream samples exceed the GLCA effluent limitation and the final effluent samples are less than the GLCA due primarily to dilution by uncontaminated or less contaminated waste streams. Both components of this criterion may include samples taken as a result of the SPDES application process;
    - A SPDES permit application, or other information, indicates that mercury is handled on-site and could be discharged through outfalls;
    - Existence of outfalls that contain legacy mercury contamination;

[1] These are Overflow Retention Facilities (ORFs) and are included under the 05 and 07 permit classifications.

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- The facility's collection system receives discharges from a dental and/or Categorical Industrial User (CIU[2]) that may discharge mercury;
- The facility accepts hauled wastes; OR,
- The facility is defined as a categorical industry that may discharge mercury. This may also include dentists, universities, hospitals, or laboratories, which have their own individual SPDES permit.

3. Control Strategy – develop and implement with the following minimum elements:

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

    b. Bulk Chemical Evaluation – for chemicals used at a rate which exceeds 1,000 gallons/year or 10,000 pounds/year, the permittee must obtain:
        i. A manufacturer's certificate of analysis;
        ii. A chemical analysis performed by a certified laboratory; OR,
        iii. A notarized affidavit that describes the substances' mercury concentration and the detection limit achieved.

    Where practicable, the permittee must only use bulk chemicals in the wastewater treatment process which contain <10 parts per billion (ppb) of mercury.

4. Status Report – An **annual** status report must be developed, in accordance with the Schedule of Additional Submittals, summarizing:

    a. Review of criteria to determine if the facility has a potential mercury source;

    b. All actions undertaken, pursuant to the control strategy, during the previous year; and

    c. Actions planned, pursuant to the control strategy, for the upcoming year.

    The first status report is due in accordance with the Schedule of Additional Submittals. The permittee must maintain a file on-site with all MMP documentation.

5. MMP Modification – the permittee must submit a permittee-initiated modification request to DEC whenever:

    a. Changes at the facility, or within the collection system, increase the potential for mercury discharges; OR,
    b. A letter from DEC identifies inadequacies in the MMP.

    The permittee may use information in the status reports, as applicable in accordance with item 3 of this MMP, as a basis for the permittee-initiated modification.

DEFINITIONS:

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

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[2] CIUs include those listed under Federal Regulation in 40 CFR Parts 405–471.

DISCHARGE NOTIFICATION REQUIREMENTS

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

(b) Subsequent modifications to or renewal of this permit does not reset or revise the deadline set forth in (a) above, unless a new deadline is set explicitly by such permit modification or renewal.

(c) The Discharge Notification Requirements described herein do not apply to outfalls from which the discharge is composed exclusively of storm water, or discharges to ground water.

(d) The sign(s) shall be conspicuous, legible and in as close proximity to the point of discharge as is reasonably possible while ensuring the maximum visibility from the surface water and shore. The signs shall be installed in such a manner to pose minimal hazard to navigation, bathing or other water related activities. If the public has access to the water from the land in the vicinity of the outfall, an identical sign shall be posted to be visible from the direction approaching the surface water.

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

N.Y.S. PERMITTED DISCHARGE POINT

SPDES PERMIT No.: NY_____

OUTFALL No. :____

For information about this permitted discharge contact:

Permittee Name: _____

Permittee Contact: _____

Permittee Phone: ( ) - ### - ####

OR:

NYSDEC Division of Water Regional Office Address:

NYSDEC Division of Water Regional Phone: ( ) - ### -####

(e) The permittee shall provide for public review at the business office repository of the permittee or at the off-premises location of its choice, provided the custodian of the off-premise location grants written permission, (such off-premise location shall be the village, town, city or county clerk's office, local library or other location accessible by the public) all the Discharge Monitoring Reports (DMR) prepared by the permittee to demonstrate compliance with the SPDES permit conditions. A copy of each DMR shall be placed on file at such location at the same time it is sent to the department, or within 60 days of preparation for DMRs not required to be submitted to the Department. 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.

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SCHEDULE OF COMPLIANCE

a) The permittee shall comply with the following schedule:

Outfall(s)	Compliance Action	Compliance Date[3]
	PILOT PROJECT QUALITY ASSURANCE PROJECT PLAN AND MONITORING PLAN The permittee shall submit an approvable Quality Assurance Project Plan (QAPP) and approvable monitoring plan to the Department prior to beginning the pilot project pre- and post-treatment monitoring activities identified below. The QAPP Monitoring Template and Lake Classification and Inventory Statewide Monitoring Program reference documents are available on the NYSDEC webpage: https://dec.ny.gov/environmental-protection/water/water-quality/assurance.	EDP + 3 months
	PILOT PROJECT PRE- AND POST-TREATMENT BIOLOGICAL MONITORING The permittee shall complete pre-treatment monitoring prior to the start of the treatment season within the same month each year and monitoring yearly according to established NYSDEC (DOW SOP 208, Biological Monitoring Field Methods; DOW SOP 214, Biological Monitoring Laboratory Methods: Enumeration and Identification; and DOW SOP 216, Biological Monitoring: Biomonitoring Calculations) and USEPA (National Lakes Assessment 2022 Field Operations Manual, National Lakes Assessment 2022 Laboratory Operations Manual, & National Lakes Assessment 2022 Technical Support Document) biological monitoring protocols for macroinvertebrate, phytoplankton, and zooplankton communities. Biological monitoring should be conducted within established sampling index periods (macroinvertebrate community) and the summer growing season (phytoplankton and zooplankton) within the same month each year. If pre-treatment monitoring cannot be conducted during the summer index periods and the summer growing season, pre-treatment sampling should still be conducted but yearly post-treatment biological monitoring should also be conducted during the same pre-treatment sampling 1-month period. All monitoring should be conducted according to an approved monitoring plan and covered under an approved Quality Assurance Project Plan (QAPP).	Prior to, during, and following each treatment season
	PILOT PROJECT PRE- AND POST-TREATMENT WATER QUALITY MONITORING Twice monthly sampling will take place within at least 2 representative sampling locations, for a total of eight sampling sessions from mid-June through mid-October. Water quality parameters should include, at a minimum, parameters specified in the permit limits and monitoring table above and chlorophyll-a and cyanobacteria endpoints (toxins and species identification and enumeration). QAPPs will be required for all monitoring endpoints and Environmental Laboratory Accreditation Program (ELAP) certified labs should be used as applicable.	To be conducted during each treatment season
	ANNUAL MONITORING REPORT The permittee shall submit a monitoring report annually summarizing the biological community and water quality data collected throughout the sampling season and evaluated against previous results for each year following the implementation of the treatment process. The report shall be emailed to lakes@dec.ny.gov.	No later than January 1 following completion of each treatment season
Unless noted otherwise, the above actions are one-time requirements.		

b) The permittee shall submit a Report of Non-compliance Event form with each of the above schedule dates no later than 14 days following each elapsed date, unless conditions require more immediate notice as prescribed in 6 NYCRR Part 750-1.2(a) and 750-2. All notifications shall be sent to the locations listed under the section of this

[3] 6 NYCRR 750-1.14 (a)

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permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS. Each notice of non-compliance shall include the following information:

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

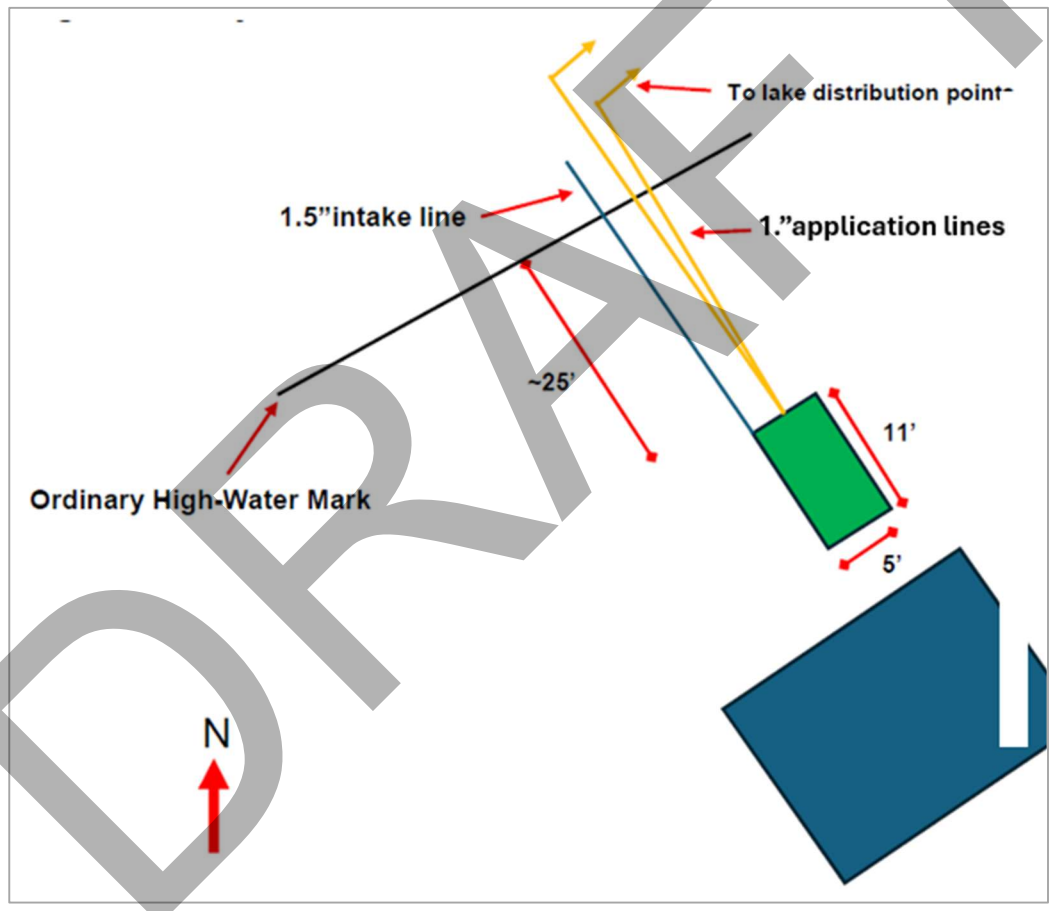
c) The permittee shall submit electronic copies of any document required by the above schedule of compliance to the DEC Regional Water Engineer, to the Bureau of Water Permits and to lakes@dec.ny.gov.

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MONITORING LOCATIONS

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

Influent: Lake water prior to addition of activated bacterial treatment
Effluent: After addition of treatment and prior to application to Lake Mohegan



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

C. Operation and Maintenance

1.	Proper Operation & Maintenance	6 NYCRR 750-2.8
2.	Bypass	6 NYCRR 750-1.2(a)(17), 2.8(b) & 2.7
3.	Upset	6 NYCRR 750-1.2(a)(98) & 2.8(c)

D. Monitoring and Records

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

E. Reporting Requirements

1.	Reporting requirements for non-POTWs	6 NYCRR 750-2.5, 2.6, 2.7, &1.17
2.	Anticipated noncompliance	6 NYCRR 750-2.7(a)
3.	Transfers	6 NYCRR 750-1.17
4.	Monitoring reports	6 NYCRR 750-2.5(e)
5.	Compliance schedules	6 NYCRR 750-1.14(d)
6.	24-hour reporting	6 NYCRR 750-2.7(c) & (d)
7.	Other noncompliance	6 NYCRR 750-2.7(e)
8.	Other information	6 NYCRR 750-2.1(f)

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

G. SPDES Permit Program Fee
The permittee shall pay to the DEC an annual SPDES permit program fee within 30 days of the date of the first invoice, unless otherwise directed by the DEC, and shall comply with all applicable requirements of ECL 72-0602 and 6 NYCRR Parts 480, 481 and 485. Note that if there is inconsistency between the fees specified in ECL 72-0602 and 6 NYCRR Part 485, the ECL 72-0602 fees govern.

H. Water Treatment Chemicals (WTCs)
New or increased use and discharge of a WTC requires prior DEC review and authorization. At a minimum, the permittee must notify the DEC in writing of its intent to change WTC use by submitting a completed *WTC Notification Form* for each proposed WTC. The DEC will review that submittal and determine if a SPDES permit modification is necessary or whether WTC review and authorization may proceed under the current permit. The use and discharge of a WTC shall not proceed without prior authorization from the DEC. Examples of WTCs include biocides, coagulants, conditioners, corrosion inhibitors, defoamers, deposit control agents, flocculants, scale inhibitors, sequestrants, and settling aids.

1. WTC use shall not exceed the rate explicitly authorized by this permit or otherwise authorized by the DEC.
2. The permittee shall maintain a logbook of all WTC use, noting for each WTC the date, time, exact location, and amount of each dosage, and, the name of the individual applying or measuring the chemical. The logbook must also document that adequate process controls are in place to ensure excessive levels of WTCs are not used.
3. The permittee shall submit a completed WTC Annual Report Form each year that they use and discharge WTCs. This form shall be submitted in electronic format and attached to either the December DMR or the annual monitoring report required below. The *WTC Notification Form and WTC Annual Report Form* are available from the DEC's website at: SPDES Permitting of Water Treatment Chemicals.

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RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

A. The permittee shall retain the monitoring information required by this permit for a period of at least five years from the date of the sampling.

B. Discharge Monitoring Reports (DMRs): The permittee shall submit completed DMR forms for each 1 month reporting period in accordance with 6 NYCRR 750-2.5(e). NYSDEC has made available the DMR Manual on the website as a reference to assist permittees with completing DMR's.

The permittee must submit DMRs electronically using the electronic reporting tool (NetDMR) specified by DEC. Instructions on the use of NetDMR can be found at: How To Complete And Submit Discharge Monitoring Reports (DMRs) - NYSDEC. **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 electronically reported to the Regional Water Engineer and Bureau of Water Permits at the following addresses:

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

Department of Environmental Conservation
Regional Water Engineer, Region 3
220 White Plains Road, Suite 110, Tarrytown, New York, 10591, Phone: (914) 803-8157
dow.r3@dec.ny.gov

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D. Schedule of Additional Submittals:

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

Outfall(s)	SCHEDULE OF ADDITIONAL SUBMITTALS - Required Action	Due Date
	CONSTRUCTION COMPLETION The permittee shall provide notification to the DEC (send to the Regional Water Engineer and NetDMR@dec.ny.gov) that the construction of the lake treatment system has been fully completed.	45 Days Prior to Start-up
	NOTIFICATION OF START DATE ("START-UP") The permittee shall provide the Department with the proposed start date for the treatment system. This date will be used to establish the start of compliance reporting. Notice can be provided via email to NetDMR@dec.ny.gov.	30 Days Prior to Start-up
	INITIAL BMP PLAN The permittee shall develop and submit an initial BMP plan to the Regional Water Engineer.	EDP + 6 Months
	WATER TREATMENT CHEMICAL (WTC) ANNUAL REPORT FORM The permittee shall submit a completed WTC Annual Report Form each year that Water Treatment Chemicals are used. The form shall be attached to the December DMR.	Attached to January DMR
	MERCURY START-UP SAMPLE The permittee must collect a sample for mercury of the effluent of the treatment system upon start-up and submit the results to the Regional Water Engineer. If the sample exceeds 12 ng/L, the permit may be reopened for consideration of an effluent limit.	Upon start-up of the treatment system
	MERCURY MINIMIZATION PLAN The permittee must complete and maintain onsite a mercury minimization plan and subsequent annual mercury minimization status reports in accordance with MMP item 2.c above.	***Maintained Onsite*** EDP + 12 months, annually thereafter
	MERCURY - CONDITIONAL EXCLUSION CERTIFICATION The permittee must submit a mercury conditional exclusion certification every five years in order to maintain MMP Type IV status.	6/11/2031and every 5 years thereafter
	STORMWATER NO EXPOSURE CERTIFICATION Permittee must recertify every five years a condition of no exposure to stormwater in order to continue to qualify for the no exposure exclusion. The No Exposure Certification Form can be found on the DEC website.	6/11/2031and every 5 years thereafter

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

E. 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.

F. 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.

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

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H. 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.

I. 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.

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SPDES Permit Fact Sheet Mohegan Lake Improvement District Lake Mohegan Biological Treatments NY0281280



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Summary of Permit Changes

A new State Pollutant Discharge Elimination System (SPDES) permit has been drafted for the Lake Mohegan Biological Treatments.

This fact sheet summarizes the information used to determine the effluent limitations (limits) and other conditions contained in the permit. General background information including the regulatory basis for the effluent limitations and other conditions are in the Appendix linked throughout this fact sheet.

Administrative History

12/30/2025 The Mohegan Lake Improvement District submitted a SPDES NY-2C application.

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

Facility Information

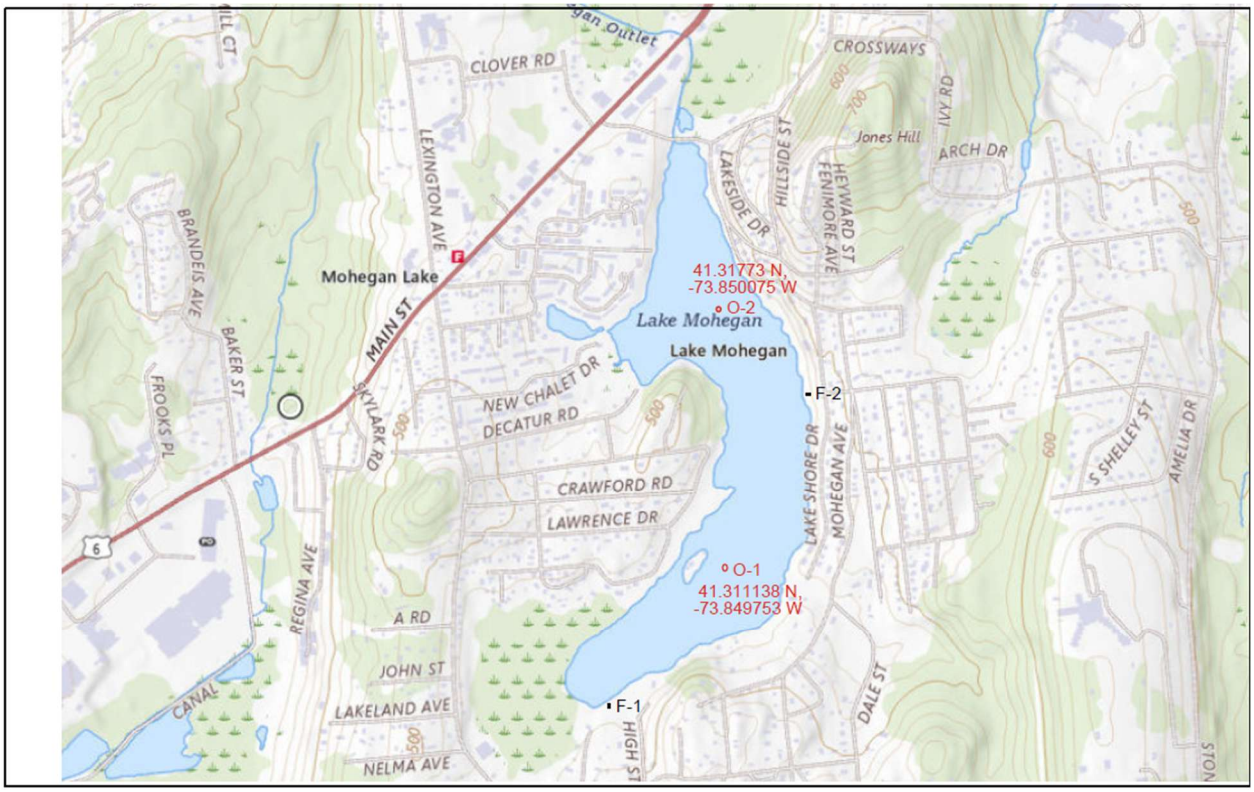
This is an industrial facility (SIC code 9999) that proposes a biological treatment system that uses an activated bacteria mixture to reduce muck at the bottom of Lake Mohegan. The treatments will occur between May 1st and Oct 15th over three consecutive years. Treatments will be delivered using a seasonal timed lake bottom injection system pumping the activated bacteria in liquid form through in-lake tubing that runs along the lake bottom in the deepest portion. The treatments involve setting up two temporary 1,000-gallon tanks and two temporary 25 square foot vinyl equipment enclosures for the pumps and dosing equipment near the shoreline of Lake Mohegan. Effluent consists of processed surface water.

Product application points 001 and 002 are located in Lake Mohegan (PWL: 1301-0149; WIN: H-55-11-P179; Class B). Product application point 001 is located at 41° 18’ 40.1’’ N and 73 50’ 59.1’’W. Product application point 002 is located at 41° 19’ 3.8”N and 73 51’ 0.3’W. An average of 3000 gallons a day of lake water will be pumped out of Lake Mohegan for each product application point to dilute the bacterial solution before being reintroduced to the lake.

The proposed product application points will consist approximately 10,100’ of self-weighted 5/8” I.D. tubing laid out along the lake bottom, with a total of 75 ports at an average distance of 125’-150’ between openings. The product application will be in portions of the lake that are at least 10’ deep.

Past efforts to improve the water quality of Lake Mohegan include a SPDES permit for the application of aluminum sulfate to manage phosphorus that was effective from 04/12/2019 and expired on 02/01/2021 and copper treatments applied to Lake Mohegan over the past decade to manage algae growth in accordance with the SPDES Pesticide General Permit (GP-0-21-003), SPDES number NYP160284.

