



Department of  
Environmental  
Conservation

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

|                           |                |                         |                           |                            |                  |
|---------------------------|----------------|-------------------------|---------------------------|----------------------------|------------------|
| SIC Code:                 | <b>4952</b>    | NAICS Code:             | <b>221320</b>             | SPDES Number:              | <b>NY0022586</b> |
| Discharge Class (CL):     | <b>05</b>      | DEC Number:             | <b>3-3336-00007/00002</b> |                            |                  |
| Toxic Class (TX):         | <b>T</b>       | Effective Date (EDP):   | <b>EDP</b>                |                            |                  |
| Major-Sub Drainage Basin: | <b>13 - 01</b> | Expiration Date (ExDP): | <b>ExDP</b>               |                            |                  |
| Water Index Number:       | <b>H</b>       | Item No.:               | <b>858 - 001</b>          | Modification Dates (EDPM): |                  |
| Compact Area:             | <b>-</b>       |                         |                           |                            |                  |

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:                      | <b>Village of Highland Falls</b>                                               |  |  | Attention: | <b>Joseph E. D'Onofrio, Mayor</b> |
| Street:                    | <b>303 Main Street</b>                                                         |  |  |            |                                   |
| City:                      | <b>Highland Falls</b>                                                          |  |  | State:     | <b>NY</b> Zip Code: <b>10928</b>  |
| Email:                     | <a href="mailto:MayorJoe@highlandfallsny.org">MayorJoe@highlandfallsny.org</a> |  |  | Phone:     | <b>(845) 446-3400</b>             |

is authorized to discharge from the facility described below:

| FACILITY NAME, ADDRESS, AND PRIMARY OUTFALL |                            |             |                  |                     |               |              |               |               |               |
|---------------------------------------------|----------------------------|-------------|------------------|---------------------|---------------|--------------|---------------|---------------|---------------|
| Name:                                       | <b>Highland Falls WWTP</b> |             |                  |                     |               |              |               |               |               |
| Address / Location:                         | <b>95 Rose Drive</b>       |             |                  |                     |               | County:      | <b>Orange</b> |               |               |
| City:                                       | <b>Highland Falls</b>      |             |                  |                     | State:        | <b>NY</b>    | Zip Code:     | <b>10928</b>  |               |
| Facility Location:                          | Latitude:                  | <b>41</b> ° | <b>20</b> '      | <b>54</b> " N       | & Longitude:  | <b>73</b> °  | <b>58</b> '   | <b>03</b> " W |               |
| Primary Outfall No.:                        | <b>002</b>                 | Latitude:   | <b>41</b> °      | <b>20</b> '         | <b>52</b> " N | & Longitude: | <b>73</b> °   | <b>58</b> '   | <b>04</b> " W |
| Outfall Description:                        | <b>Treated Sanitary</b>    |             | Receiving Water: | <b>Hudson River</b> |               |              | Class:        | <b>B</b>      |               |

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

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

### DISTRIBUTION:

CO BWP - Permit Coordinator  
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EPA Region II  
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|                       |                                    |       |     |
|-----------------------|------------------------------------|-------|-----|
| Permit Administrator: |                                    |       |     |
| Address:              | 625 Broadway Albany, NY 12233-1750 |       |     |
| Signature:            |                                    | Date: | / / |

## Contents

|                                                                  |                                     |
|------------------------------------------------------------------|-------------------------------------|
| DEFINITIONS FOR PERMIT LIMITS, LEVELS AND MONITORING TERMS.....  | 3                                   |
| PERMIT LIMITS, LEVELS AND MONITORING.....                        | 4                                   |
| MERCURY MINIMIZATION PROGRAM (MMP) - Type I .....                | 6                                   |
| DISCHARGE NOTIFICATION REQUIREMENTS.....                         | 10                                  |
| SCHEDULE OF COMPLIANCE.....                                      | 11                                  |
| MONITORING LOCATIONS.....                                        | 13                                  |
| MONITORING LOCATIONS (cont'd).....                               | <b>Error! Bookmark not defined.</b> |
| GENERAL REQUIREMENTS.....                                        | 14                                  |
| RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS..... | 16                                  |
| E. Schedule of Additional Submittals:.....                       | 16                                  |

## DEFINITIONS FOR PERMIT LIMITS, LEVELS AND MONITORING TERMS

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

## PERMIT LIMITS, LEVELS AND MONITORING

| OUTFALL    | LIMITATIONS APPLY                 | RECEIVING WATER | EFFECTIVE  | EXPIRING    |
|------------|-----------------------------------|-----------------|------------|-------------|
| <b>002</b> | All Year (unless otherwise noted) | Hudson River    | <b>EDP</b> | <b>ExDP</b> |

| PARAMETER                                     | EFFLUENT LIMITATION   |         |            |              |       | MONITORING REQUIREMENTS |                |          |      | FN  |
|-----------------------------------------------|-----------------------|---------|------------|--------------|-------|-------------------------|----------------|----------|------|-----|
|                                               | Type                  | Limit   | Units      | Limit        | Units | Sample Frequency        | Sample Type    | Location |      |     |
|                                               |                       |         |            |              |       |                         |                | Inf.     | Eff. |     |
| Flow Rate                                     | Monthly Average       | 1.35    | MGD        |              |       | Continuous              | Recorder       |          | X    |     |
| Flow Rate                                     | Daily Maximum         | Monitor | MGD        |              |       | Continuous              | Recorder       |          | X    |     |
| pH                                            | Range                 | 6.0-9.0 | SU         |              |       | 2/day                   | Grab           | X        | X    |     |
| Temperature                                   | Daily Maximum         | Monitor | °F         |              |       | 2/day                   | Grab           |          | X    |     |
| BOD <sub>5</sub>                              | Monthly Average       | 30      | mg/L       | 340          | lbs/d | 1/week                  | 24-hr. Comp.   | X        | X    | 1   |
| BOD <sub>5</sub>                              | 7-Day Average         | 45      | mg/L       | 510          | lbs/d | 1/week                  | 24-hr. Comp.   |          | X    |     |
| Total Suspended Solids (TSS)                  | Monthly Average       | 30      | mg/L       | 340          | lbs/d | 1/week                  | 24-hr. Comp.   | X        | X    | 1   |
| Total Suspended Solids (TSS)                  | 7-Day Average         | 45      | mg/L       | 510          | lbs/d | 1/week                  | 24-hr. Comp.   |          | X    |     |
| Settleable Solids                             | Daily Maximum         | 0.3     | mL/L       |              |       | 2/day                   | Grab           |          | X    |     |
| Ammonia (as N)<br>June 1 – October 31         | Monthly Average       | 8.7     | mg/L       | Monitor      | lbs/d | 1/week                  | 24-hr. Comp.   |          | X    | 3   |
| Ammonia (as N)<br>November 1 – May 31         | Monthly Average       | 14      | mg/L       | Monitor      | lbs/d | 1/week                  | 24-hr. Comp.   |          | X    | 3   |
| Mercury, Total                                | Daily Maximum         | 50      | ng/L       |              |       | 1/quarter               | Grab           |          | X    |     |
| Biennial Pollutant Scan                       | Daily Maximum         |         |            |              |       | 1/Two Years             | 24-hr. Comp.   |          | X    | 2   |
| EFFLUENT DISINFECTION                         |                       |         |            |              |       |                         |                |          |      |     |
| Required Seasonal from May 1st - October 31st |                       | Limit   | Units      | Limit        | Units | Sample Frequency        | Sample Type    | Inf.     | Eff. | FN  |
| Coliform, Fecal                               | 30-Day Geometric Mean | 200     | CFU/100 mL |              |       | 1/week                  | Grab           |          | X    |     |
| Coliform, Fecal                               | 7-Day Geometric Mean  | 400     | CFU/100 mL |              |       | 1/week                  | Grab           |          | X    |     |
| Chlorine, Total Residual                      | Daily Maximum         | 0.038   | mg/L       |              |       | 2/day                   | Grab           |          | X    | 3   |
| WHOLE EFFLUENT TOXICITY (WET) TESTING         |                       | Limit   | Units      | Action Level | Units | Sample Frequency        | Sample Type    | Inf.     | Eff. | FN  |
| WET - Acute Invertebrate                      | See footnote 6        |         |            | 1.8          | TUa   | 1/quarter               | See footnote 6 |          | X    | 4,5 |
| WET - Acute Vertebrate                        | See footnote 6        |         |            | 1.8          | TUa   | 1/quarter               | See footnote 6 |          | X    | 4,5 |
| WET - Chronic Invertebrate                    | See footnote 6        |         |            | 7.5          | TUc   | 1/quarter               | See footnote 6 |          | X    | 4,5 |
| WET - Chronic Vertebrate                      | See footnote 6        |         |            | 7.5          | TUc   | 1/quarter               | See footnote 6 |          | X    | 4,5 |

