



Department of  
Environmental  
Conservation

## State Pollutant Discharge Elimination System (SPDES) DISCHARGE PERMIT

SIC Code:	9999	NAICS Code:	-	SPDES Number:	NY0313173
Discharge Class (CL):	01	DEC Number:	1-4736-08860/00011		
Toxic Class (TX):	T	Effective Date (EDP):	EDP		
Major-Sub Drainage Basin:	17 - 01	Expiration Date (ExDP):	ExDP		
Water Index Number:	P 815	Item No.:	923 - 25	Modification Dates (EDPM):	
Compact Area:	-				

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

PERMITTEE NAME AND ADDRESS					
Name:	Village of Southampton	Attention:	William Manger, Mayor		
Street:	23 Main Street				
City:	Southampton	State:	NY	Zip Code:	11968
Email:	wmanger@southamptonvillage.org	Phone:	(631) 283 - 0247		

is authorized to discharge from the facility described below:

FACILITY NAME, ADDRESS, AND PRIMARY OUTFALL									
Name:	Lake Agawam Algae Harvesters								
Address / Location:	Lake Agawam						County:	Suffolk	
City:	Southampton				State:	NY	Zip Code:	11968	
Facility Location:	Latitude:	40 °	52 '	57 " N	& Longitude:	72 °	23 '	31 " W	
Primary Outfall No.:	001	Latitude:	40 °	52 '	17 " N	& Longitude:	72 °	23 '	33 " W
Wastewater Description:	Process wastewater	Receiving Water:	Agawam Pond		NAICS:	-	Class:	C	Standard: C

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

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

### DISTRIBUTION:

BWP Permit Coordinator ([permit.coordinator@dec.ny.gov](mailto:permit.coordinator@dec.ny.gov))  
BWP Permit Writer  
RWE  
RPA  
EPA Region II ([Region2\\_NPDES@epa.gov](mailto:Region2_NPDES@epa.gov))

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

## 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.

## PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL	DESCRIPTION	RECEIVING WATER	EFFECTIVE	EXPIRING
001	Process wastewater	Lake Agawam	Upon start-up of treatment system	ExDP

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.	Eff.	
Flow	Daily Maximum	3.0	MGD	-	-	Continuous	Recorder	-	X	-
pH	Daily Minimum	6.5	SU	-	-	2/day	Grab	-	X	-
	Daily Maximum	8.5	SU	-	-					-
Temperature	Daily Maximum	Monitor	°F	-	-	2/day	Grab	-	X	-
Total Suspended Solids (TSS)	Daily Maximum	20	mg/L	-	-	1/week	Grab	-	X	-
Ammonia (as N)	Daily Maximum	Monitor	mg/L	-	-	1/week	Grab	X	X	2
Total Phosphorus (as P)	Daily Maximum	Monitor	mg/L	-	-	1/week	Grab	X	X	2
Total Phenols	Daily Maximum	Monitor	mg/L	-	-	1/week	Grab	X	X	1, 2
Nitrate-nitrite	Daily Maximum	Monitor	mg/L	-	-	1/week	Grab	X	X	2
Total Aluminum	Daily Maximum	2.0	mg/L	-	-	1/week	Grab	-	X	-

### FOOTNOTES:

1. Total phenols shall be determined by colorimetric or spectrophotometric analysis using the most sufficiently sensitive method approved under 40 CFR Part 136 for total recoverable phenols.

2. 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 in 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.

3. Construction cannot commence until after DEC approval of a Basis of Design Report (BODR) and plans/specifications in accordance with 6 NYCRR Part 750-2.10.

## STORMWATER POLLUTION PREVENTION REQUIREMENTS

### NO EXPOSURE CERTIFICATION

The permittee submitted a Conditional Exclusion for No Exposure Form on 12/12/2024, 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.

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## BEST MANAGEMENT PRACTICES (BMPs) FOR INDUSTRIAL FACILITIES

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

1. **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 initial BMP plan shall be submitted in accordance with the Schedule of Submittals to the Regional Water Engineer. The BMP plan shall be implemented within 6 months of submission, unless a different time frame is approved by the Department. The BMP plan **shall be reviewed annually** and shall be modified whenever (a) changes at the facility materially increase the potential for releases of pollutants; (b) actual releases indicate the plan is inadequate, or (c) a letter from the DEC identifies inadequacies in the plan. The permittee shall certify in writing, as an attachment to the December Discharge Monitoring Report (DMR), that the annual review has been completed. Subsequent modifications to or renewal of this permit does not reset or revise these deadlines unless a new deadline is set explicitly by such permit modification or renewal.
3. **Facility Review** - The permittee shall review all facility components or systems (including but not limited to material storage areas; in-plant transfer, process, and material handling areas; loading and unloading operations; storm water, erosion, and sediment control measures; process emergency control systems; and sludge and waste disposal areas) where materials or pollutants are used, manufactured, stored or handled to evaluate the potential for the release of pollutants to the waters of the State. In performing such an evaluation, the permittee shall consider such factors as the probability of equipment failure or improper operation, cross-contamination of storm water by process materials, settlement of facility air emissions, the effects of natural phenomena such as freezing temperatures and precipitation, fires, and the facility's history of spills and leaks. The relative toxicity of the pollutant shall be considered in determining the significance of potential releases. The review shall address all substances present at the facility that are identified in the SPDES application Form NY-2C (available at [https://www.dec.ny.gov/docs/permits\\_ej\\_operations\\_pdf/form2c.pdf](https://www.dec.ny.gov/docs/permits_ej_operations_pdf/form2c.pdf)) or that are required to be monitored for by the SPDES permit.
4. **13 Minimum BMPs:** Whenever the potential for a release of pollutants to State waters is determined to be present, the permittee shall identify BMPs that have been established to prevent or minimize such potential releases. Where BMPs are inadequate or absent, appropriate BMPs shall be established. In selecting appropriate BMPs, the permittee shall consider good industry practices and, where appropriate, structural measures such as secondary containment and erosion/sediment control devices and practices. USEPA guidance for development of stormwater elements of the BMP is available in *Developing Your Stormwater Pollution Prevention Plan A Guide for Industrial Operators*, February 2009, EPA 833-B-09-002. As a minimum, the plan shall include the following BMPs:

- |                                     |   |                                 |
|-------------------------------------|---|---------------------------------|
| 1. BMP Pollution Prevention Team    | 6. Security   | 10. Spill Prevention & Response |
| 2. Reporting of BMP Incidents       | 7. Preventive Maintenance                             | 11. Erosion & Sediment Control  |
| 3. Risk Identification & Assessment | 8. Good Housekeeping                                  | 12. Management of Runoff        |
| 4. Employee Training                | 9. Materials/Waste Handling, Storage, & Compatibility | 13. Street Sweeping             |
| 5. Inspections and Records          |   |                                 |