Site Overview

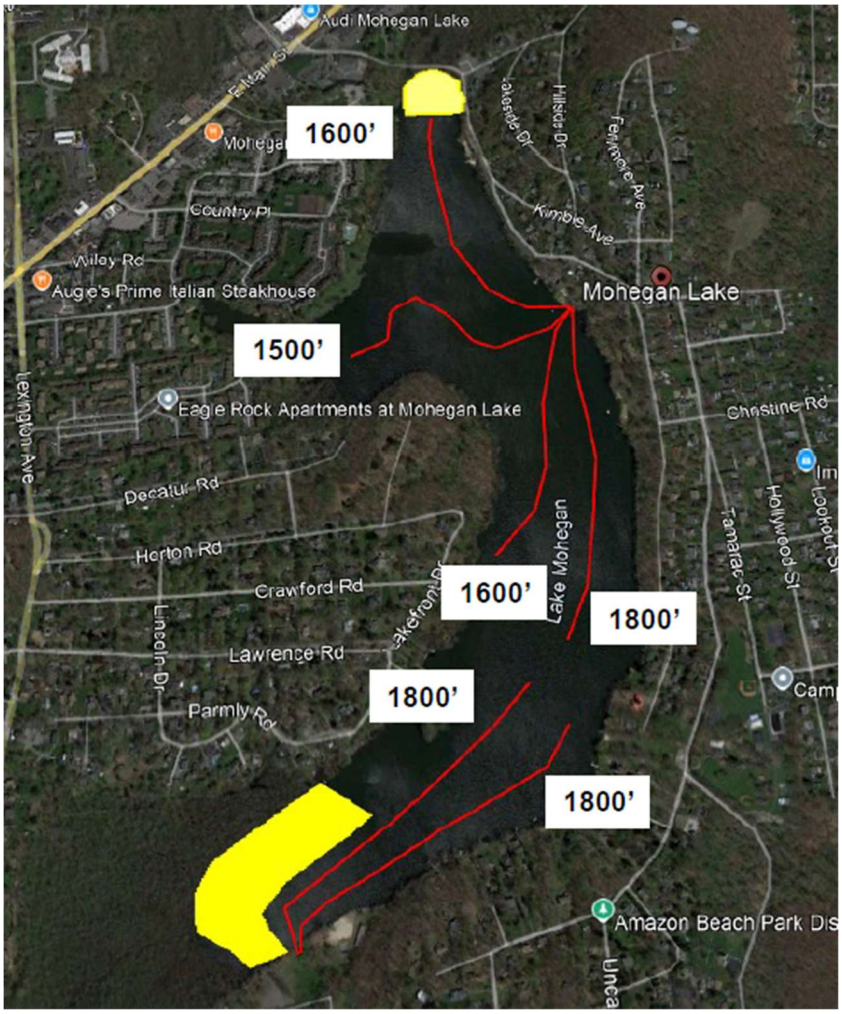


12/25/2025
USGSTopo
Red: Band_1
Green: Band_2
Blue: Band_3

F-1 Mohegan Colony Equipment Location
O-1 Mohegan Colony Outfall Area (see drawings for detail)
F-2 Mohegan Beach Park Equipment Location
O-2 Mohegan Beach Park Outfall Area (see drawings for detail)

1:18,056
0 0.1 0.2 0.4 mi
0 0.17 0.35 0.7 km

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography



Enforcement History

This is a new permit and there is no historical data or enforcement.

Existing Effluent Quality

The Pollutant Summary Table presents the existing effluent quality and effluent limitations. The existing effluent quality was determined from the application submitted by the permittee. Appendix Link

Interstate Water Pollution Control Agencies

Product application points 001 & 002 are located within the Interstate Environmental Commission (IEC) compact area . Appendix Link

Receiving Water Information

The facility proposes to apply product via the following product application points:

Product Application Point No.	SIC Code	Wastewater Type	Receiving Water
001	9511	Process wastewater	Lake Mohegan, Class B

Impaired Waterbody Information

The Mohegan Lake segment (PWL No. 1301-0149) was first listed on the 2010 New York State Section 303(d) List of Impaired/TMDL Waters as impaired for primary and secondary contact recreation due to Phosphorus. The segment continues to be listed as of the 2020/2022 NYS Section 303(d) List. A TMDL has not been developed to address the impairment and, therefore, there are no applicable wasteload allocations (WLAs) for this facility.

Critical Receiving Water Data

Reach Description:

Mohegan Lake is a shallow, eutrophic lake with a surface area of approximately 102 acres and a maximum depth of 19 ft. Twenty-three harmful algal blooms were confirmed during 2021-2025 seasons.

The entire waterbody is receiving bacterial treatment; therefore, dilution is not applicable.

Product Application Point No.	Acute Dilution Ratio A(A)	Chronic Dilution Ratio A(C)	Human, Aesthetic, Wildlife Dilution Ratio (HEW)	Basis
001	End-of-pipe limitations	End-of-pipe limitations	End-of-pipe limitations	BPJ

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 are provided in the Pollutant Summary Table.

Whole Effluent Toxicity (WET) Testing

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

Anti-backsliding

This is a new permit, therefore there can be no backsliding.
Appendix Link

Antidegradation

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

[1] As prescribed by 6 NYCRR Part 617

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 discharge to surface waters, unless a waiver is obtained. This requirement is new.

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

Best Management Practices (BMPs) for Industrial Facilities

In accordance with 6 NYCRR 750-1.14(f) and 40 CFR 122.44(k), the permittee is required to develop and implement a BMP plan that prevents, or minimizes the potential for, the release of toxic or hazardous pollutants to state waters. The BMP plan must include procedures for expeditiously stopping, containing, and cleaning up leaks, spills and other releases to surface waters and procedures for responding to an adverse incident from the product application. Procedures must include notification of appropriate facility personnel and regulatory agencies, as applicable under 6 NYCRR 750-2.7. The BMP plan requires annual review by the permittee.

Stormwater Pollution Prevention Requirements

On 6/11/2026, the permittee submitted a Conditional Exclusion for No Exposure Form, certifying that all industrial activities and materials are completely sheltered from exposure. This condition must be maintained for the exclusion to remain applicable. The Schedule of Additional Submittals also includes a due date for re-certification every five years as required by 40 CFR 122.26(g)(iii).

Mercury

The DOW 1.3.10 Mercury – Multiple Discharge Variance (MDV), dated June 11, 2026, provides the framework for DEC to require mercury monitoring and mercury minimization programs (MMPs), through SPDES permitting. All of the following permit conditions are consistent with the MDV. Appendix Link

The facility is located outside of the Great Lakes Basin and is a SPDES Class 01. The permittee submitted a Conditional Exclusion Form on 6/11/2026, certifying the facility does not have a mercury source as listed in Part III.E. of the MDV. Therefore, consistent with the MDV, the permit includes requirements for the implementation of MMP Type IV. The Schedule of Additional Submittals includes a mercury minimization plan annual status report (maintained onsite), and re-certification of the exclusion every five years. This requirement is new.

Schedule of Compliance

A Schedule of Compliance has been included for the following items:

- Project Pre- and Post-Treatment Biological Monitoring
- Project Pre- and Post-Treatment Water Quality Monitoring
- Annual Monitoring Report

Schedule of Additional Submittals

The following Permit Requirements include submittals and are included in the Schedule of Additional Submittals:

- Notification of Construction Completion and Startup date
- WTC Annual Report
- Initial BMP Plan
- Mercury Start Up Sample
- Mercury Minimization Plan (MMP) Status Report

WTC Annual Report

In accordance with 6 NYCRR 750-2.1(i), the permit requires submission of an annual report each year that the permittee uses WTCs. The permittee must summarize all WTC use for the prior calendar year, January 1 through December 31, and attach it either to the December DMR or annual monitoring report required by the permit. More information is located on the DEC's website under SPDES Permitting of Water Treatment Chemicals.

Initial BMP Plan

Please see BMPs for Industrial Facilities above.

Stormwater No Exposure Certification

In accordance with 40 CFR 122.26(g)(iii) and 6 NYCRR 750-1.25(c), the permittee must submit the form, signed in accordance with 6 NYCRR 750-1.18, every five years certifying that the facility is eligible for the no exposure certification. Please see Stormwater Pollution Prevention Requirements above.