### FOOTNOTES:

1. Effluent shall not exceed 15% and 15% of influent concentration values for BOD<sub>5</sub> & TSS respectively.
2. Biennial Pollutant Scan: The permittee shall perform effluent sampling every two (2) years for all applicable pollutants identified in the NY-2A Application, Tables A - D. Sampling data shall be collected according to the guidance in the NY-2A application and maintained by the permittee. Monitoring results shall not be submitted on the DMR. Data shall be submitted with the next submission of the NY-2A form.
3. This is a final effluent limitation. See Schedule of Compliance for any applicable interim effluent limitations.
4. Quarterly samples shall be reported as calendar quarters (Q1 – January 1<sup>st</sup> to March 31<sup>st</sup>; Q2 – April 1<sup>st</sup> to June 30<sup>th</sup>; Q3 – July 1<sup>st</sup> to September 30<sup>th</sup>; Q4 – October 1<sup>st</sup> to December 31<sup>st</sup>).
5. **Whole Effluent Toxicity (WET) Testing:**

Testing Requirements – Chronic WET testing is required, but report both the acute and chronic results. Testing shall be performed in accordance with 40 CFR Part 136 and TOGS 1.3.2 unless prior written approval has been obtained from the Department. The test species shall be Ceriodaphnia dubia (water flea - invertebrate) and Pimephales promelas (fathead minnow - vertebrate). Receiving water collected upstream from the discharge should be used for dilution. All tests conducted should be static-renewal (two 24-hr composite samples with one renewal for Acute tests and three 24-hr composite samples with two renewals for Chronic tests). The appropriate dilution series should be used to generate a definitive test endpoint, otherwise an immediate rerun of the test may be required. WET testing shall be coordinated with the monitoring of chemical and physical parameters limited by this permit so that the resulting analyses are also representative of the sample used for WET testing. The ratio of critical receiving water flow to discharge flow (i.e. dilution ratio) is 5.9:1 for acute, and 7.5:1 for chronic. Discharges which are disinfected using chlorine should be dechlorinated prior to WET testing or samples shall be taken immediately prior to the chlorination system.

Monitoring Period - WET testing shall be performed quarterly (calendar quarters) during calendar years ending in **1** and **6**.

Reporting - Toxicity Units shall be calculated and reported on the DMR as follows:  $TU_a = (100)/(48\text{-hr LC50})$  [note that Acute data is generated by both Acute and Chronic testing] and  $TU_c = (100)/(7\text{-day NOEC})$  or  $(100)/(7\text{-day IC25})$  when Chronic testing has been performed or  $TU_c = (TU_a) \times (10)$  when only Acute testing has been performed and is used to predict Chronic test results, where the 48-hr LC50, 7-day NOEC and/or IC25 are all expressed in % effluent. This must be done, including the Chronic prediction from the Acute data, for both species unless otherwise directed. For Chronic results, report the most sensitive endpoint (i.e. survival, growth and/or reproduction) corresponding to the lowest 7-day NOEC or IC25 and resulting highest  $TU_c$ . For Acute results, report a  $TU_a$  of 0.3 if there is no statistically significant mortality in 100% effluent as compared to the control. Report a  $TU_a$  of 1.0 if there is statistically significant mortality in 100% effluent as compared to the control, but insufficient mortality to generate a 48-hr LC50. Also, in the absence of a 48-hr LC50, use 1.0  $TU_a$  for the Chronic prediction from the Acute data, and report a  $TU_c$  of 10.0.

The complete test report including all bench sheets, statistical analyses, reference toxicity data, daily average flow at the time of sampling and other appropriate supporting documentation, shall be submitted within 60 days following the end of each test period with your WET DMR and to the [WET@dec.ny.gov](mailto:WET@dec.ny.gov) email address. A summary page of the test results for the invertebrate and vertebrate species indicating  $TU_a$ , 48-hr LC50 for Acute tests and/or  $TU_c$ , NOEC, IC25, and most sensitive endpoints for Chronic tests, should also be included at the beginning of the test report.

WET Testing Action Level Exceedances - If an action level is exceeded then the Department may require the permittee to conduct additional WET testing including Acute and/or Chronic tests. Additionally, the permittee may be required to perform a Toxicity Identification/Reduction Evaluation (TI/RE) in accordance with Department guidance. Enforceable WET limits may also apply. The permittee shall be notified in writing by their Regional DEC office of additional requirements. The written notification shall include the reason(s) why such testing, TI/RE and/or limits are required.

## STORMWATER POLLUTION PREVENTION REQUIREMENTS

### NO EXPOSURE CERTIFICATION

The permittee submitted a Conditional Exclusion for No Exposure Form on **07/30/2020**, certifying that all industrial activities and materials are completely sheltered from exposure to rain, snow, snowmelt, and/or stormwater runoff. 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 NYSDEC website.

DRAFT

## MERCURY MINIMIZATION PROGRAM (MMP) - Type I

1. General - The permittee must develop, implement, and maintain a mercury minimization program (MMP), containing the elements set forth below, to reduce mercury effluent levels with the goal of achieving the WQBEL of 0.7 ng/L.
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 as described in detail below:
  - a. Monitoring - Monitoring at outfall, influent and other locations tributary to compliance points may be performed using either USEPA Method 1631 or another sufficiently sensitive method, as approved under 40 CFR Part 136<sup>1</sup>. Monitoring of raw materials, equipment, treatment residuals, and other non-wastewater/non-stormwater substances may be performed using other methods as appropriate. Monitoring must be coordinated so that the results can be effectively compared between locations.

Minimum required monitoring is as follows:

- i. Sewage Treatment Plant Influent and/or Effluent – The permittee must collect samples at the location(s) and frequency as specified in the SPDES permit limitations table.
- ii. Key Locations and Potential Mercury Sources – The permittee must sample *key locations*, chosen to identify *potential mercury sources*, at least semi-annually. Sampling of discharges from dental facilities in compliance with 6 NYCRR 374.4 is not required.
- iii. Hauled Wastes – The permittee must establish procedures for the acceptance of hauled waste to ensure the hauled waste is not a potential mercury source. Loads which may exceed 500 ng/L,<sup>2</sup> must receive approval from the Department prior to acceptance.
- iv. Decreased Monitoring Requirements - Facilities with EEQ at or below 12 ng/L are eligible for the following:
  - 1) Reduced requirements, through a permittee-initiated permit modification
    - a) Conduct influent monitoring, sampling quarterly, in lieu of monitoring within the collection system, such as at *key locations*; and
    - b) Conduct effluent compliance sampling quarterly.
  - 2) If a facility with reduced requirements reports discharges above 12 ng/L for two of four consecutive effluent samples, the Department may undertake a Department-initiated modification to remove the allowance of reduced requirements.
  - 3) Under the decreased permit requirements, the facility must continue to conduct a status report, as applicable in accordance with 2.c of this MMP, to determine if any waste streams have changed.
- v. Additional monitoring must be completed as required elsewhere in this permit (e.g., locations tributary to compliance points).

<sup>1</sup> Outfall monitoring must be conducted using the methods specified in Table 8 of *DOW 1.3.10*.

<sup>2</sup>A level of 0.2 mg/L (200,000 ng/L) or more is considered hazardous per 40 CFR Part 261.11. 500 ng/L is used here to alert the permittee that there is an unusual concentration of mercury and that it will need to be managed appropriately.