## BMPs FOR INDUSTRIAL FACILITIES (continued)

5. **Stormwater Pollution Prevention Plans (SWPPPs) Required for Discharges of Stormwater from Construction Activity to Surface Waters** - A SWPPP shall be developed prior to commencing any construction activity that will result in soil disturbance of one or more acres of uncontaminated area<sup>1</sup>. (Note: the disturbance threshold is 5000 SF in the New York City East of Hudson Watershed). The SWPPP shall conform to the current version of the SPDES General Permit for Stormwater Discharges from Construction Activity (CGP), including the *New York Standards and Specifications for Erosion and Sediment Control* and *New York State Stormwater Management Design Manual*. The permittee shall submit a copy of the SWPPP and any amendments thereto to the local governing body and any other authorized agency having jurisdiction or regulatory control over the construction activity **at least 30 days prior to soil disturbance**. The SWPPP shall be maintained on-site and submitted to the Department only upon request. When a SWPPP is required, a properly completed *Notice of Intent* (NOI) form shall be submitted (available at [www.dec.ny.gov/chemical/43133.html](http://www.dec.ny.gov/chemical/43133.html)) prior to soil disturbance. Note that submission of the NOI is required for informational purposes; the permittee is not eligible for and will not obtain coverage under any SPDES general permit for stormwater discharges. SWPPPs must be developed for subsequent site disturbances in accordance with the above requirements. The permittee is responsible for ensuring that the provisions of each SWPPP are properly implemented.
6. **Required Sampling For "Hot Spot" Identification** - 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.

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<sup>1</sup> Uncontaminated area means soils which are free of contamination by any toxic or non-conventional pollutants identified in the tables of SPDES Application Form NY-2C. Disturbance of any size contaminated area(s) and the resulting discharge of contaminated stormwater is not authorized by this permit unless the discharge is under State or Federal oversight as part of a remedial program or after review by the Regional Water Engineer; nor is such discharge authorized by any SPDES general permit for stormwater discharges.



## MERCURY MINIMIZATION PROGRAM (MMP) - Type IV

On 12/12/2024, the permittee submitted a Conditional Exclusion Certification, certifying that the facility does not have any of the mercury sources listed in Part III.A.3. of DOW 1.3.10.

1. General - The permittee must develop, implement, and maintain a mercury minimization program (MMP), containing the elements set forth below.
2. MMP Elements - The MMP must be a written document and must include any necessary drawings or maps of the facility and/or collection system. Other related documents already prepared for the facility may be used as part of the MMP and may be incorporated by reference. At a minimum, the MMP must include the following elements<sup>2</sup> as described in detail below:
  - a. Conditional Exclusion Certification - A certification (Appendix D of *DOW 1.3.10*), signed in accordance with 750-1.8 Signature of SPDES forms, must be submitted once every five (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 discharge from 1) individually permitted combined sewer overflow (CSOs)<sup>3</sup> communities and/or 2) Type II sanitary sewer overflow (SSO)<sup>4</sup> facilities;
    - One or more effluent samples which 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 permit application or other information indicates that mercury is handled on site and could be discharged through outfalls;
    - Outfalls which contain legacy mercury contamination;
    - The facility's collection system receives discharges from a dental and/or categorical industrial user (CIU)<sup>5</sup> 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 SPDES permit.
  - b. Control Strategy - The control strategy must contain the following minimum elements:
    - i. 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.
    - ii. Bulk Chemical Evaluation – For chemicals, used at a rate which exceeds 1,000 gallons/year or 10,000 pounds/year, the permittee must obtain a manufacturer's certificate of analysis, a chemical analysis performed by a certified laboratory, and/or a notarized affidavit which describes the substances' mercury concentration and the detection limit achieved. If possible, the permittee must only use bulk chemicals utilized in the wastewater treatment process which contain <10 ppb mercury.

<sup>2</sup>Neither monitoring nor outreach is required for facilities meeting the criteria for MMP Type IV, but monitoring and/or outreach can be included in the permittee's control strategy.

<sup>3</sup>CSO permits are included under the 05 and 07 permit classifications.

<sup>4</sup>These are overflow retention facilities (ORFs) and are included under the 05 and 07 permit classifications.

<sup>5</sup>CIUs include those listed under Federal Regulation in 40 CFR Part 400.

## MERCURY MINIMIZATION PROGRAM (MMP) – Type IV (Continued)

- c. **Status Report** - An **annual** status report must be developed and maintained on site, in accordance with the [Schedule of Additional Submittals](#), summarizing:
- Review of criteria to determine if the facility has a potential mercury source;
    - If the permittee no longer meets the criteria for MMP Type IV, the permittee must notify the DEC for a permittee-initiated permit modification;
  - All actions undertaken, pursuant to the control strategy, during the previous year; and
  - Actions planned, pursuant to the control strategy, for the upcoming year.

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

3. **MMP Modification** - The MMP must be modified whenever:
- Changes at the facility, or within the collection system, increase the potential for mercury discharges;
  - A letter from the DEC identifies inadequacies in the MMP.

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

### 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.



## DISCHARGE NOTIFICATION REQUIREMENTS

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

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

### N.Y.S. PERMITTED DISCHARGE POINT

SPDES PERMIT No.: NY \_\_\_\_\_

OUTFALL No. : \_\_\_\_\_

For information about this permitted discharge contact:

Permittee Name: \_\_\_\_\_

Permittee Contact: \_\_\_\_\_

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

OR:

NYSDEC Division of Water Regional Office Address:

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

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

## SCHEDULE OF COMPLIANCE

a) The permittee shall comply with the following schedule:

Outfall(s)	Compliance Action	Compliance Date <sup>6</sup>
	<p><b><u>DESIGN DOCUMENTS</u></b> The permittee shall submit approvable<sup>7</sup> Design Documents including a Basis of Design Report (BODR), Plans, Specifications, and Construction Schedule for the selected alternative that will ensure compliance with all final effluent limitations.</p>	EDP + 24 Months
	<p><b><u>COMPLETE CONSTRUCTION – NEW DISCHARGES</u></b> The permittee shall provide a Construction Completion Certification to the DEC (send to the Regional Water Engineer and <a href="mailto:NetDMR@dec.ny.gov">NetDMR@dec.ny.gov</a>) that the disposal system has been fully completed in accordance with the approved Design Document.</p>	Upon Construction Completion
	<p><b><u>PILOT PROJECT QUALITY ASSURANCE PROJECT PLAN AND MONITORING PLAN</u></b> 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.</p>	EDP + 3 months
	<p><b><u>PILOT PROJECT PRE- AND POST-TREATMENT BIOLOGICAL MONITORING</u></b> 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 (<a href="#">National Lakes Assessment 2022 Field Operations Manual</a>, <a href="#">National Lakes Assessment 2022 Laboratory Operations Manual</a>, &amp; <a href="#">National Lakes Assessment 2022 Technical Support Document</a>) biological monitoring protocols for macroinvertebrate, phytoplankton, and zooplankton communities.</p> <p>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).</p>	Prior to, during, and following each treatment season
	<p><b><u>PILOT PROJECT PRE- AND POST-TREATMENT WATER QUALITY MONITORING</u></b> 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 pollutant summary table and chlorophyll-a and cyanobacteria endpoints (toxins and species identification and enumeration). All monitoring should be conducted according to an approved monitoring plan and covered under an approved Quality Assurance Project Plan (QAPP).</p>	To be conducted during each treatment season