Mercury Start-Up Sample

Please see above discussion of mercury. The permittee must submit mercury data confirming the absence of a mercury source.

Mercury Conditional Exclusion Certification

Please see above discussion of mercury. Consistent with DOW 1.3.10 and 6 NYCRR 750-1.14(f), the permittee must submit the form, signed in accordance with 6 NYCRR 750-1.8, every five years certifying that the facility is neither a mercury source nor receives flow from a mercury source.

Mercury Minimization Plan (MMP) and Status Report

Please see above discussion of MMP and the required annual Status Report., in accordance with 6 NYCRR 750-1.14(f).

Permittee: Mohegan Lake Improvement District
Facility: Lake Mohegan Biological Treatments
SPDES Number: NY0281280
USEPA Non-Major/Class 01 Industrial

Date: October 20, 2026
Permit Writer: Erik Posner
Water Quality Reviewer: Erik Posner
Full Technical Review

PRODUCT APPLICATION POINT AND RECEIVING WATER SUMMARY TABLE

Product application point	Latitude	Longitude	Receiving Water Name	Water Class	Water Index No. / Priority Waterbody Listing (PWL) No.	Major / Sub Basin	Hardness (mg/L)[2]	1Q10 (MGD)	7Q10 (MGD)	30Q10 (MGD)	Critical Effluent Flow (MGD)	Dilution Ratio		
												A(A)	A(C)	HEW
001	41° 18' 51.7" N	73° 50' 56.5" W	Lake Mohegan	B	H-55-11-P 179 PWL: 1301-0149	13/01	138	-	-	-	0.003	No dilution: End of pipe limits.		
002	41° 19' 3.8" N	73° 51' 0.3" W												

POLLUTANT SUMMARY TABLE

Product Application Points 001 & 002

Product application point #	001 & 002	**Description of Wastewater:** Process Wastewater **Type of Treatment:** None													
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		
General Notes: All applicable water quality standards were reviewed for development of the WQBELs. The standard and WQBEL shown below represent the most stringent. The permit limits applied as part of this permit review are bolded.															
Flow Rate	GPD	Daily Max	30,000	-	-	30,000	Design Flow	No alterations that will impair the waters for their best usages.					703.2	-	**Design Flow**
	The flow limit has been set at the design flow of the wastewater treatment facility.														
pH	SU	Minimum	-	-	-	6.0	40 CFR 133.102	7.85[4]	-	6.5 – 8.5	Range	**6.5 - 8.5**	703.3	-	WQBEL
		Maximum	-	-	-	9.0									
	Consistent with TOGS 1.2.1, TBELs reflect the available treatment technology listed in Attachment C. Given the available dilution, an effluent limitation equal to the WQS is appropriate.														
Temperature	°F	Daily Max	-	-	-	**Monitor**	750-1.13 Monitor	-	(Lake): The water temperature at the surface of a lake shall not be raised more than 3F over the temperature that existed before the addition				704.2	-	Monitor
	Consistent with 6 NYCRR 750-1.13(a), monitoring is required and may be used to inform future permitting decisions.														

[2] Ambient hardness was established from a 2023 analysis of median watershed specific data collected by DEC through the Rotating Integrated Basin Studies (RIBS) program from 2012-2022. This data is available through the RIBS Data Portal.
[3] Existing Effluent Quality: Unless otherwise stated, Daily Max = 99% lognormal; Monthly Avg = 95% lognormal (for datasets with ≤3 nondetects); Daily Max = 99% delta-lognormal; Monthly Avg = 95% delta-lognormal (for datasets with >3 nondetects)
[4] Ambient pH calculated from RIBs station 1301MOH0179_C, located near the center of Lake Mohegan, using the median of 187 samples collected from 6/17/1998 – 9/16/2025.

Product application point #	001 & 002	**Description of Wastewater:** Process Wastewater **Type of Treatment:** None													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data: Permit Limit	Existing Discharge Data: Existing Effluent Quality[3]	Existing Discharge Data: # of Data Points Detects / Non-Detects	TBELs: Limit	TBELs: Basis	Water Quality Data & WQBELs: Ambient Bkgd. Conc.	Water Quality Data & WQBELs: Projected Instream Conc.	Water Quality Data & WQBELs: WQ Std. or GV	Water Quality Data & WQBELs: WQ Type	Water Quality Data & WQBELs: Calc. WQBEL	Water Quality Data & WQBELs: Basis	ML	Basis for Permit Requirement
Dissolved Oxygen (DO)	mg/L	Daily Min	-	-	-	**Monitor**	750-1.13 Monitor	-	-	(Non-Trout) 4.0 mg/L		-	703.3	-	Monitor
(DO)	The applicant is proposing to pull influent water from Mohegan Lake, introduce bacteria into the process water through a series of tanks, and then reintroduce the process water back into the lake through a distribution piping network. The bacteria are intended to reduce sludge and silt within the lake. It is presumed that any detection of Dissolved Oxygen would be resulting from its presence in the ambient waterbody and not occurring because of a treatment process or water treatment chemical (WTC). Therefore, no WQBEL is specified. Monitoring of the influent and effluent will be included in the permit to assess the effect of the treatment technology on the ambient Dissolved Oxygen.														
Nitrogen, Ammonia (as N)	mg/L	Monthly Avg	-	-	- /-	**Monitor**	750-1.13 Monitor	0.12	-	1.2	A(C)	1.2	703.5	-	Monitor
	The WQS for Ammonia was determined from TOGS 1.1.1 from a pH of 8.2 SU, calculated as the 75-%ile of RIBS data from the lake, and a summer temperature of 25 °C. The temperature of the receiving waterbody was an assumed value and consistent with TOGS 1.3.1E. The applicant is proposing to pull influent water from Lake Mohegan, introduce bacilli bacteria into the process water through a series of tanks, and then reintroduce the process water back into the lake through a distribution piping network. The bacilli bacteria are intended to consume excess nutrients and organic sediments within the lake. The ambient background concentration was obtained from RIBS data site 1301MOH0179. It is presumed that any detection of Nitrogen, Ammonia (as N) would be resulting from its presence in the ambient waterbody and not occurring because of a treatment process or water treatment chemical (WTC). Therefore, no WQBEL is specified. Monitoring of the influent and effluent will be included in the permit to confirm that there is no net increase of Nitrogen, Ammonia (as N) in Lake Mohegan.														
Total Nitrogen	mg/L	Monthly Avg	-	-	-/-	**Monitor**	750-1.13 Monitor	1.1	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usages.				703.2	-	**Monitor**
	The applicant is proposing to pull influent water from Lake Mohegan, introduce bacilli bacteria into the process water through a series of tanks, and then reintroduce the process water back into the pond through a distribution piping network. The bacilli bacteria are intended to consume excess nutrients and organic sediments within the lake. The ambient background concentration was obtained from RIBS data site 1301MOH0179. It is presumed that any detection of Total Nitrogen would result from its presence in the ambient waterbody and not occurring because of a treatment process or water treatment chemical (WTC). Therefore, no WQBEL is specified. Monitoring of the influent and effluent will be included in the permit to confirm that there is no net increase of Total Nitrogen in Lake Mohegan.														