## MERCURY MINIMIZATION PROGRAM (MMP) - Type I (Continued)

- b. Control Strategy - The control strategy must contain the following minimum elements:
- i. Pretreatment/Sewer Use Law - The permittee must review pretreatment program requirements and the Sewer Use Law (SUL) to ensure it is up-to-date and enforceable with applicable permit requirements and will support efforts to achieve a dissolved mercury concentration of 0.70 ng/L in the effluent.
  - ii. Monitoring and Inventory/Inspections -
    - 1) Monitoring shall be performed as described in 2.a above. As mercury sources are found, the permittee must enforce its sewer use law to track down and minimize these sources.
    - 2) The permittee must inventory and/or inspect users of its system as necessary to support the MMP.
      - a) Dental Facilities
        1. The permittee must maintain an inventory of each dental facility.
        2. The permittee must inspect each dental facility at least once every five years to verify compliance with the wastewater treatment operation, maintenance, and notification elements of 6 NYCRR 374.4. Alternatively, the permittee may develop and implement an outreach program,<sup>3</sup> which informs users of their responsibilities, and collect the "Amalgam Waste Compliance Report for Dental Dischargers"<sup>4</sup> form, as needed, to satisfy the inspection requirements. The permittee must conduct the outreach program at least once every five years and ensure the "Amalgam Waste Compliance Report for Dental Dischargers" are submitted by new users, as necessary. The outreach program could be supported by a subset of site inspections.
        3. A file shall be maintained containing documentation demonstrating compliance with 2.b.ii.2)a) above. This file shall be available for review by the Department representatives and copies shall be provided upon request.
      - b) Other *potential mercury sources*
        1. The permittee must maintain an inventory of other *potential mercury sources*.
        2. The permittee must inspect other *potential mercury sources* once every five years. Alternatively, the permittee may develop and implement an outreach program which informs users of their responsibilities as *potential mercury sources*. The permittee must conduct the outreach program at least once every five years. The outreach program should be supported by a subset of site inspections.
        3. A file shall be maintained containing documentation demonstrating compliance with 2.b.ii.2)b) above. This file shall be available for review by the Department representatives and copies shall be provided upon request.
  - iii. Systems with CSO & Type II SSO Outfalls – Permittees must prioritize *potential mercury sources* upstream of CSOs and Type II SSOs for mercury reduction activities and/or controlled-release discharge.
  - iv. 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.

<sup>3</sup> For example, the outreach program could include education about sources of mercury and what to do if a mercury source is found.

<sup>4</sup> The form, "Amalgam Waste Compliance Report for Dental Dischargers," can be found here:  
[https://www.dec.ny.gov/docs/water\\_pdf/dentalform.pdf](https://www.dec.ny.gov/docs/water_pdf/dentalform.pdf)



- v. **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.
- c. **Status Report - An annual** status report must be completed and maintained on site summarizing:
  - i. All MMP monitoring results for the previous reporting period;
  - ii. A list of known and *potential mercury sources*
    - 1) If the permittee meets the criteria for MMP Type IV, the permittee must notify the Department for a permittee-initiated modification;
  - iii. All actions undertaken, pursuant to the control strategy, during the previous reporting period;
  - iv. Actions planned, pursuant to the control strategy, for the upcoming reporting period; and
  - v. Progress towards achieving a dissolved mercury concentration of 0.70 ng/L in the effluent (e.g., summarizing reductions in effluent concentrations as a result of the control strategy implementation and/or installation/modification of a treatment system).

The permittee must maintain a file with all MMP documentation. The file must be available for review by Department 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:
  - a. Changes at the facility, or within the collection system, increase the potential for mercury discharges;
  - b. Effluent discharges exceed the current permit limitation(s); or
  - c. A letter from the Department identifies inadequacies in the MMP.

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

#### DEFINITIONS:

**Key location** – a location within the collection/wastewater system (e.g. including but not limited to a specific manhole/access point, tributary sewer/wastewater connection, or user discharge point) identified by the permittee as a potential mercury source. The permittee may adjust key locations based upon sampling and/or best professional judgement.

**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

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

- (a) 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.
- (b) 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.
- (c) 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: (    ) - ### - #####

- (d) 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.
- (e) 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Due Date                                                    |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| 002        | <b><u>SCHEDULE OF COMPLIANCE STATUS REPORTS</u></b><br>Submit interim status reports on the progress related to meeting the specified final limits. This is a requirement of 6 NYCRR Part 750-1.14(b).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | EDP + 9 months,<br>and every 9<br>months thereafter         |
| 002        | <b><u>PRELIMINARY ENGINEERING REPORT</u></b><br>The permittee shall submit an approvable <sup>5</sup> preliminary engineering report that meets the requirements of the most recent version of the EFC/DEC Engineering Report Outline ( <a href="https://www.dec.ny.gov/permits/6054.html">https://www.dec.ny.gov/permits/6054.html</a> ). The report shall be prepared by a Professional Engineer licensed to practice engineering in New York State and detail the designs that will be used to comply with the final effluent limitations for total residual chlorine and ammonia. Approvable is defined as that which can be approved by the Department with only minimal revision. Minimal revision shall mean revised and resubmitted to the Department within sixty (60) days of notification by the Department of the revisions that are necessary. All approvable engineering submissions must include the seal and signature of the professional engineer. | EDP + 12 Months                                             |
|            | <b><u>DESIGN SUBMITTAL</u></b><br>If physical plant upgrades are required, the permittee shall submit an approvable Basis of Design Report, Engineering Plans, Specifications, and Construction Schedule for the implementation of more stringent limits for total residual chlorine and ammonia. Department approval is subject to SEQRA and other permits, as needed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | EDP + 24 Months                                             |
|            | <b><u>BEGIN CONSTRUCTION</u></b><br>The permittee shall begin construction of the treatment facilities in accordance with the Department approved schedule.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | In Accordance<br>with Approved<br>Basis of Design<br>Report |
|            | <b><u>COMPLETE CONSTRUCTION &amp; COMMENCE OPERATION</u></b><br>The permittee shall complete construction and commence operation of the system and comply with the final effluent limitations for ammonia and total residual chlorine.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | In Accordance<br>with Approved<br>Basis of Design<br>Report |

The above compliance actions are one-time requirements. The permittee shall comply with the above compliance actions to the Department's satisfaction once. When this permit is administratively renewed by NYSDEC letter entitled "SPDES NOTICE/RENEWAL APPLICATION/PERMIT," the permittee is not required to repeat the submission(s) noted above. The above due dates are independent from the effective date of the permit stated in the "SPDES NOTICE/RENEWAL APPLICATION/PERMIT" letter.

### INTERIM EFFLUENT LIMITS FOR PARAMETERS SUBJECT TO THIS SCHEDULE OF COMPLIANCE

| Outfall | Parameter(s) Affected    | Interim Effluent Limit |         |       | Limits Apply | Notes | Interim Limits Expire                                        |
|---------|--------------------------|------------------------|---------|-------|--------------|-------|--------------------------------------------------------------|
|         |                          | Type                   | Limit   | Units |              |       |                                                              |
| 002     | Chlorine, Total Residual | Daily Max              | 2.0     | mg/L  | May 1-Oct 31 | N/A   | Upon completion of<br>treatment plant upgrades<br>+ 3 months |
| 002     | Ammonia (as N)           | Monthly Avg            | Monitor | mg/L  | All Year     | N/A   | Upon completion of<br>treatment plant upgrades<br>+ 3 months |

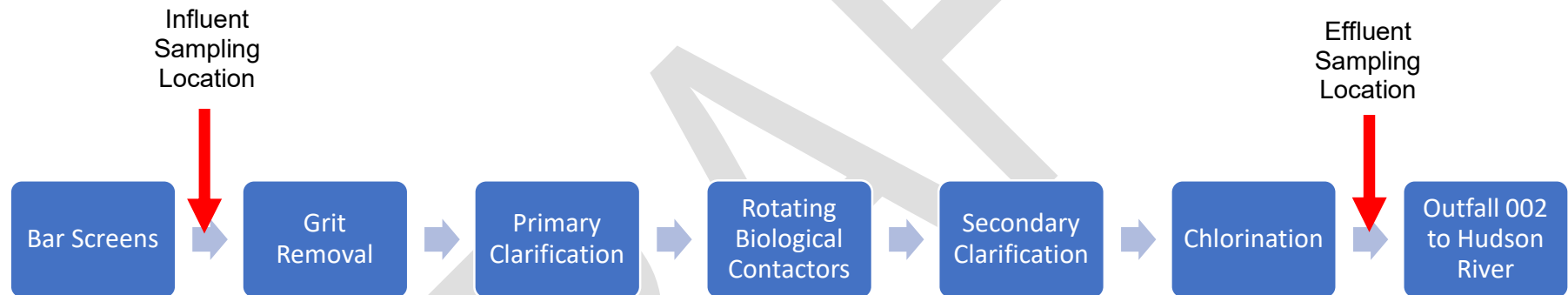
<sup>5</sup> 6 NYCRR 750-1.2(a)(8)

|               |  |
|---------------|--|
| <b>Notes:</b> |  |
|---------------|--|

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

## MONITORING LOCATIONS

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



## 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 I 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                     | 6 NYCRR 750-2.5, 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)          |
| 9. Additional conditions applicable to a POTW | 6 NYCRR 750-2.9             |
- F. Planned Changes
1. The permittee shall give notice to the Department as soon as possible of planned physical alterations or additions to the permitted facility when:
    - a. The alteration or addition to the permitted facility may meet any of the criteria for determining whether facility is a new source in 40 CFR §122.29(b); or
    - b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject either to effluent limitations in the permit, or to notification requirements under 40 CFR §122.42(a)(1); or
    - c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

In addition to the Department, the permittee shall submit a copy of this notice to the United States Environmental Protection Agency at the following address: U.S. EPA Region 2, Clean Water Regulatory Branch, 290 Broadway, 24th Floor, New York, NY 10007-1866.