<sup>6</sup> 6 NYCRR 750-1.14 (a)

<sup>7</sup> 6 NYCRR 750 1.2 (a)(8)

Outfall(s)	Compliance Action	Compliance Date <sup>6</sup>
	<p><b><u>ANNUAL MONITORING REPORT</u></b>            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.</p>	<p>No later than January 1 following completion of each treatment season</p>
<p><b>Unless noted otherwise, the above actions are one-time requirements.</b></p>		

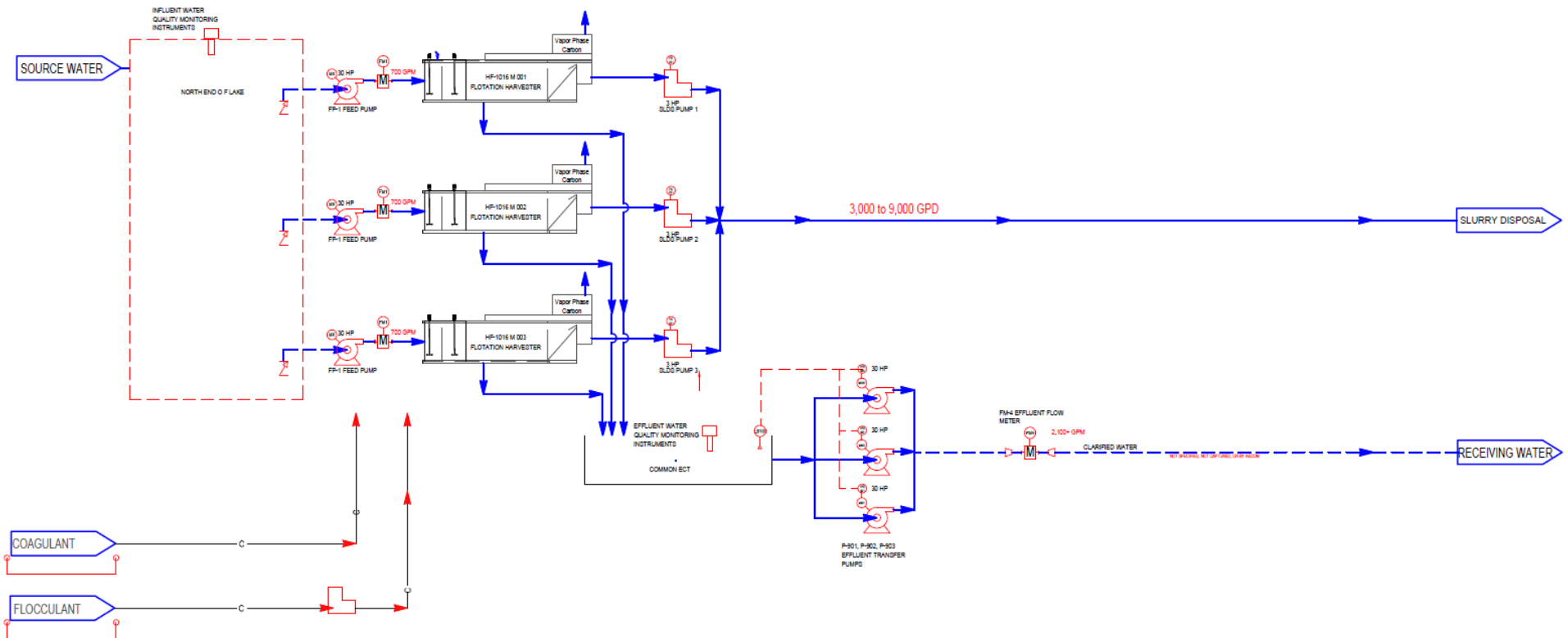
- b) The permittee shall submit a [Report of Non-compliance Event](#) form with each of the above schedule dates no later than 14 days following each elapsed date, unless conditions require more immediate notice as prescribed in 6 NYCRR Part 750-1.2(a) and 750-2. All notifications shall be sent to the locations listed under the section of this permit entitled RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS. Each notice of non-compliance shall include the following information:
1. A short description of the non-compliance;
  2. A description of any actions taken or proposed by the permittee to comply with the elapsed schedule requirements without further delay and to limit environmental impact associated with the non-compliance;
  3. Any details which tend to explain or mitigate an instance of non-compliance; and
  4. An estimate of the date the permittee will comply with the elapsed schedule requirement and an assessment of the probability that the permittee will meet the next scheduled requirement on time.
- c) The permittee shall submit copies of any document required by the above schedule of compliance to the DEC Regional Water Engineer ([Ryan.Omara@dec.ny.gov](mailto:Ryan.Omara@dec.ny.gov)), the Chief of Lake Monitoring and Assessment ([Brian.Duffy@dec.ny.gov](mailto:Brian.Duffy@dec.ny.gov)), and to the Bureau of Water Permits ([SPDESapp@dec.ny.gov](mailto:SPDESapp@dec.ny.gov)).