Product application point #	001 & 002	**Description of Wastewater:** Process Wastewater **Type of Treatment:** None													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data: Permit Limit	Existing Discharge Data: Existing Effluent Quality[3]	Existing Discharge Data: # of Data Points Detects / Non-Detects	TBELs: Limit	TBELs: Basis	Water Quality Data & WQBELs: Ambient Bkgd. Conc.	Water Quality Data & WQBELs: Projected Instream Conc.	Water Quality Data & WQBELs: WQ Std. or GV	Water Quality Data & WQBELs: WQ Type	Water Quality Data & WQBELs: Calc. WQBEL	Water Quality Data & WQBELs: Basis	ML	Basis for Permit Requirement
Total Kjeldahl Nitrogen	mg/L	Monthly Avg	-	-	- / -	**Monitor**	750-1.13 Monitor	-	-	-	-	-	-	-	**Monitor**
	The applicant is proposing to pull influent water from Lake Mohegan, introduce bacilli bacteria into the process water through a series of tanks, and then reintroduce the process water back into the pond through a distribution piping network. The bacilli bacteria are intended to consume excess nutrients and organic sediments within the lake. It is presumed that any detection of Total Kjeldahl Nitrogen would be resulting from its presence in the ambient waterbody and not occurring because of a treatment process or water treatment chemical (WTC). Therefore, no WQBEL is specified. Monitoring of the influent and effluent will be included in the permit to confirm that there is no net increase of Total Kjeldahl Nitrogen in Lake Mohegan.														
Nitrogen, Nitrate (as N)	mg/L	Monthly Avg	-	-	- / -	**Monitor**	750-1.13 Monitor	-	-	-	-	-	-	-	**Monitor**
	The applicant is proposing to pull influent water from Lake Mohegan, introduce bacilli bacteria into the process water through a series of tanks, and then reintroduce the process water back into the pond through a distribution piping network. The bacilli bacteria are intended to consume excess nutrients and organic sediments within the lake. It is presumed that any detection of Nitrogen, Nitrate (as N) would be resulting from its presence in the ambient waterbody and not occurring because of a treatment process or water treatment chemical (WTC). Therefore, no WQBEL is specified. Monitoring of the influent and effluent will be included in the permit to confirm that there is no net increase of Nitrogen, Nitrate (as N) in Lake Mohegan.														
Nitrogen, Nitrite (as N)	mg/L	Monthly Avg	-	-	- / -	**Monitor**	750-1.13 Monitor	0.004	-	-	-	-	-	-	**Monitor**
	The applicant is proposing to pull influent water from Lake Mohegan, introduce bacilli bacteria into the process water through a series of tanks, and then reintroduce the process water back into the pond through a distribution piping network. The bacilli bacteria are intended to consume excess nutrients and organic sediments within the lake. The ambient background concentration was obtained from RIBS data site 1301MOH0179. It is presumed that any detection of Nitrogen, Nitrite (as N) would be resulting from its presence in the ambient waterbody and not occurring because of a treatment process or water treatment chemical (WTC). Therefore, no WQBEL is specified. Monitoring of the influent and effluent will be included in the permit to confirm that there is no net increase of Nitrogen, Nitrite (as N) in Lake Mohegan.														

Product application point #	001 & 002	**Description of Wastewater:** Process Wastewater **Type of Treatment:** None													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data: Permit Limit	Existing Discharge Data: Existing Effluent Quality[3]	Existing Discharge Data: # of Data Points Detects / Non-Detects	TBELs: Limit	TBELs: Basis	Water Quality Data & WQBELs: Ambient Bkgd. Conc.	Water Quality Data & WQBELs: Projected Instream Conc.	Water Quality Data & WQBELs: WQ Std. or GV	Water Quality Data & WQBELs: WQ Type	Water Quality Data & WQBELs: Calc. WQBEL	Water Quality Data & WQBELs: Basis	ML	Basis for Permit Requirement
Total Phosphorus	mg/L	Monthly Avg	-	-	- / -	Monitor	750-1.13 Monitor	0.09	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usages.				703.2	-	Monitor
The applicant is proposing to pull influent water from Lake Mohegan, introduce bacilli bacteria into the process water through a series of tanks, and then reintroduce the process water back into the pond through a distribution piping network. The bacilli bacteria are intended to consume excess nutrients and organic sediments within the lake. The ambient background concentration was obtained from RIBS data site 1301MOH0179. It is presumed that any detection of Total Phosphorus (as P) would be resulting from its presence in the ambient waterbody and not occurring because of a treatment process or water treatment chemical (WTC). Therefore, no WQBEL is specified. Monitoring of the influent and effluent will be included in the permit to confirm that there is no net increase of Total Phosphorus (as P) in Lake Mohegan.														
Orthophosphate (as P)	mg/L	Monthly Avg	-	-	- /-	Monitor	750-1.13 Monitor	-	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usages.				703.2	-	Monitor
The applicant is proposing to pull influent water from Lake Mohegan, introduce bacilli bacteria into the process water through a series of tanks, and then reintroduce the process water back into the pond through a distribution piping network. The bacilli bacteria are intended to consume excess nutrients and organic sediments within the lake. The ambient background concentration was obtained from RIBS data site 1301MOH0179. It is presumed that any detection of Orthophosphate (as P) would be resulting from its presence in the ambient waterbody and not occurring because of a treatment process or water treatment chemical (WTC). Therefore, no WQBEL is specified. Monitoring of the influent and effluent will be included in the permit to confirm that there is no net increase of Orthophosphate (as P) in Lake Mohegan.														
Total Mercury	ng/L	Daily Max	-	-	-	-	-	-	-	0.7	H(FC)	-	-	-	DOW 1.3.10
See Mercury section of this fact sheet.															
Total Aluminum	ng/L	Daily Max	-	-	-	**Monitor**	750-1.13 Monitor	-	-	-	-	-	-	-	**Monitor**
The applicant is proposing to pull influent water from Lake Mohegan, introduce bacilli bacteria into the process water through a series of tanks, and then reintroduce the process water back into the pond through a distribution piping network. The bacilli bacteria are intended to consume excess nutrients and organic sediments within the lake. It is presumed that any detection of total aluminum would be resulting from its presence in the ambient waterbody and not occurring because of a treatment process or water treatment chemical (WTC). Therefore, no WQBEL is specified. Monitoring of the influent and effluent will be included in the permit to confirm that there is no net increase of total aluminum in Lake Mohegan.														

Product application point #	001 & 002	**Description of Wastewater:** Process Wastewater **Type of Treatment:** None													
			Existing Discharge Data			TBELs		Water Quality Data & WQBELs							
Effluent Parameter	Units	Averaging Period	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	ML	Basis for Permit Requirement
Total Copper	ng/L	Daily Max	-	-	-	**Monitor**	750-1.13 Monitor	-	-	-	-	-	-	-	**Monitor**
	The applicant is proposing to pull influent water from Lake Mohegan, introduce bacilli bacteria into the process water through a series of tanks, and then reintroduce the process water back into the pond through a distribution piping network. The bacilli bacteria are intended to consume excess nutrients and organic sediments within the lake. It is presumed that any detection of total copper would be resulting from its presence in the ambient waterbody and not occurring because of a treatment process or water treatment chemical (WTC). Therefore, no WQBEL is specified. Monitoring of the influent and effluent will be included in the permit to confirm that there is no net increase of total copper in Lake Mohegan.														