## GENERAL REQUIREMENTS (continued)

### 2. Notification Requirement for POTWs

All POTWs shall provide adequate notice to the Department and the USEPA of the following:

- a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging those pollutants; or
- b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
- c. For the purposes of this paragraph, adequate notice shall include information on:
  - i. the quality and quantity of effluent introduced into the POTW, and
  - ii. any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

POTWs shall submit a copy of this notice to the United States Environmental Protection Agency, at the following address:

U.S. EPA Region 2, Clean Water Regulatory Branch, 290 Broadway, 24th Floor, New York, NY 10007-1866

### G. Sludge Management

The permittee shall comply with all applicable requirements of 6 NYCRR Part 360.

### H. SPDES Permit Program Fee

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

### I. Water Treatment Chemicals (WTCs)

New or increased use and discharge of a WTC requires prior Department review and authorization. At a minimum, the permittee must notify the Department in writing of its intent to change WTC use by submitting a completed *WTC Notification Form* for each proposed WTC. The Department will review that submittal and determine if a SPDES permit modification is necessary or whether WTC review and authorization may proceed outside of the formal permit administrative process. The majority of WTC authorizations do not require SPDES permit modification. In any event, use and discharge of a WTC shall not proceed without prior authorization from the Department. Examples of WTCs include biocides, coagulants, conditioners, corrosion inhibitors, defoamers, deposit control agents, flocculants, scale inhibitors, sequestrants, and settling aids.

1. WTC use shall not exceed the rate explicitly authorized by this permit or otherwise authorized in writing by the Department.
2. The permittee shall maintain a logbook of all WTC use, noting for each WTC the date, time, exact location, and amount of each dosage, and, the name of the individual applying or measuring the chemical. The logbook must also document that adequate process controls are in place to ensure that excessive levels of WTCs are not used.
3. The permittee shall submit a completed WTC Annual Report Form each year that they use and discharge WTCs. This form shall be submitted in electronic format and attached to either the December DMR or the annual monitoring report required below. The *WTC Notification Form* and *WTC Annual Report Form* are available from the Department's website at: <http://www.dec.ny.gov/permits/93245.html>



## RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS

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

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

Attach the monthly "Wastewater Facility Operation Report" (form 92-15-7) and any required DMR attachments electronically to the DMR or with the hardcopy submittal.

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 electronically to the RWE and Bureau of Water Permits at the following email addresses:

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

Email: [SPDESApp@dec.ny.gov](mailto:SPDESApp@dec.ny.gov)

Phone: (518) 402-8111

Department of Environmental Conservation  
Regional Water Engineer, Region 3  
220 White Plains Rd Suite 110, Tarrytown, NY 10591

Email: [DOW.r3@dec.ny.gov](mailto:DOW.r3@dec.ny.gov)

Phone: (914) 803-8157

- D. Bypass and Sewage Pollutant Right to Know Reporting: In accordance with the Sewage Pollutant Right to Know Act (ECL § 17-0826-a), Publicly Owned Treatment Works (POTWs) are required to notify DEC and Department of Health within two hours of discovery of an untreated or partially treated sewage discharge and to notify the public and adjoining municipalities within four hours of discovery. Information regarding reporting and other requirements of this program may be found on the Department's website. In addition, POTWs are required to provide a five-day incident report and supplemental information to the DEC in accordance with Part 750-2.7(d) by utilizing the Division of Water Report of Noncompliance Event form unless waived by DEC on a case-by-case basis.

- E. 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:

| SCHEDULE OF ADDITIONAL SUBMITTALS |                                                                                                                                                                                                                              |                                |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Outfall(s)                        | Required Action                                                                                                                                                                                                              | Due Date                       |
| 002                               | <u>WATER TREATMENT CHEMICAL (WTC) ANNUAL REPORT FORM</u><br>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. | Every January 28 <sup>th</sup> |

| SCHEDULE OF ADDITIONAL SUBMITTALS |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                   |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Outfall(s)                        | Required Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Due Date                                                          |
| 002                               | <u>BIENNIAL POLLUTANT SCAN</u><br>The permittee shall implement an ongoing monitoring program and perform effluent sampling every two years as specified in Footnote 2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Retain and submit with next NY-2A Application                     |
| 002                               | <u>WHOLE EFFLUENT TOXICITY (WET) TESTING</u><br>WET testing shall be performed in years ending in <b>1</b> and <b>6</b> . Chronic testing is specified but reporting of both the acute and chronic results is required. The toxicity test report including all information requested of this permit shall be attached to your WET DMRs and sent to the <a href="mailto:WET@dec.ny.gov">WET@dec.ny.gov</a> email address.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Within 60 days following the end of each monitoring period        |
| 002                               | <u>EMERGING CONTAMINANT SHORT-TERM MONITORING PROGRAM</u><br>The permittee shall collect grab samples of both the influent and effluent from the facility's treatment system(s) associated with the identified outfall for Per- and Polyfluoroalkyl Substances (PFAS) and 1,4-Dioxane (1,4-D), unless permittee receives written notification from the DEC during this time that sampling can be discontinued. Samples must be analyzed utilizing EPA draft analytical method 1633 and EPA Method 8270D SIM or 8270E SIM, respectively. The samples must represent normal discharge conditions and treatment operations and shall be obtained on a quarterly basis for at least 4 consecutive quarters, unless written notification from the DEC indicates otherwise. The results shall be reported through the "Emerging Contaminants Survey for POTWs" found at: <a href="https://dec.ny.gov/environmental-protection/water/emerging-contaminants">https://dec.ny.gov/environmental-protection/water/emerging-contaminants</a> .<br><br>The permittee shall initiate track down of potential sources by completing the "Emerging Contaminants Investigation Checklist for POTWs" available at the above link.<br>The DEC may periodically request updates or additional monitoring to check progress on track down investigations. Elements of the checklist may be used as permit conditions in future permit modifications. | EDP + 18 months<br><br>Within 90 days of DEC written notification |
|                                   | <u>STORMWATER NO EXPOSURE CERTIFICATION</u><br>Permittee must recertify every five (5) years a condition of no exposure to stormwater to continue to qualify for the no exposure exclusion. The No Exposure Certification Form can be found on the NYSDEC website.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 7/30/2025, and every 5 years thereafter                           |
|                                   | <u>MERCURY MINIMIZATION PLAN</u><br>The permittee must complete and maintain onsite an annual mercury minimization status report in accordance with the requirements of this permit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Maintained Onsite<br>EDP + 6 months, annually thereafter          |

Unless noted otherwise, the above actions are one-time requirements. The permittee shall submit the results of the above actions to the satisfaction of the Department. When this permit is administratively renewed by NYSDEC letter entitled "SPDES NOTICE/RENEWAL APPLICATION/PERMIT", the permittee is not required to repeat the above submittal(s), unless noted otherwise. The above due dates are independent from the effective date of the permit stated in the letter of "SPDES NOTICE/RENEWAL APPLICATION/PERMIT."

- F. 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.