# 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: After intake screens and prior to addition of WTCs

Effluent: After treatment and prior to discharge to Lake Agawam



## GENERAL REQUIREMENTS

- A. The regulations in 6 NYCRR Part 750 are hereby incorporated by reference and the conditions are enforceable requirements under this permit. The permittee shall comply with all requirements set forth in this permit and with all the applicable requirements of 6 NYCRR Part 750 incorporated into this permit by reference, including but not limited to the regulations in paragraphs B through H as follows:
- B. General Conditions
- |  |   |
|--|---|
| 1. Duty to comply                                | 6 NYCRR 750-2.1(e) & 2.4                |
| 2. Duty to reapply                               | 6 NYCRR 750-1.16(a)                     |
| 3. Need to halt or reduce activity not a defense | 6 NYCRR 750-2.1(g)                      |
| 4. Duty to mitigate                              | 6 NYCRR 750-2.7(f)                      |
| 5. Permit actions                                | 6 NYCRR 750-1.1(c), 1.18, 1.20 & 2.1(h) |
| 6. Property rights                               | 6 NYCRR 750-2.2(b)                      |
| 7. Duty to provide information                   | 6 NYCRR 750-2.1(i)                      |
| 8. Inspection and entry                          | 6 NYCRR 750-2.1(a) & 2.3                |
- C. Operation and Maintenance
- |                                   |                                      |
|-----------------------------------|--------------------------------------|
| 1. Proper Operation & Maintenance | 6 NYCRR 750-2.8                      |
| 2. Bypass                         | 6 NYCRR 750-1.2(a)(17), 2.8(b) & 2.7 |
| 3. Upset                          | 6 NYCRR 750-1.2(a)(94) & 2.8(c)      |
- D. Monitoring and Records
- |                           |  |
|---------------------------|--|
| 1. Monitoring and records | 6 NYCRR 750-2.5(a)(2), 2.5(a)(6), 2.5(c)(1), 2.5(c)(2), & 2.5(d) |
| 2. Signatory requirements | 6 NYCRR 750-1.8 & 2.5(b)   |
- E. Reporting Requirements
- |   |                                   |
|---|-----------------------------------|
| 1. Reporting requirements for non-POTWs | 6 NYCRR 750-2.5, 2.6, 2.7, & 1.17 |
| 2. Anticipated noncompliance            | 6 NYCRR 750-2.7(a)                |
| 3. Transfers                            | 6 NYCRR 750-1.17                  |
| 4. Monitoring reports                   | 6 NYCRR 750-2.5(e)                |
| 5. Compliance schedules                 | 6 NYCRR 750-1.14(d)               |
| 6. 24-hour reporting                    | 6 NYCRR 750-2.7(c) & (d)          |
| 7. Other noncompliance                  | 6 NYCRR 750-2.7(e)                |
| 8. Other information                    | 6 NYCRR 750-2.1(f)                |
- F. Sludge Management
- The permittee shall comply with all applicable requirements of 6 NYCRR Part 360.
- G. SPDES Permit Program Fee
- The permittee shall pay to the 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 outside of the formal permit administrative process. The majority of WTC authorizations do not require SPDES permit modification. In any event, use and discharge of a WTC shall not proceed without prior authorization from the DEC. Examples of WTCs include biocides, coagulants, conditioners, corrosion inhibitors, defoamers, deposit control agents, flocculants, scale inhibitors, sequestrants, and settling aids.
- |  |
|--|
| 1. WTC use shall not exceed the rate explicitly authorized by this permit or otherwise authorized 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 <i>WTC Notification Form</i> and <i>WTC Annual Report Form</i> are available from the DEC's website at: <a href="http://www.dec.ny.gov/permits/93245.html">http://www.dec.ny.gov/permits/93245.html</a> |

## RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

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

DMRs must be submitted electronically using the electronic reporting tool (NetDMR) specified by DEC. Instructions on the use of NetDMR can be found at: [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 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

Department of Environmental Conservation  
Regional Water Engineer, Region 1  
50 Circle Road, Stony Brook, New York, 11790-3409

Phone: (631) 444-0405

- 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
001	<u>BMP PLAN</u> The permittee shall submit and annually review the completed BMP plan on an annual basis. The BMP plan shall be modified whenever: (a) changes at the facility materially increase the potential for releases of pollutants, (b) actual releases indicate the plan is inadequate, or (c) a letter from the DEC identifies inadequacies in the plan. The permittee shall certify in writing, as an attachment to the December Discharge Monitoring Report (DMR), that the annual review has been completed. All BMP plan revisions must be submitted to the Regional Water Engineer within 30 days.	EDP + 6 Months, Annually thereafter on January 28 <sup>th</sup>
001	<u>WATER TREATMENT CHEMICAL (WTC) ANNUAL REPORT FORM</u> 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.	
001	<u>MERCURY MINIMIZATION PLAN</u> The permittee must complete and maintain onsite an annual mercury minimization status report in accordance with the requirements of this permit.	<b>Maintained Onsite</b> EDP + 12 months, annually thereafter

Outfall(s)	SCHEDULE OF ADDITIONAL SUBMITTALS - Required Action	Due Date
001	<u>MERCURY - CONDITIONAL EXCLUSION CERTIFICATION</u> Permittee must submit a mercury conditional exclusion certification every five years in order to maintain MMP Type IV status.	12/12/2029 and every 5 years thereafter
001	<u>STORMWATER NO EXPOSURE CERTIFICATION</u> 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.	12/12/2029 and 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.
- 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.



# **SPDES Permit Fact Sheet**

## **Village of Southampton**

### **Lake Agawam Algae Harvesters**

#### **NY0313173**



**Department of  
Environmental  
Conservation**

## Summary of Permit Changes

A new State Pollutant Discharge Elimination System (SPDES) permit has been drafted for the Lake Agawam Algae Harvesters.

**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

- 6/3/2022 The Village of Southampton received a Notice of Incomplete Application (NOIA) as an NY-2C application was not originally submitted with the Article 24 Freshwater Wetlands Permit.
- 6/17/2022 The Village of Southampton submitted an NY-2C permit application.
- 7/5/2023 The Village of Southampton was sent a second NOIA as the NY-2C application was deficient.
- 11/20/2023 The Village of Southampton sent a response to the second NOIA.
- 6/14/2024 The Village of Southampton was sent a third Notice of Incomplete Application (NOIA) as the NY-2C application was still deficient.
- 11/12/2024 The Village of Southampton sent a response to the third NOIA.