Appendix: Regulatory and Technical Basis of Permit Authorizations

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

Regulatory References

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

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

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

SPDES Permit Requirements	Regulatory Reference
Anti-backsliding	6 NYCRR 750-1.10(c) and 750-1.10(d), CWA sections 402(o), 303(d)(4), ECL 17-0809, 40 CFR 122.44(*l*)
Best Management Practices (BMPS) for CSOs	6 NYCRR 750-2.8(a)(2)
Environmental Benefits Permit Strategy (EBPS)	6 NYCRR 750-1.18, NYS ECL 17-0817(4), TOGS 1.2.2 (revised January 25,2012)
Exceptions for Type I SSO Outfalls (bypass)	6 NYCRR 750-2.8(b)(2), 40 CFR 122.41
Mercury Multiple Discharge Variance	Division of Water Program Policy 1.3.10 (DOW 1.3.10)
Mixing Zone and Critical Water Information	TOGS 1.3.1 & Amendments
PCB Minimization Program	40 CFR Part 132 Appendix F Procedure 8, 6 NYCRR 750-1.13(a) and 750-1.14(f), and TOGS 1.2.1
Pollutant Minimization Program (PMP)	6 NYCRR 750-1.13(a), 750-1.14(f), TOGS 1.2.1
Schedules of Compliance	6 NYCRR 750-1.14
Sewage Pollution Right to Know (SPRTK)	NYS ECL 17-0826-a, 6 NYCRR 750-2.7
State Administrative Procedure Act (SAPA)	State Administrative Procedure Act Section 401(2), 6 NYCRR 621.11(l)
State Environmental Quality Review (SEQR)	6 NYCRR Part 617
USEPA Effluent Limitation Guidelines (ELGs)	40 CFR Parts 405-471
USEPA National CSO Policy	33 USC Section 1342(q)
Whole Effluent Toxicity (WET) Testing	TOGS 1.3.2
General Provisions of a SPDES Permit Department Request for Additional Information	NYCRR 750-2.1(i)

Outfall and Receiving Water Information

Impaired Waters

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

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

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

Permit Requirements

Basis for Effluent Limitations

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

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

Anti-backsliding

Anti-backsliding requirements are specified in the CWA sections 402(o) and 303(d)(4), ECL 17-0809, and regulations at 40 CFR 122.44(*l*) and 6 NYCRR 750-1.10(c) and (d). Generally, the relaxation of effluent limitations in permits is prohibited unless one of the specified exceptions applies, which will be cited on a case-by-case basis in this fact sheet. Consistent with current case law[5] and USEPA interpretation[6] 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.

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

Antidegradation Policy

New York State implements the antidegradation portion of the CWA based upon two documents: (1) Organization and Delegation Memorandum #85-40, "Water Quality Antidegradation Policy" (September 9, 1985); and, (2) TOGS 1.3.9, "Implementation of the NYSDEC Antidegradation Policy – Great Lakes Basin (Supplement to Antidegradation Policy dated September 9, 1985) (undated)." The permit for the facility contains effluent limitations which ensure that the existing best usage of the receiving waters will be maintained. To further support the antidegradation policy, SPDES applications have been reviewed in accordance with the State Environmental Quality Review Act (SEQR) as prescribed by 6 NYCRR Part 617.

Effluent Limitations

In developing a permit, the DEC 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 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 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 DEC 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.

Technology-based Effluent Limitations (TBELs)

CWA sections 301(b)(1)(B) and 304(d)(1), 40 CFR 133.102, ECL section 17-0509, and 6 NYCRR 750-1.11 require technology-based controls, known as secondary treatment. These and other requirements are summarized in TOGS 1.3.3. Where the TBEL is more stringent than the WQBEL, the TBEL is applied as a limit in accordance with TOGS 1.3.3. Equivalent secondary treatment, as defined in 40 CFR 133.105, allow for effluent limitations of the more stringent of the consistently achievable concentrations or monthly/weekly averages of 45/65 mg/L, and the minimum monthly average of at least 65% removal. Consistently achievable concentrations are defined in 40 CFR 133.101(f) as the 95th percentile value for the 30-day (monthly) average effluent quality achieved by the facility in a period of two years. The achievable 7-day (weekly) average value is equal to 1.5 times the 30-day average value calculated

above. Equivalent secondary treatment applies to those facilities where the principal treatment process is either a trickling filter or a waste stabilization pond; the treatment works provides significant biological treatment of municipal wastewater; and, the effluent concentrations consistently achievable through proper operation and maintenance of the facility cannot meet traditional secondary treatment requirements. There are no federal technology-based standards for toxic pollutants from POTWs. A statistical analysis of existing effluent data, as described in TOGS 1.2.1, may be used to establish other performance-based TBELs.

Technology-based Effluent Limitations (TBELS) for Discharges to Groundwater

TBELS aim to prevent pollution by requiring a minimum level of effluent quality that is attainable using demonstrated technologies for reducing discharges of pollutants or pollution into the waters of the United States. ECL section 17-0509, and 6 NYCRR 750-1.11 require technology-based controls for POTWs discharging to surface waters, known as secondary treatment. The applicable regulations are specified in 40 CFR 133.102 and 6 NYCRR 750-1.11. These and other requirements are summarized in TOGS 1.3.3 and below:

- Secondary treatment requirements of 40 CFR Part 133 will typically not be included unless the facility discharges to a surface water prior to entering the groundwater or if, in the permit writer's judgement, limitations are necessary to prevent nuisance conditions or enhance plant operation.
- Since nitrogen is a component of all domestic wastewater, permits for facilities discharging 30,000 GPD or greater include effluent limitations for Nitrate of 20 mg/L (as N). Groundwater discharges in Nassau and Suffolk Counties are required to achieve an effluent standard for Total Nitrogen of 10 mg/L (as N).
- Disinfection will typically not be required for discharges to groundwater unless local public health concerns exist due to exposure or contact with effluent. When this occurs, disinfection requirements and effluent limitations for chlorine residual are developed in accordance with TOGS 1.3.3.

Technology-based Effluent Limitations (TBELS) for Industrial Facilities to Groundwater

TBELS aim to prevent pollution by requiring a minimum level of effluent quality that is attainable using demonstrated technologies for reducing discharges of pollutants or pollution into the waters of the United States. Requirements for discharges from industrial facilities to groundwater are summarized in TOGS 1.2.1. In accordance with TOGS 1.2.1, for facilities discharging to groundwater:

- Discharges will typically be limited to the more stringent of the groundwater effluent standards in 6 NYCRR 703.6 or the applicable treatment technology listed in TOGS 1.2.1 Attachment (C).
- Discharges from industrial facilities which contain nitrogen or nitrogen compounds include effluent limitations for Nitrate of 20 mg/L (as N). Groundwater discharges in Nassau and Suffolk Counties are required to achieve an effluent standard for Total Nitrogen of 10 mg/L (as N).
- Disinfection will typically not be required for discharges to groundwater unless local public health concerns exist due to exposure or contact with effluent.

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 750-1.11 require that permits include limitations for all pollutants or parameters which are or may be discharged at a level which may cause or contribute to an exceedance of any State water quality standard adopted pursuant to NYS ECL 17-0301. Additionally, 6 NYCRR 701.1 prohibits the discharge of pollutants that will cause impairment of the best usages of the receiving water as specified by the water classifications at the location of discharge and at other locations that may be affected by such discharge. Water quality standards can be found under 6 NYCRR Parts 700-704. The limitations must be stringent enough to ensure that water quality standards are met at the point of discharge and in downstream waters and must be consistent with any applicable WLA which may be in effect through a TMDL for the receiving water. These and other requirements are summarized in TOGS

1.1.1, 1.3.1, 1.3.2, 1.3.5 and 1.3.6. The DEC considers a mixing zone analysis, critical flows, and reasonable potential analysis when developing a WQBEL.