- G. 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.
- H. Calculations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.
- I. 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.
- J. 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 Highland Falls Highland Falls WWTP NY0022586**

DRAFT



Department of  
Environmental  
Conservation

## Contents

|                                                                        |    |
|------------------------------------------------------------------------|----|
| Summary of Permit Changes .....                                        | 3  |
| Administrative History .....                                           | 3  |
| Facility Information.....                                              | 4  |
| Site Overview .....                                                    | 5  |
| Enforcement History.....                                               | 6  |
| Existing Effluent Quality.....                                         | 6  |
| Receiving Water Information .....                                      | 6  |
| Impaired Waterbody Information.....                                    | 7  |
| Critical Receiving Water Data & Mixing Zone .....                      | 7  |
| Permit Requirements .....                                              | 7  |
| Whole Effluent Toxicity (WET) Testing .....                            | 7  |
| Anti-backsliding .....                                                 | 8  |
| Antidegradation .....                                                  | 8  |
| Discharge Notification Act Requirements.....                           | 8  |
| Stormwater Pollution Prevention Requirements.....                      | 8  |
| Mercury .....                                                          | 8  |
| Biennial Pollutant Scan.....                                           | 9  |
| Schedule of Compliance.....                                            | 9  |
| Emerging Contaminant Monitoring .....                                  | 9  |
| Schedule of Additional Submittals .....                                | 10 |
| OUTFALL AND RECEIVING WATER SUMMARY TABLE.....                         | 11 |
| POLLUTANT SUMMARY TABLE.....                                           | 12 |
| Outfall 002.....                                                       | 12 |
| Appendix: Regulatory and Technical Basis of Permit Authorizations..... | 15 |
| Regulatory References.....                                             | 15 |
| Outfall and Receiving Water Information .....                          | 15 |
| Interstate Water Pollution Control Agencies .....                      | 16 |
| Existing Effluent Quality.....                                         | 16 |
| Permit Requirements.....                                               | 16 |

## Summary of Permit Changes

A State Pollutant Discharge Elimination System (SPDES) EBPS permit renewal has been drafted for the Highland Falls WWTP. The updated, added, or removed changes to the permit are summarized below:

- Location of flow monitoring has been revised from influent to effluent.
- Influent sampling of settleable solids no longer required.
- Updated monitoring frequency (more frequent) settleable solids, pH, temperature, chlorine
- Updated permit format, definitions, and general conditions
- New mercury limits and requirements (Minimization Plan)
- New WET action levels of 1.8 TUa and 7.5 TUC and new WET testing requirements
- Decreased limit for total residual chlorine with interim limits
- The disinfection season has been changed to May 1 through October 31
- New limits for ammonia (as N) with interim limits
- Mass-loading limits for BOD<sub>5</sub> and total suspended solids have been revised to two significant figures.
- Added biennial pollutant scan.
- Added Emerging Contaminant Short Term Monitoring (STM).

**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

- 3/1/1987 The last full technical review was performed and the SPDES permit became effective with a new five-year term and expiration date of 3/1/1992. The 1987 permit, along with all subsequent modifications, has formed the basis of this permit.
- The permit was administratively renewed in 1991, 1997, 2002, 2007, 2012 and 2017.
- 9/21/2001 The permit was modified to include new Discharge Notification Act requirements.
- 2/13/2004 The DEC modified the permit to update the General Conditions section to reflect revisions to 6NYCRR Part 750.
- 5/6/2016 Renewal application received, and the current permit was allowed to stay in effect pursuant to SAPA<sup>1</sup>.
- 4/30/2019 DEC issued a Request for Information (RFI) to modify and renew the SPDES permit due to the facility's EBPS score<sup>2</sup>. At the time of the RFI, the facility had an EBPS score of 150.
- 10/7/2020 The permittee submitted a completed NY-2A application and supplemental information as requested in the RFI to the DEC.

---

<sup>1</sup> State Administrative Procedures Act Section 401(2) and 6 NYCRR 621.11(f)

<sup>2</sup> Pursuant to 6 NYCRR 750-1.18 and NYS Environmental Benefit Permit Strategy (EBPS)

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

## Facility Information

This facility is a publicly owned treatment works that receives flow from domestic users, with effluent consisting of treated sanitary wastewater. The collection system consists of separate sewers. The facility does not have any significant industrial users (SIUs).

The current 1.35 MGD treatment plant consists of:

- Preliminary Treatment: bar screens, grit removal
- Primary Treatment: primary clarification
- Secondary Treatment: rotating biological contactors (2 trains of 4 units each)
- Disinfection (seasonal): chlorination

Sludge is digested with two-stage anaerobic digestion, thickened with a gravity thickener, and belt pressed. The invert elevation is 8 feet below sea level.

The primary outfall (Outfall 002) is non-diffused (simple pipe) discharge with a diameter of 14" and terminates approximately 100 feet from the bankside.

The facility is planning the following upgrades/improvements:

- The facility has rebuilt the plant (with a focus on the RBC trains) driven in large part by a fire that occurred on 8/15/2018. Note: treatment processes or capacities have not changed with these upgrade and repairs.

The facility accepts wastewater from the following municipalities:

| Municipality              | POSS # or SPDES # | Collection System |
|---------------------------|-------------------|-------------------|
| Village of Highland Falls | NY0022586         | Separate          |



## Site Overview

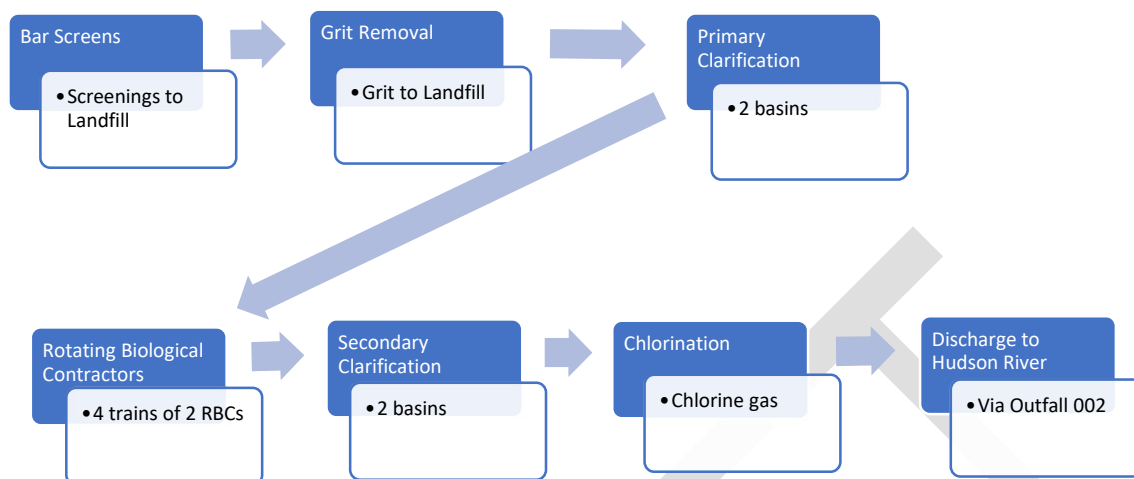
### Aerial Image:



Source: Google Earth, image date 9/19/2019



### Flow Schematic:



### 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 Discharge Monitoring Reports submitted by the permittee for the period 5/31/2016 to 5/31/2021. In addition, data from the village's NY-2A application submission (October 2020) was used to supplement this information. [Appendix Link](#)

### Receiving Water Information

The facility discharges via the following outfalls:

| Outfall No. | SIC Code | Wastewater Type             | Receiving Water                   |
|-------------|----------|-----------------------------|-----------------------------------|
| 002         | 4952     | Treated Sanitary Wastewater | Hudson River (portion 3), Class B |

**Reach Description:** There are no upstream or downstream waterbodies or wastewater treatment plants that were significant enough in flow to incorporate into the modeling for Highland Falls' WWTP.

It is noted that the Hudson River south of the Bear Mountain Bridge is classified as a saline waterbody (Class SB). This is about 2.15 miles downstream of Outfall 002. This downstream classification did not influence the development of this permit renewal.

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

### Impaired Waterbody Information

The Hudson River segment (PWL No. 1301-0003) was first listed on the 1998 [New York State Section 303\(d\) List](#) of Impaired/TMDL Waters as impaired due to polychlorinated bisphenols (PCBs) in sediment. 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

Consistent with TOGS 1.3.1, the outfall information submitted in the application and the mixing zone form was used to develop a mixing zone model to establish dilution ratios for the water quality analysis. The CORMIX model (an EPA-supported mixing modeling software package) showed the mixing is largely effluent (or “near-field”) driven since the ambient forces in the Hudson River often re-entrain the effluent plume due to the tidal cycle.

| Outfall No. | Acute Dilution Ratio A(A) | Chronic Dilution Ratio A(C) | Human, Aesthetic, Wildlife Dilution Ratio (HEW) | Basis  |
|-------------|---------------------------|-----------------------------|-------------------------------------------------|--------|
| 002         | 5.9                       | 7.5                         | 7.5                                             | CORMIX |

A CORMIX 1 (Single Port) model was developed under unsteady conditions due the tidal influence of the Hudson River. Outfall information used for the model was obtained from the permittee during the application process. Ambient information was obtained from a variety of sources including the permittee, U.S. Army Corps of Engineers (river bathymetry), and the National Ocean and Atmospheric Administration (tidal stages). Acute dilution was obtained at the edge of the “near-field range” (NFR) - the area of outfall-induced mixing. The edge of the NFR was applied given the combined uncertainties of modeling in the far-field – the area of river-induced mixing – and accounting for tidal reversal conditions. Additionally, the edge of the NFR yields a more conservative dilution than the recommended spatial distances specified in the document entitled [USEPA Office of Water, Technical Support Document for Water Quality-based Toxics Control \(EPA/5050/2-90-001, March 1991\)](#). The chronic and HEW dilutions were calculated at the point where tidal reversal occurred, as the CORMIX model was limited to this condition.