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

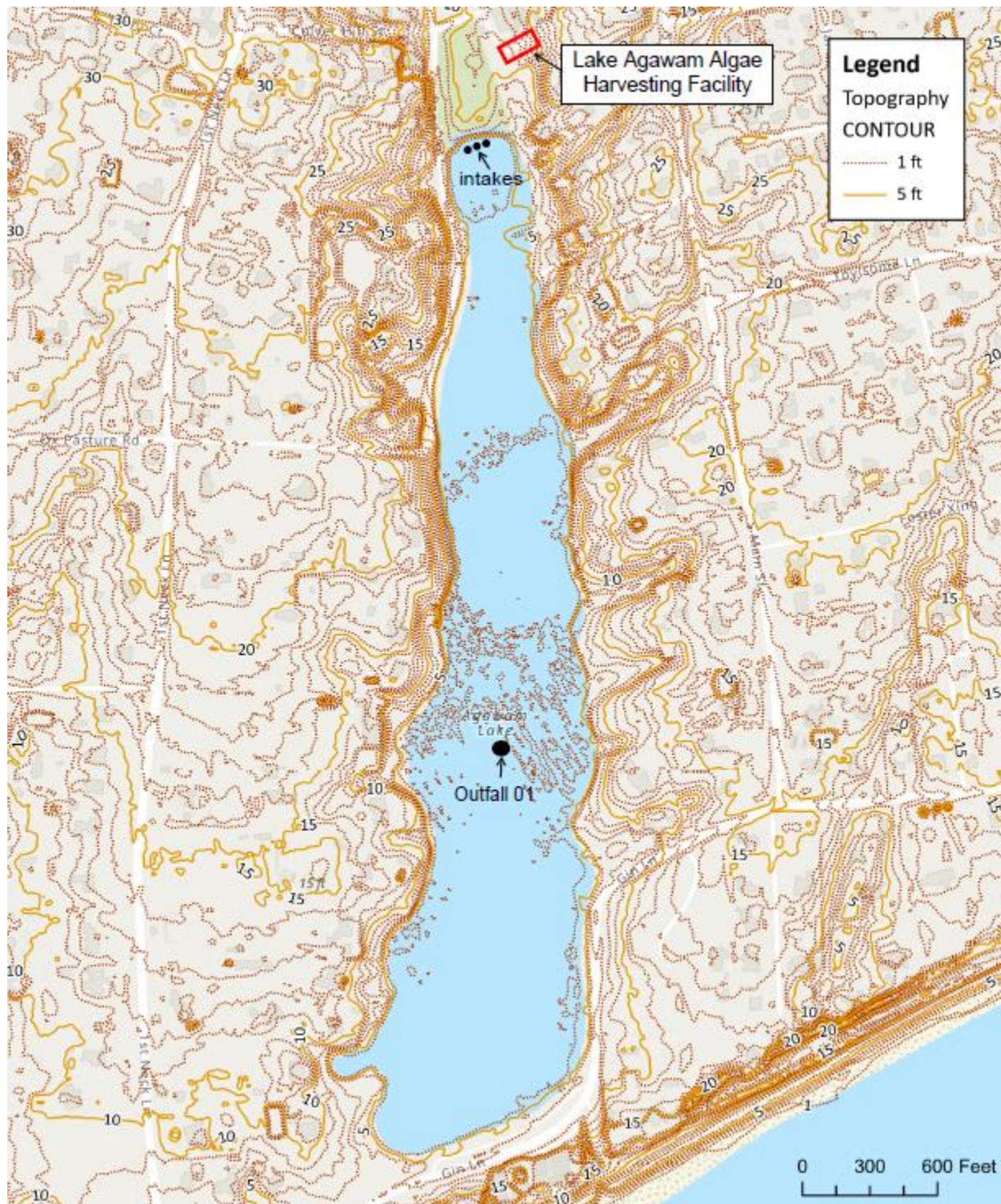
## Facility Information

This is a proposed industrial facility (SIC code(s) 9999) that intends to use Hydronucleation Flotation Technology (HFT) for algae harvesting. The harvesting process will involve deploying weir skimmers across target areas at the north end of Lake Agawam to collect water. The collected water will then be pumped to the land-based algae harvesting and nutrient removal system, where the water will undergo liquid solid separation using an advanced form of dissolved air flotation. The recovered algae will be placed in a storage tank for disposal off-site at a waste facility. Treated water will then be returned to Lake Agawam.

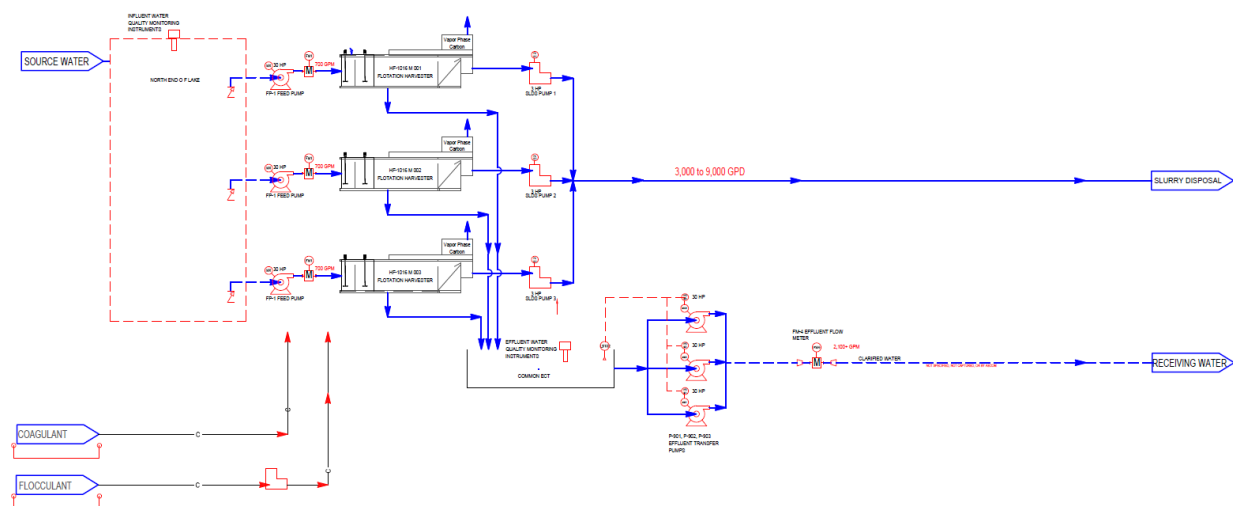
Effluent will consist of process wastewater.

The proposed outfall is a 12-inch DR11 HPDE that will be submerged in Lake Agawam and anchored to the lake bottom with sandbags to facilitate removal during the winter months, if necessary. The pipe will extend south by approximately 2,700 liner feet in the lake. The terminal end of the outfall will be located approximately 380 feet from the bank and raised approximately 2 feet from the lake bottom. The open end of the pipe will be angled at 45 degrees from the lake bottom to prevent sediment disturbance.

## Site Overview







## Enforcement History

Compliance and enforcement information can be found on the EPA's [Enforcement and Compliance History Online \(ECHO\)](#) website.

## 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](#)

## Additional Site-Specific Concerns

The facility is located in a sole source aquifer. As required by ECL 17-0828, the permittee submitted a completed *Application Supplement B: Discharges within Sole Source Aquifers* form identifying the following water purveyors within a three-mile radius of the facility: Suffolk County Water Authority.

## Receiving Water Information

The facility proposes to discharge via the following outfalls:

Outfall No.	SIC Code	Wastewater Type	Receiving Water
001	9999	Process wastewater	Agawam Pond, Class C

**Reach Description:** Agawam Pond (P 815) is part of the Shinnecock Bay – Mecox Bay Drainage Basin. The segment of Agawam Pond at the point of discharge is classified as C (6 NYCRR 923.4 – Table I – Item 25). It is located approximately 0.2 miles inland from the ocean and between 0.2 miles east and 0.5 miles west of Southampton.

See the [Outfall and Receiving Water Summary Table](#) and [Appendix](#) for additional information.

### Impaired Waterbody Information

The Agawam Pond segment (PWL No. 1701-0117) was first listed on the 2008 [New York State Section 303\(d\) List](#) of Impaired/TMDL Waters as impaired due to Total Phosphorus and Dissolved Oxygen. 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 & Mixing Zone

The facility discharges to Agawam Pond, which does not have an outlet. Pollutants discharged to Lake Agawam are expected to remain in the lake, build up over time, and could impact the water quality of the lake. Therefore, no dilution is being considered.

Outfall No.	Acute Dilution Ratio A(A)	Chronic Dilution Ratio A(C)	Human, Aesthetic, Wildlife Dilution Ratio (HEW)	Basis
001	1:1	1:1	1:1	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 in the discharge are provided in the [Pollutant Summary Table](#).