Mixing Zone Analyses

In accordance with TOGS 1.3.1., the DEC may perform additional analysis of the mixing condition between the effluent and the receiving waterbody. Mixing zone analyses using plume dispersion modeling are conducted in accordance with the following:
"EPA Technical Support Document for Water Quality-Based Toxics Control" (March 1991); EPA Region VIII's "Mixing Zones and Dilution Policy" (December 1994); NYSDEC TOGS 1.3.1, "Total Maximum Daily Loads and Water Quality-Based Effluent Limitations" (July 1996); "CORMIX v11.0" (2019).

Critical Flows

In accordance with TOGS 1.2.1 and 1.3.1, WQBELs are developed using dilution ratios that relate the critical low flow condition of the receiving waterbody to the critical effluent flow. The critical low flow condition used in the dilution ratio will be different depending on whether the limitations are for aquatic or human health protection. For chronic aquatic protection, the critical low flow condition of the waterbody is typically represented by the 7Q10 flow and is calculated as the lowest average flow over a 7-day consecutive period within 10 years. For acute aquatic protection, the critical low flow condition is typically represented by the 1Q10 and is calculated as the lowest 1-day flow within 10 years. However, NYSDEC considers using 50% of the 7Q10 to be equivalent to the 1Q10 flow. For the protection of human health, the critical low flow condition is typically represented by the 30Q10 flow and is calculated as the lowest average flow over a 30-day consecutive period within 10 years. However, NYSDEC considers using 1.2 x 7Q10 to be equivalent to the 30Q10. The 7Q10 or 30Q10 flow is used with the critical effluent flow to calculate the dilution ratio. The critical effluent flow can be the maximum daily flow reported on the permit application, the maximum of the monthly average flows from discharge monitoring reports for the past three years, or the facility design flow. When more than one applicable standard exists for aquatic or human health protection for a specific pollutant, a reasonable potential analysis is conducted for each applicable standard and corresponding critical flow to ensure effluent limitations are sufficiently stringent to ensure all applicable water quality standards are met as required by 40 CFR 122.44(d)(1)(i). For brevity, the pollutant summary table reports the results of the most conservative scenario.

Reasonable Potential Analysis (RPA)

The Reasonable Potential Analysis (RPA) is a statistical estimation process, outlined in the 1991 USEPA Technical Support Document for Water Quality-based Toxics Control (TSD), Appendix E. This process uses existing effluent quality data and statistical variation methodology to project the maximum amounts of pollutants that could be discharged by the facility. This projected instream concentration (PIC) is calculated using the appropriate ratio and compared to the water quality standard (WQS). When the RPA process determines the WQS may be exceeded, a WQBEL is required. The procedure for developing WQBELs includes the following steps:

1) identify the pollutants present in the discharge(s) based upon existing data, sampling data collected by the permittee as part of the permit application or a short-term high intensity monitoring program, or data gathered by the DEC;

2) identify water quality criteria applicable to these pollutants;

3) determine if WQBELs are necessary (i.e. reasonable potential analysis (RPA)). The RPA will utilize the procedure outlined in Chapter 3.3.2 of EPA's Technical Support Document (TSD). As outlined in the TSD, for parameters with limited effluent data the RPA may include multipliers to account for effluent variability; and,

4) calculate WQBELs (if necessary). Factors considered in calculating WQBELs include available dilution of effluent in the receiving water, receiving water chemistry, and other pollutant sources.

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

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

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

Water Quality-Based Effluent Limitations (WQBELs) for Discharges to Groundwater

The procedure for developing WQBELs includes identifying the pollutants present in the discharge(s), identifying water quality criteria applicable to these pollutants, determining if WQBELs are necessary (reasonable potential), and calculating the WQBELs. For groundwater discharges, if the expected concentration of the pollutant of concern in the receiving water may exceed the ambient groundwater quality standard or guidance value, then there is reasonable potential that the discharge may cause or contribute to a violation of the water quality, and a WQBEL for the pollutant is required.

WQBELs for groundwater discharges are based on the groundwater effluent limits set forth in 6 NYCRR Part 703 (Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations) except as noted in 6 NYCRR 702.21. TOGS 1.1.1 provides a listing of groundwater effluent limitations for substances having an ambient water quality standard or guidance value. Groundwater effluent limitations are applied at the point of discharge to the groundwater distribution system.

For land treatment systems with no accessible final sampling points, such as constructed wetland treatment systems or buried sand filters, permit limitations for groundwater discharges are typically based on ambient groundwater quality standards or guidance values applied at representative down gradient monitoring well(s). Limitations at the downgradient sampling point are set at the Class GA ambient groundwater standards, rather than at the groundwater effluent limits promulgated under 6 NYCRR 703.6, as compliance is determined based upon the concentrations present in the downgradient groundwater monitoring well at the groundwater interface.

Class GA standards are established for the protection of sources of drinking water designated as Health (Water Source) or H(WS) in TOGS 1.1.1. As such, effluent limitations based on aquatic life criteria and WET testing requirements are not applicable to groundwater discharges.

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 6 NYCRR 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.
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)(iv) and 6 NYCRR 750-2.5(d), SPDES permits must contain monitoring requirements using sufficiently sensitive test procedures approved under 40 CFR Part 136. A method is “sufficiently sensitive” when the method’s minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant parameter; or the lowest ML of the analytical methods approved under 40 CFR Part 136. The ML represents the lowest level that can be measured within specified limitations of precision and accuracy during routine laboratory operations on most effluent matrices. When establishing effluent limitations for a specific parameter (based on technology or water quality requirements), it is possible that the calculated limitation will fall below the ML established by the approved analytical method(s). In these instances, the calculated limitation is included in the permit with a compliance level set equal to the ML of the most sensitive method.

Monitoring Requirements

CWA section 308, 40 CFR 122.44(i), 6 NYCRR 750-1.13, and 750-2.5 require that monitoring be included in permits to determine compliance with effluent limitations. Additional effluent monitoring may also be required to gather data to determine if effluent limitations may be required. The permittee is responsible for conducting the monitoring and reporting results on Discharge Monitoring Reports (DMRs). The permit contains the monitoring requirements for the facility. Monitoring frequency is based on the minimum sampling necessary to adequately monitor the facility’s performance and characterize the nature of the discharge of the monitored flow or pollutant. Variable effluent flows and pollutant levels may be required to be monitored at more frequent intervals than relatively constant effluent flow and pollutant levels (6 NYCRR 750-1.13). For industrial facilities, sampling frequency is based on guidance provided in TOGS 1.2.1. For municipal facilities, sampling frequency is based on guidance provided in TOGS 1.3.3.

Other Conditions

Mercury

Mercury is widespread in New York State (NYS) waters at levels above the most stringent dissolved mercury water quality standard (WQS) of 0.7 ng/L. SPDES permittees cannot comply with a Water Quality-Based Effluent Limitation (WQBEL) for mercury. Therefore, an MDV is appropriate, in accordance with 6 NYCRR 702.17(h), “to address widespread standard or guidance value attainment issues including the presence of a ubiquitous pollutant or naturally high levels of a pollutant in a watershed.” The first MDV was issued in October 2010 and subsequently revised and reissued in 2015, 2020, and 2025. Each iteration of the MDV builds off the previous version supporting the State’s effort to reduce mercury pollution and make reasonable progress toward achieving the WQBEL for mercury. This iteration of the MDV refines the content and application of the MDV for mercury.

The MDV does not change the WQS of 0.7 ng/L; it establishes a variance of the WQBEL which is based on the WQS. SPDES permits which include this variance comply with 40 CFR 122.44.

DOW 1.3.10 explains which surface water permittees are eligible for the MDV.

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.