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

An evaluation of the discharge indicates the potential for toxicity based on the following criteria: [Appendix Link](#)

- Treatment plants which equal or exceed a discharge of 1.0 MGD. (#7)

The requirement for WET testing is new. No previous WET data was available to perform a reasonable potential analysis. Consistent with TOGS 1.3.2, given the dilution available and location outside of the Great Lakes drainage basin, the permit requires chronic WET testing. WET testing action levels of 1.8 TUa and 7.5 TUC have been included in the permit for each species. The acute action level for each species represent the acute dilution ratio times a factor of 0.3. The chronic action levels represent the chronic dilution ratio. Samples will be collected quarterly in years ending in 1 and 6.

### Anti-backsliding

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

### Antidegradation

The permit contains effluent limitations which ensure that the 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>3</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.

This requirement was included in the facility permit through a modification on 09/21/2001.

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

### Stormwater Pollution Prevention Requirements

The facility is a publicly owned treatment works  $\geq 1$  MGD that requires SPDES permit coverage under 40 CFR 122.26 (b)(14)(ix). However, on 10/7/2021, 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). This requirement is being continued over from the previous permit and a renewal requirement is also included in the new permit's Schedule of Submittals.

### Mercury<sup>4</sup>

The multiple discharge variance (MDV) for mercury provides the framework for NYSDEC to require mercury monitoring and mercury minimization programs (MMPs), through SPDES permitting. [Appendix Link](#)

The facility is non-Great Lakes drainage basin, Class 05 discharger, and has two (2) dental facilities in the sewershed and the permit includes new requirements for the implementation of MMP Type I.

Based on one (1) data point of "non-detect" collected as part of the application the facility is expected to meet the new daily max permit limit of 50 ng/L (with monthly sampling frequency). The limit represents the general level currently achievable (GLCA). The data collected will be

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<sup>3</sup> As prescribed by 6 NYCRR Part 617

<sup>4</sup> In accordance with DOW 1.3.10 Mercury – SPDES Permitting & Multiple Discharge Variance (MDV), December 30, 2020.

used to establish an additional 12-month rolling average effluent limit during the next permit review.

A mercury minimization program consisting of the following is also required:

- Additional monitoring
- Control strategy for implementation of the MMP
- Annual status report (maintained onsite)

### Biennial Pollutant Scan

The permit includes a requirement to perform biennial sampling (once every two years) of the WWTP effluent for the parameters in the NY-2A Application, Tables A – D. This sampling will provide the required three effluent samples from applicable parameters for submittal with the next NY-2A Application. This requirement ensures the data is representative of effluent conditions over the permit term and will be available for the next application submittal and permit review. This requirement is new.

### Schedule of Compliance

A Schedule of Compliance is being included<sup>5</sup> for the following items ([Appendix Link](#)):

- Compliance period for attainment of final effluent limits for ammonia and total residual chlorine
  - A major modification to the treatment facility and/or operations is likely needed and will take a significant amount of time to properly plan, design, fund, and construct
  - Submittal of an approvable engineering report (preliminary report) summarizing the facility upgrades needed to comply with the final effluent limitations for ammonia and total residual chlorine. The report must meet the requirements of the EFC/DEC Engineering Report Outline.

### Emerging Contaminant Monitoring

Emerging Contaminants, such as Perfluorooctanoic acid (PFOA), Perfluorooctanesulfonic acid (PFOS), and 1,4-Dioxane (1,4-D), have been used in a wide variety of consumer and industrial product as well as in manufacturing processes for decades. These contaminants do not break down easily, therefore their presence in wastewater can remain a concern for years following their discontinued use. As the science surrounding these contaminants is still evolving, additional monitoring is needed to better understand potential sources and background levels. For more information on emerging contaminants, please see the DEC Division of Water web page: [Emerging Contaminants In NY's Waters - NYSDEC](#).

**Required Sampling:** Pursuant to 6 NYCRR Part 750-1.13(b), the permit includes a short-term monitoring program listed in the Schedule of Additional Submittals to evaluate the influent and effluent discharge levels of Per-and Polyfluoroalkyl Substances (PFAS) and 1,4-Dioxane. This monitoring program is consistent with guidance released in EPA guidance memos dated April 28, 2022, and December 5, 2022.

The DEC will review the monitoring results and pursuant to 6 NYCRR 750-2.1(i) may notify the permittee of the need for further monitoring to identify potential sources as specified in the Emerging Contaminants Investigation Checklist for POTWs to determine whether cause exists to modify the permit to incorporate a pollutant minimization program per 6 NYCRR 750-1.14(f).

The DEC will consider this information and progress made to track down and reduce or eliminate the source of the identified pollutants in determining if a permit modification is needed.

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<sup>5</sup> Pursuant to 6 NYCRR 750-1.14

### Schedule of Additional Submittals

A Schedule of Additional Submittals has been included for the following ([Appendix Link](#)):

- Water Treatment Chemical (WTC) Annual Report Form - Submission of annual report form.
- Biennial Pollutant Scan - Scan results required to be maintained on-site.
- Whole Effluent Toxicity (WET) Testing - Submission of routine results.
- Stormwater No Exposure Certification - Recertification required every five (5) years. Note: permittee submitted initial No Exposure Form with application package and dated 07/30/2020.
- Mercury Minimization Plan – Plan required to be maintained on-site.
- Emerging Contaminant Short Term Monitoring

Permittee: Village of Highland Falls  
Facility: Highland Falls WWTP  
SPDES Number: NY0022586  
USEPA Major/Class 05 Municipal

Date: January 7, 2025 v.1.26  
Permit Writer: Christopher Ciccarelli  
Water Quality Reviewer: Christopher Ciccarelli  
Full Technical Review

## 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 |
| 002     | 41° 20' 52" N | 73° 58' 04" W | Hudson River         | B           | H (portion 3)<br>PWL: 1301-0003                        | 13 / 01           | 83 <sup>6</sup> | CORMIX     |            |             | 1.35                         | 5.9            | 7.5  | 7.5 |

<sup>6</sup> Ambient hardness data obtained from DEC ambient sampling station "13LHUD120.2", Hudson River in Bethlehem.