### Whole Effluent Toxicity (WET) Testing

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

### 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)<sup>1</sup> determination. [Appendix Link](#)

### Discharge Notification Act Requirements

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

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

### 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 requires annual review by the permittee.

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<sup>1</sup> As prescribed by 6 NYCRR Part 617

### Stormwater Pollution Prevention Requirements

The facility discharges stormwater associated with industrial activity and requires SPDES permit coverage under 40 CFR 122.26(a)(6).

On 12/12/2024, 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 submittals also includes a due date for re-certification every five years as required by 40 CFR 122.26(g)(iii).

### Mercury<sup>2</sup>

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

#### [Appendix Link](#)

The facility is located outside of the Great Lakes Basin, is a Class 01 industrial facility, and does not have a mercury source. On 12/12/2024, the permittee submitted a Conditional Exclusion Certification, certifying that the facility does not have any of the mercury sources listed in Part III.A.3. of DOW 1.3.10 and the effluent measured <12 ng/L. Therefore, consistent with DOW 1.3.10, the permit includes requirements for the implementation of MMP Type IV and does not include mercury effluent limitations. The [Schedule of Additional Submittals](#) includes a mercury minimization plan annual status report (maintained onsite), and re-certification of the exclusion every five years. As part of the re-certification, the effluent must be sampled and continue to measure <12 ng/L. This requirement is new.

### Schedule of Compliance

A Schedule of Compliance is being included<sup>3</sup> for the following items ([Appendix Link](#)):

- Design Documents
- Complete Construction – New Discharges
- Pilot Project Quality Assurance Project Plan and Monitoring Plan
- Pilot Project Pre- and Post-Treatment Biological Monitoring
- Pilot Project Pre- and Post-Treatment Water Quality Monitoring
- Annual Monitoring Report

### Schedule of Additional Submittals

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

- BMP Plan
- Mercury Minimization Plan
- Mercury Conditional Exclusion Certification
- Stormwater No Exposure Certification
- Water Treatment Chemical (WTC) Annual Report Form

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<sup>2</sup> In accordance with DOW 1.3.10 Mercury – SPDES Permitting & Multiple Discharge Variance (MDV), December 30, 2020.

<sup>3</sup> Pursuant to 6 NYCRR 750-1.14

## OUTFALL AND RECEIVING WATER SUMMARY TABLE

Outfall	Latitude	Longitude	Receiving Water Name	Water Class	Water Index No. / Priority Waterbody Listing (PWL) No.	Major / Sub Basin	Hardness (mg/l)	1Q10 (MGD)	7Q10 (MGD)	30Q10 (MGD)	Critical Effluent Flow (MGD)	Dilution Ratio		
												A(A)	A(C)	HEW
001	40° 52' 17" N	72° 23' 33" W	Agawam Pond	C	P 815 PWL: 1701-0117	17/01	107 <sup>4</sup>	-	-	-	3.0	1:1	1:1	1:1

## POLLUTANT SUMMARY TABLE

### Outfall 001

Outfall #	001	Description of Wastewater: Process wastewater													
		Type of Treatment: Coagulation, Flocculation													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>5</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
<b>General Notes:</b> Existing discharge data was obtained from the application provided by the permittee. All applicable water quality standards were reviewed for development of the WQBELs. The standard and WQBEL shown below represent the most stringent. The technology based effluent limitations (TBELs) were developed from TOGS 1.2.1 Att.C, for category D (chemical treatment) treatment systems.															
Flow Rate	MGD	Daily Max	-	-	-	3.0	Design Flow	No alterations that will impair the waters for their best usages.					<a href="#">703.2</a>	-	Design Flow
	The flow limit is set at the design flow of the wastewater treatment facility.														
pH	SU	Minimum	-	7.01 Actual Min	20/0	6.0	40 CFR 133.102	8.62 <sup>6</sup>	-	6.5 – 8.5	Range	6.5 - 8.5	<a href="#">703.3</a>	-	WQBEL
		Maximum	-	8.2 Actual Max	20/0	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.														

<sup>4</sup> Ambient hardness was calculated from DOW monitoring location 1701AGA0815 using the average of 6 samples.

<sup>5</sup> 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)

<sup>6</sup> Ambient pH calculated from DOW monitoring location 1701AGA0815 using the average of 6 samples.



Permittee: Village of Southampton  
 Facility: Lake Agawam Algae Harvesters  
 SPDES Number: NY0313173  
 USEPA Non-Major/Class 01 Industrial

Date: January 2, 2025 v.1.27  
 Permit Writer: Gwendolyn Temple  
 Water Quality Reviewer: Gwendolyn Temple  
 Full Technical Review

Outfall #	001	Description of Wastewater: Process wastewater													
		Type of Treatment: Coagulation, Flocculation													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>5</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
Temperature	°F	Daily Max	-	86 Actual Max	6,339/0	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.														
5-day Biochemical Oxygen Demand (BOD <sub>5</sub> )	mg/L	Daily Max	-	4.60 Actual Max	2/0	-	-	-	No alteration that will impair the waters for their best usages.				703.3	-	No Limitation
	A numeric water quality standard for 5-day Biochemical Oxygen Demand (BOD <sub>5</sub> ) does not exist for Class C waterbodies. Therefore, no limitation or monitoring is specified.														
Total Suspended Solids	mg/L	Daily Max	-	10.8 Actual Max	18/0	20	TOGS 1.2.1/ BPJ	-	None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages.				703.2	-	TBEL
	Consistent with TOGS 1.2.1, TBELs reflect the available treatment technology listed in Attachment C. While the facility does not treat the effluent using filtration, the TBEL for filtration should be applied as a way for the facility to ensure that they are properly flocculating the wastestream.														
Nitrogen, Ammonia (as N)	mg/L	Monthly Avg	-	0.49 Actual Max	22/0	Monitor	750-1.13 Monitor	0.35 <sup>7</sup>	0.637	0.22	A(C)	-	-	-	Monitor
	Nitrogen, Ammonia (as N) was detected in the effluent as reported in the NY-2C application. The existing effluent quality shows Nitrogen, Ammonia (as N) concentration as the maximum daily discharge. The actual long-term average discharge value is 0.17 mg/L. The long-term average influent concentration is 0.19 mg/L.														
	The WQS for Ammonia was determined from TOGS 1.1.1 from a pH of 8.62 and a summer temperature of 25 °C. The temperature of the receiving waterbody was an assumed value and consistent with TOGS 1.3.1E.														
It is presumed that the detected Nitrogen, Ammonia (as N) reported in the NY-2C application is 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 Agawam.															

<sup>7</sup> Ambient Nitrogen, Ammonia (as N) was calculated from DOW monitoring location 1701AGA0815 using the average of 6 samples.