## POLLUTANT SUMMARY TABLE

### Outfall 002

|                                                                                                                                                                                                                                                                                                                                                                                                |       |                         | Existing Discharge Data |                           |           |              | TBELs |                 | Water Quality Data and WQBELS                                                |                                                                                                                                                                                                                                       |                  |         |             |                 |         |              |                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------------------|-------------------------|---------------------------|-----------|--------------|-------|-----------------|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------|-------------|-----------------|---------|--------------|------------------------------|
| Effluent Parameter                                                                                                                                                                                                                                                                                                                                                                             | Units | Averaging Period        | Current Permit Limit    | Existing Effluent Quality | # Detects | # Nondetects | Limit | Basis           | Ambient Background Conc.                                                     | Projecte<br>d<br>Instream<br>Conc.                                                                                                                                                                                                    | WQ Std.<br>or GV | WQ Type | Calc. WQBEL | Basis for WQBEL | ML      | Permit Limit | Basis for Permit Requirement |
| Flow                                                                                                                                                                                                                                                                                                                                                                                           | MGD   | Monthly Average         | 1.35                    | 0.83 Actual Average       | 60        | 0            | 1.35  | Design Flow     | Narrative: No alterations that will impair the waters for their best usages. |                                                                                                                                                                                                                                       |                  |         |             | 703.2           | -       | 1.35         | Design Flow                  |
| Consistent with 40CFR Part 133.102 and TOGS 1.3.3, a monthly average flow limitation equal to the average daily design capacity of the treatment plant is specified.                                                                                                                                                                                                                           |       |                         |                         |                           |           |              |       |                 |                                                                              |                                                                                                                                                                                                                                       |                  |         |             |                 |         |              |                              |
| pH                                                                                                                                                                                                                                                                                                                                                                                             | SU    | Minimum                 | 6                       | 6 Actual Min              | 60        | 0            | 6.0   | 40 CFR 133.102  | 7.4                                                                          | -                                                                                                                                                                                                                                     | 6.5 - 8.5        | Range   | -           | 703.3           | -       | 6.0 - 9.0    | TBEL                         |
| pH                                                                                                                                                                                                                                                                                                                                                                                             | SU    | Maximum                 | 9                       | 7.42 Actual Max           | 60        | 0            | 9.0   |                 |                                                                              |                                                                                                                                                                                                                                       |                  |         |             |                 |         |              |                              |
| Consistent with TOGS 1.3.3 for POTWs, TBELs reflect secondary treatment standards.<br>Given the available dilution, an effluent limitation equal to the TBEL is protective of the WQS.<br>Ambient pH obtained from DEC Ambient sampling station RIBS, Bethlehem (LHUD 120.2).                                                                                                                  |       |                         |                         |                           |           |              |       |                 |                                                                              |                                                                                                                                                                                                                                       |                  |         |             |                 |         |              |                              |
| Temperature                                                                                                                                                                                                                                                                                                                                                                                    | deg F | DAILY MX                | Monitor                 | 79 Actual Max             | 60        | 0            | -     | -               | 82                                                                           | Narrative (Non-Trout): The water temperature at the surface of a stream shall not be raised to more than 90F at any point and... shall not be raised or lowered to more than 5F over the temperature that existed before the addition |                  |         | 704.2       | -               | Monitor | Monitor      |                              |
| Consistent with 6 NYCRR 750-1.13(a), monitoring is required and may be used to inform future permitting decisions. This requirement is continued from the previous permit.                                                                                                                                                                                                                     |       |                         |                         |                           |           |              |       |                 |                                                                              |                                                                                                                                                                                                                                       |                  |         |             |                 |         |              |                              |
| 5-Day                                                                                                                                                                                                                                                                                                                                                                                          | mg/L  | Monthly Average         | 30                      | 14                        | 60        | 0            | 30    | 40 CFR 133.102  | -                                                                            |                                                                                                                                                                                                                                       |                  | -       | 703.3       | -               | 30      | WQBEL        |                              |
|                                                                                                                                                                                                                                                                                                                                                                                                | mg/L  | 7D Average              | 45                      | 30                        | 59        | 0            | 45    | 40 CFR 133.102  |                                                                              |                                                                                                                                                                                                                                       |                  | -       |             |                 | 45      |              |                              |
| Biochemical                                                                                                                                                                                                                                                                                                                                                                                    | lb/d  | Monthly Average         | 338                     | 106                       | 60        | 0            | 340   | Antibacksliding |                                                                              |                                                                                                                                                                                                                                       |                  | -       |             |                 | 340     |              |                              |
| Oxygen Demand                                                                                                                                                                                                                                                                                                                                                                                  | lb/d  | 7D Average              | 507                     | 278                       | 60        | 0            | 510   | Antibacksliding |                                                                              |                                                                                                                                                                                                                                       |                  | -       |             |                 | 510     |              |                              |
| (BOD5)                                                                                                                                                                                                                                                                                                                                                                                         | %     | Monthly Average Minimum | 85                      | 73 Actual Min             | 60        | 0            | 85    | 40 CFR 133.102  |                                                                              |                                                                                                                                                                                                                                       |                  | -       |             |                 | 85      |              |                              |
| Consistent with 40 CFR Part 133.102 and TOGS 1.3.3 for POTWs, TBELs reflect secondary treatment standards. In marine environments, dissolved oxygen can not be calculated so TBELs are applied.<br>Note that the mass-loading limits have been adjusted to two significant figures to reflect current DEC guidance.<br>3 violations for % removal of BOD5 were reported in the collected data. |       |                         |                         |                           |           |              |       |                 |                                                                              |                                                                                                                                                                                                                                       |                  |         |             |                 |         |              |                              |



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |                         |         |               |    |    |     |                 |       |                                                                                                                                       |       |       |       |       |      |       |            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------------|---------|---------------|----|----|-----|-----------------|-------|---------------------------------------------------------------------------------------------------------------------------------------|-------|-------|-------|-------|------|-------|------------|
| Total Suspended Solids (TSS)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | mg/L    | Monthly Average         | 30      | 18            | 57 | 3  | 30  | 40 CFR 133.102  | -     | Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. | 703.2 | -     | 30    | TBEL  |      |       |            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | mg/L    | 7D Average              | 45      | 54            | 60 | 0  | 45  | 40 CFR 133.102  |       |                                                                                                                                       |       |       | 45    |       |      |       |            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | lb/d    | Monthly Average         | 338     | 144           | 60 | 0  | 340 | Antibacksliding |       |                                                                                                                                       |       |       | 340   |       |      |       |            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | lb/d    | 7D Average              | 507     | 508           | 60 | 0  | 510 | Antibacksliding |       |                                                                                                                                       |       |       | 510   |       |      |       |            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | %       | Monthly Average Minimum | 85      | 72 Actual Min | 60 | 0  | 85  | 40 CFR 133.102  |       |                                                                                                                                       |       |       | 85    |       |      |       |            |
| Consistent with 40 CFR Part 133.102 and TOGS 1.3.3 for POTWs, TBELs reflect secondary treatment standards. Note that the mass-loading limits have been adjusted to two significant figures to reflect current. Given the available dilution, an effluent limitation equal to the TBEL, and consistent with TOGS 1.3.3, is protective of water quality standards.<br>The EEQ values for TSS mg/L 7D Average and TSS lb/day 7D Average are higher than the current permit limit due to variability in the data causing the 99%tile values to increase. There have been 0 reported violations of the 507 lb/d 7D Average limit and only 1 reported violation of the 45 mg/L 7D Average limit at 46mg/L in the collected data.<br>9 violations for % removal of TSS were reported in the collected data.                                                                                                                                                                                                                                                                                                                                                                                                                           |         |                         |         |               |    |    |     |                 |       |                                                                                                                                       |       |       |       |       |      |       |            |
| Settleable Solids                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | mL/L    | DAILY MX                | 0.3     | 0.3           | 46 | 14 | 0.3 | TOGS 1.3.3      | -     | Narrative: None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages  | 703.3 | -     | 0.3   | TBEL  |      |       |            |
| Consistent with TOGS 1.3.3, the effluent limitation is equal to the TBEL of 0.3 mL/L for POTWs providing secondary treatment without filtration. Given that adequate dilution is available the TBEL is protective of WQS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |         |                         |         |               |    |    |     |                 |       |                                                                                                                                       |       |       |       |       |      |       |            |
| Nitrogen, Ammonia (as N), Summer 6/1 - 10/31                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | mg/L    | MO AVG                  | -       | -             | -  | -  | -   | -               | 0.075 | 7.20                                                                                                                                  | 1.2   | A(C)  | 8.7   | 703.5 | -    | 8.7   | WQBEL      |
| Nitrogen, Ammonia (as N), Winter 11/1 - 5/31                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | mg/L    | MO AVG                  | -       | -             | -  | -  | -   | -               | 0.047 | 10.80                                                                                                                                 | 1.9   | A(C)  | 14.0  | 703.5 | -    | 14    | WQBEL      |
| The WQS for Ammonia was determined from TOGS 1.1.1 from a pH of 7.5 and a winter temperature of 10°C. The temperature of the receiving waterbody was an assumed value and consistent with TOGS 1.3.1E.<br>The WQS for Ammonia was determined from TOGS 1.1.1 from a pH of 7.5 and a summer temperature of 25°C. The temperature of the receiving waterbody was an assumed value and consistent with TOGS 1.3.1E.<br>The projected instream concentration was calculated using an assumed effluent concentration of 12 mg/L and an ambient upstream concentration of 0.075 mg/L for summer and 0.047 mg/L for winter (DEC station "13LHUD120.2"). In accordance with TOGS 1.3.1E, the HEW dilution ratio was applied to calculate the projected instream concentration. A comparison of the projected instream concentration to the WQS indicates a reasonable potential to cause or contribute to a WQS violation and therefore a WQBEL is specified. There was no previous ammonia limit or monitoring for this facility. A Schedule of Compliance is included for the implementation of this new limit to allow adequate time for the permittee to complete necessary treatment plant upgrades to comply with the new limit. |         |                         |         |               |    |    |     |                 |       |                                                                                                                                       |       |       |       |       |      |       |            |
| Total Mercury                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ng/L    | DAILY MX                | -       | -             | 0  | 1  | 50  | ILCA            | -     | -                                                                                                                                     | 0.7   | H(FC) | 50    | GCLA  | -    | 50    | DOW 1.3.10 |
| See Mercury Section of this fact sheet.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |                         |         |               |    |    |     |                 |       |                                                                                                                                       |       |       |       |       |      |       |            |
| Coliform, Fecal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | #/100mL | 30DA GEO                | 200     | 32.17         | 12 | 18 | 200 | TOGS 1.3.3      | -     | Narrative: The monthly geometric mean, from a minimum of five examinations, shall not exceed 200.                                     | 703.4 | -     | 200   | TBEL  |      |       |            |
| Coliform, Fecal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | #/100mL | 7 DA GEO                | 400     | 102.27        | 18 | 12 | 400 | TOGS 1.3.3      | -     |                                                                                                                                       |       | -     | 400   | TBEL  |      |       |            |
| Consistent with TOGS 1.3.3, effluent disinfection is required seasonally from May 1st - October 31st, due to the class of the receiving waterbody. Fecal coliform limits equal to the TBEL are specified. Note the existing permit has a disinfection season of May 15th to October 15th.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |         |                         |         |               |    |    |     |                 |       |                                                                                                                                       |       |       |       |       |      |       |            |
| Chlorine, total residual (TRC)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | mg/L    | DAILY MX                | Monitor | 1.9           | 30 | 0  | 2.0 | TOGS 1.3.3      | -     | -                                                                                                                                     | 0.005 | A(C)  | 0.038 | 703.5 | 0.03 | 0.038 | WQBEL      |
| Effluent disinfection is currently required seasonally and will remain a permit requirement. The WQBEL was calculated by multiplying the WQS by the chronic dilution ratio. Due to the low dilution, the calculated WQBEL is less than the TBEL and an effluent limitation equal to the WQBEL is appropriate. A Schedule of Compliance is included for the implementation of this new limit to allow adequate time for the permittee to complete necessary treatment plant upgrades to comply with the new limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |         |                         |         |               |    |    |     |                 |       |                                                                                                                                       |       |       |       |       |      |       |            |