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 Full Technical Review

Outfall #	001	Description of Wastewater: Process wastewater													
		Type of Treatment: Coagulation, Flocculation													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>5</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
Total Phosphorus (as P)	mg/L	Monthly Avg	-	0.03 Actual Max	20/0	Monitor	750-1.13 Monitor	0.11 <sup>8</sup>	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
	Total Phosphorus (as P) was detected in the effluent as reported in the NY-2C application. The existing effluent quality shows Total Phosphorus (as P) concentration as the maximum daily discharge. The actual long-term average discharge value is 0.01 mg/L. The long-term average influent concentration is 0.22 mg/L.														
	It is presumed that the detected Total Phosphorus (as P) reported in the NY-2C application is 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 Agawam.														
Total Mercury	ng/L	Daily Max	-	1.6	1/0	-	-	-	-	0.7	H(FC)	-	-	-	DOW 1.3.10
	See <a href="#">Mercury section of this fact sheet</a> .														
Total Organic Carbon	mg/L	Daily Max	-	4.3 Actual Max	2/0	-	-	-	-	-	-	-	-	-	No Limitation
	Total Organic Carbon was detected as reported in the NY-2C application. A numeric water quality standard for Total Organic Carbon does not exist for Class C waterbodies. Therefore, no limitation or monitoring is specified.														
Total Zinc	mg/L	Daily Max	-	0.0017	1/0	0.4	TOGS 1.2.1	-	0.01039	0.0875	A(C)	No Reasonable Potential	-	-	No Limitation
	Total Zinc was detected as reported in the NY-2C application.  The projected instream concentration was calculated using the maximum reported effluent concentration of 0.0017 mg/L, a multiplier of 6.20, the chronic dilution ratio, and an assumed negligible upstream ambient concentration. The multiplier was selected from EPA's Technical Support Document Chapter 3.3 to account for the number of samples. A metals translator of 1.014 was also applied to convert between the total and dissolved form in accordance with the EPA Document 823-B-96-007. A comparison of the projected instream concentration to the WQS indicates no reasonable potential to cause or contribute to a WQS violation. Therefore, no effluent limitation equal to the WQBEL or TBEL is specified.														

<sup>8</sup> Ambient Total Phosphorus (as P) was calculated from DOW monitoring location 1701AGA0815 using the average of 6 samples.

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Outfall #	001	Description of Wastewater: Process wastewater													
		Type of Treatment: Coagulation, Flocculation													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>5</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
Total Phenols	mg/L	Daily Max	-	0.0066	1/0	Monitor	750-1.13 Monitor	-	0.041	0.001	E(FS)	-	-	-	Monitor
	Total Phenols was detected as reported in the NY-2C application. A numeric water quality standard for Total Phenols does not exist for Class C waterbodies. However, a WQS of 0.001 mg/L exists for Total Chlorinated Phenols for Class C waterbodies.  It is presumed that the detected Total Phenols reported in the NY-2C application is 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 Phenols in Lake Agawam.														
Bromide	mg/L	Daily Max	-	0.75	1/0	-	-	-	-	-	-	-	-	-	No Limitation
	Bromide was detected as reported in the NY-2C application. A numeric water quality standard for Bromide for Class C waterbodies. Therefore, no limitation or monitoring is specified.														
Color	CU	Daily Max	-	35	1/0	-	-	-	None in amounts that will adversely affect the taste, color or odor thereof, or impair the waters for their best usages.			703.2	-	No Limitation	
	Color was detected as reported in the NY-2C application. A numeric water quality standard for Color does not exist for Class C waterbodies. Therefore, no limitation or monitoring is specified.														
Fecal coliform	#/100 ml	Daily Max	-	40	1/0	-	-	-	-	-	-	-	-	-	No Limitation
	Fecal coliform was detected as reported in the NY-2C application. This facility is not discharging sanitary waste and therefore, no limitation or monitoring is required.														
Chemical Oxygen Demand (COD)	mg/L	Daily Max	-	46.9	1/0	-	-	-	-	-	-	-	-	-	No Limitation
	Chemical Oxygen Demand (COD) was detected as reported in the NY-2C application. A numeric water quality standard for Chemical Oxygen Demand (COD) does not exist for Class C waterbodies. Therefore, no limitation or monitoring is specified.														

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Outfall #	001	Description of Wastewater: Process wastewater													
		Type of Treatment: Coagulation, Flocculation													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>9</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
Nitrate-nitrite	mg/L	Daily Max	-	0.31 Actual Max	20/0	Monitor	750-1.13 Monitor	0.06 <sup>9</sup>	0.434	0.1	A(C)	-	-	-	Monitor
	Nitrate-nitrite was detected as reported in the NY-2C application. The existing effluent quality shows Nitrate-nitrite concentration as the maximum daily discharge. The actual long-term average discharge value is 0.14 mg/L.														
	A numeric water quality standard for Nitrate-nitrite does not exist for Class C waterbodies. However, a WQS exists of 0.1 mg/L exists for Nitrite (as N) for Class C waterbodies, which is shown in the table above.														
	It is presumed that the detected Nitrate-nitrite reported in the NY-2C application is 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 Nitrate-nitrite in Lake Agawam.														
Total Organic Nitrogen (as N)	mg/L	Daily Max	-	0.23 Actual Max	10/0	-	-	-	-	-	-	-	-	-	No Limitation
	Total Organic Nitrogen (as N) was detected as reported in the NY-2C application. The existing effluent quality shows Total Organic Nitrogen (as N) concentration as the maximum daily discharge. The actual long-term average discharge value is 0.16 mg/L.														
	A numeric water quality standard for Total Organic Nitrogen (as N) does not exist for Class C waterbodies. Therefore, no limitation or monitoring is specified.														
Sulfate (as SO <sub>4</sub> )	mg/L	Daily Max	-	38.4	1/0	-	-	-	-	-	-	-	-	-	No Limitation
	Sulfate (as SO <sub>4</sub> ) was detected as reported in the NY-2C application. A numeric water quality standard for Sulfate (as SO <sub>4</sub> ) does not exist for Class C waterbodies. Therefore, no limitation or monitoring is specified.														
Total Aluminum	mg/L	Daily Max	-	0.2 Actual Max	16/0	2.0	TOGS 1.2.1	-	-	-	-	-	-	-	TBEL
	Total Aluminum was detected as reported in the NY-2C application.														
	Per TOGS 1.3.1E, given that the ambient pH is greater than 6.5 SU, a TBEL for Total Aluminum is applicable.														
	Additionally, aluminum chlorohydrate solution (3204H) is used as a coagulant to remove algae in the influent water to the algae harvester. The aluminum hydroxide floc produced by the WTC destabilizes the charge of the algae cells, as it does with colloids, causing them to aggregate into larger particles that can be flocculated and floated by dissolved air. As such, a permit limit for Total Aluminum is included.														
Total Barium	mg/L	Daily Max	-	0.04	1/0	4	TOGS 1.2.1	-	-	-	-	-	-	-	No Limitation
	Total Barium was detected as reported in the NY-2C application. A numeric water quality standard for Total Barium does not exist for Class C waterbodies. Additionally, no effluent limitation equal to the TBEL is being required at this time.														

<sup>9</sup> Ambient Nitrogen, Nitrite was calculated from DOW monitoring location 1701AGA0815 using the average of 3 samples.