Permittee: Village of Highland Falls  
 Facility: Highland Falls WWTP  
 SPDES Number: NY0022586  
 USEPA Major/Class 05 Municipal

Date: January 7, 2025 v.1.26  
 Permit Writer: Christopher Ciccarelli  
 Water Quality Reviewer: Christopher Ciccarelli  
 Full Technical Review

### Additional Pollutants Detected

| Effluent Parameter                                                                                                                                                                                                      | Units | Averaging Period | Existing Discharge Data |                           |           |              | TBELs |       | Water Quality Data and WQBELs |                          |               |         |                         |                 |    |              |                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------|-------------------------|---------------------------|-----------|--------------|-------|-------|-------------------------------|--------------------------|---------------|---------|-------------------------|-----------------|----|--------------|------------------------------|
|                                                                                                                                                                                                                         |       |                  | Current Permit Limit    | Existing Effluent Quality | # Detects | # Nondetects | Limit | Basis | Ambient Background Conc.      | Projected Instream Conc. | WQ Std. or GV | WQ Type | Calc. WQBEL             | Basis for WQBEL | ML | Permit Limit | Basis for Permit Requirement |
| Zinc, Total [as Zn]                                                                                                                                                                                                     | ug/L  | DAILY MX         | -                       | 46                        | 1         | 0            | -     | -     | 6.7                           | 25                       | 71            | A(C)    | No Reasonable Potential | -               | -  | -            | No limitation                |
| One detection for Zinc, Total [as Zn] was reported with the NY-2A Application. A comparison of this detection to the WQS showed no reasonable potential to violate the WQS, so no limitation or monitoring is required. |       |                  |                         |                           |           |              |       |       |                               |                          |               |         |                         |                 |    |              |                              |

## 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>7</sup> and USEPA interpretation<sup>8</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>7</sup> American Iron and Steel Institute v. Environmental Protection Agency, 115 F.3d 979, 993 n.6 (D.C. Cir. 1997)

<sup>8</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.

### *Technology-based Effluent Limitations (TBELs)*

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



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

#### *Technology-based Effluent Limitations (TBELs) for Discharges to Groundwater*

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

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

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

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

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

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

In addition to the TBELs, permits must include additional or more stringent effluent limitations and conditions, including those necessary to protect water quality. CWA sections 101 and 301(b)(1)(C), 40 CFR 122.44(d)(1), and 6 NYCRR 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.

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

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

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

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

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

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

WET tests use small vertebrate and invertebrate species to measure the aggregate toxicity of an effluent. There are two different durations of toxicity tests: acute and chronic. Acute toxicity tests measure survival over a 96-hour test exposure period. Chronic toxicity tests measure reductions in survival, growth, and reproduction over a 7-day exposure. TOGS 1.3.1 includes guidance for determining when aquatic toxicity

testing should be included in SPDES permits. The authority to require toxicity testing is in 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.

### *Requirements for Combined Sewer Overflows (CSOs)*

Pollution from combined sewer overflows is controlled with implementation of SPDES permit conditions in accordance with the Division of Water CSO Control strategy (TOGS 1.6.3) and the USEPA CSO Control Policy issued April 11, 1994.

CWA Section 402(q) requires that each permit for a discharge from a municipal combined storm and sanitary sewer shall conform to EPA's Combined Sewer Overflow Control Policy.<sup>[1]</sup> The CSO Control Policy identifies specific requirements for Phase I and Phase II permits. Phase I permits must include requirements for the implementation of the Nine Minimum Controls (NMCs) and development of the Long-Term CSO Control Plan (LTCP).

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<sup>[1]</sup> Available at <https://www.epa.gov/sites/production/files/2015-10/documents/owm0111.pdf>

The 15 CSO Best Management Practices (BMPs) required by NYS under TOGS 1.6.2 are equivalent to the "Nine Minimum Control Measures" required under the USEPA National Combined Sewer Overflow policy (33 USC section 1342(q)). BMPs are technology-based requirements developed in accordance with best professional judgement. These are largely non-structural measures which are designed to maximize pollutant capture and removal from the combined sewer system and the POTW as a whole.

Phase II permits must include requirements to implement the technology-based controls including the NMCs determined on a BPJ basis, as well as requirements which ensure that the selected CSO controls are implemented, operated, and maintained as described in the long-term CSO control plan (LTCP). These requirements are critical to meeting the objectives of the Policy, including to bring all CSO discharge points into compliance with the technology-based and water quality-based requirements of the CWA, and to minimize the water quality, aquatic biota, and human health impacts from CSOs.

Additionally, the 1994 CSO Control Policy requires permits include a requirement for CSO communities who have developed an approved LTCP to reassess overflows to sensitive areas in those cases where elimination or relocation of the overflows is not physically possible and economically achievable. The reassessment should be based on consideration of new or improved techniques to eliminate or relocate overflows or changed circumstance that influence economic achievability.

## 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.

There have been a number of changes to DOW 1.3.10, December 2020 (e.g., the criteria for mercury sources, the MMP Decision tree, and the MMPs themselves) which could result in less stringent effluent limitations. There are now criteria to determine if a facility has sources of mercury. Additionally, the types of MMPs have been restructured. MMP Type IV is appropriate for facilities that are not sources of mercury. A similar MMP type was not included in the 2010 or 2015 versions of DOW 1.3.10. DOW 1.3.10, Figure 1, is a decision tree, which includes the criteria used to determine if a facility has source of mercury and which MMP is appropriate for a facility.

### 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.

### Pollutant Minimization Programs

Pollutant Minimization Programs are included when a pollutant is being discharged from the facility at detectable levels and the ML for the most sensitive method is greater than the calculated WQBEL. These programs typically include an on-going potential source identification, evaluation, and prioritization program to demonstrate progress towards meeting the goal of the WQBEL. Pollutant Minimization Plan requirements are based on 40 CFR Part 132 Appendix F Procedure 8, 6 NYCRR 750-1.13(a) and 750-1.14(f), and TOGS 1.2.1.

### Mini Industrial Pretreatment Program

Pretreatment requirements are intended to protect a WWTP from receiving pollutants that cause pass through or interference to the operations of the POTW receiving such wastes. When necessary, the DEC, in accordance with TOGS 1.3.3. and through issued SPDES permits, requires WWTPs to develop and implement mini or partial pretreatment programs. These requirements are consistent with regulations in 6 NYCRR §750-2.9(b)(1), ECL 17-0811, ECL 17-0825, and 40 CFR §403.5.

As part of the mini pretreatment program, a WWTP must identify industrial users; determine whether legal authority controls (e.g. sewer use laws) are adequate; require, issue, and enforce industrial user permits; and, implement the program.