Permittee: Village of Southampton  
 Facility: Lake Agawam Algae Harvesters  
 SPDES Number: NY0313173  
 USEPA Non-Major/Class 01 Industrial

Date: January 2, 2025 v.1.27  
 Permit Writer: Gwendolyn Temple  
 Water Quality Reviewer: Gwendolyn Temple  
 Full Technical Review

Outfall #	001	Description of Wastewater: Process wastewater													
		Type of Treatment: Coagulation, Flocculation													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality <sup>5</sup>	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis		
Total Boron	mg/L	Daily Max	-	0.1	1/0	-	-	-	0.62	10	A(C)	No Reasonable Potential	-	-	No Limitation
	Total Boron was detected as reported in the NY-2C application.														
	The projected instream concentration was calculated using the maximum reported effluent concentration of 0.1 mg/L, a multiplier of 6.20, the chronic dilution ratio, and an assumed negligible upstream ambient concentration. The multiplier was selected from EPA's Technical Support Document Chapter 3.3 to account for the number of samples. A metals translator of 1.0 was also applied to convert between the total and dissolved form in accordance with the EPA Document 823-B-96-007. A comparison of the projected instream concentration to the WQS indicates no reasonable potential to cause or contribute to a WQS violation. Therefore, no WQBEL is specified.														
Total Iron	mg/L	Daily Max	-	0.11 Actual Max	20/0	4	TOGS 1.2.1	0.7565 <sup>10</sup>	0.154	3	A(C)	No Reasonable Potential	-	-	No Limitation
	Total Iron was detected as reported in the NY-2C application. The existing effluent quality shows Total Iron concentration as the maximum daily discharge. The actual long-term average discharge value is 0.08 mg/L.														
	The projected instream concentration was calculated using the maximum reported effluent concentration of 0.11 mg/L, a multiplier of 6.20, the chronic dilution ratio, and an upstream ambient concentration*. The multiplier was selected from EPA's Technical Support Document Chapter 3.3 to account for the number of samples. A metals translator of 1.0 was also applied to convert between the total and dissolved form in accordance with the EPA Document 823-B-96-007. A comparison of the projected instream concentration to the WQS indicates no reasonable potential to cause or contribute to a WQS violation. Therefore, no effluent limitation equal to the WQBEL or TBEL is specified.														
Total Magnesium	mg/L	Daily Max	-	14.7	1/0	-	-	-	-	-	-	-	-	-	No Limitation
	Total Magnesium was detected as reported in the NY-2C application. A numeric water quality standard for Total Magnesium does not exist for Class C waterbodies. Therefore, no limitation or monitoring is specified.														
Total Manganese	mg/L	Daily Max	-	0.33	1/0	2	TOGS 1.2.1	-	-	-	-	-	-	-	No Limitation
	Total Manganese was detected as reported in the NY-2C application. A numeric water quality standard for Total Manganese does not exist for Class C waterbodies. Additionally, no effluent limitation equal to the TBEL is being required at this time.														
Total Titanium	mg/L	Daily Max	-	0.0026	1/0	-	-	-	-	-	-	-	-	-	No Limitation
	Total Titanium was detected as reported in the NY-2C application. A numeric water quality standard for Total Titanium does not exist for Class C waterbodies. Therefore, no limitation or monitoring is specified.														

<sup>10</sup> Ambient Total Iron was calculated from DOW monitoring location 1701AGA0815 using the average of 6 samples.

## Appendix: Regulatory and Technical Basis of Permit Authorizations

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

### Regulatory References

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

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

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

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

### Outfall and Receiving Water Information

#### Impaired Waters

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



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

### 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 95<sup>th</sup> (monthly average) and 99<sup>th</sup> (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<sup>11</sup> and USEPA interpretation<sup>12</sup> 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.

<sup>11</sup> American Iron and Steel Institute v. Environmental Protection Agency, 115 F.3d 979, 993 n.6 (D.C. Cir. 1997)

<sup>12</sup> 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 Department determines the technology-based effluent limitations (TBELs) and then evaluates the water quality expected to result from technology controls to determine if any exceedances of water quality criteria in the receiving water might result. If there is a reasonable potential for exceedances of water quality criteria to occur, water quality-based effluent limitations (WQBELs) are developed. A WQBEL is designed to ensure that the water quality standards of receiving waters are met. In general, the CWA requires that the effluent limitations for a particular pollutant are the more stringent of either the TBEL or WQBEL.

### *Technology-based Effluent Limitations (TBELs) for Industrial Facilities*

A TBEL requires a minimum level of treatment for industrial point sources based on currently available treatment technologies 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.

### *Water Quality-Based Effluent Limitations (WQBELs)*

In addition to the TBELs, permits must include additional or more stringent effluent limitations and conditions, including those necessary to protect water quality. CWA sections 101 and 301(b)(1)(C), 40 CFR 122.44(d)(1), and 6 NYCRR Parts 750-1.11 require that permits include limitations for all pollutants or parameters which are or may be discharged at a level which may cause or contribute to an exceedance of any State water quality standard adopted pursuant to NYS ECL 17-0301. Additionally, 6 NYCRR Part 701.1 prohibits the discharge of pollutants that will cause impairment of the best usages of the receiving water as specified by the water classifications at the location of discharge and at other locations that may be affected by such discharge. Water quality standards can be found under 6 NYCRR Parts 700-704. The limitations must be stringent enough to ensure that water quality standards are met at the point of

discharge and in downstream waters and must be consistent with any applicable WLA which may be in effect through a TMDL for the receiving water. These and other requirements are summarized in TOGS 1.1.1, 1.3.1, 1.3.2, 1.3.5 and 1.3.6. The DEC considers a mixing zone analysis, critical flows, and reasonable potential analysis when developing a WQBEL.

#### Mixing Zone Analyses

In accordance with TOGS 1.3.1., the DEC may perform additional analysis of the mixing condition between the effluent and the receiving waterbody. Mixing zone analyses using plume dispersion modeling are conducted in accordance with the following:

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

#### Critical Flows

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

#### Reasonable Potential Analysis (RPA)

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

- 1) identify the pollutants present in the discharge(s) based upon existing data, sampling data collected by the permittee as part of the permit application or a short-term high intensity monitoring program, or data gathered by the DEC;
- 2) identify water quality criteria applicable to these pollutants;
- 3) determine if WQBELs are necessary (i.e. reasonable potential analysis (RPA)). The RPA will utilize the procedure outlined in Chapter 3.3.2 of EPA’s Technical Support Document (TSD). As outlined in the TSD, for parameters with limited effluent data the RPA may include multipliers to account for effluent variability; and,

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

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

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

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

#### *Whole Effluent Toxicity (WET) Testing:*

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

1. There is the presence of substances in the effluent for which ambient water quality criteria do not exist.
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

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

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

### Schedules of Compliance

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

### Schedule(s) of Additional Submittals

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

### 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.