State Pollutant Discharge Elimination System (SPDES) DISCHARGE PERMIT

SIC Code:	**0921**	NAICS Code:	**112511**	SPDES Number:	**NY0035335**
Discharge Class (CL):	**09**			DEC Number:	**5-1652-00134/00004**
Toxic Class (TX):	**N**			Effective Date (EDP):	**EDP**
Major-Sub Drainage Basin:	**10 – 03**			Expiration Date (ExDP):	**ExDP**
Water Index Number:	**C-15-P110-6-P114-9-1**	Item No.:	**830 - 181**	Modification Dates (EDPM):	
Compact Area:	**NEIWPCC**				

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:	**NYS Dept. of Environmental Conservation**	Attention:	**James G. Daley**		
Street:	**625 Broadway**				
City:	**Albany**	State:	**NY**	Zip Code:	**12233-4753**
Email:	**jim.daley@dec.ny.gov**	Phone:	**(518) 402-8959**		

is authorized to discharge from the facility described below:

FACILITY NAME, ADDRESS, AND PRIMARY OUTFALL															
Name:	**Adirondack Fish Culture Station**														
Address / Location:	**103 Fish Hatchery Road**											County:	**Franklin**		
City:	**Saranac Lake**							State:	**NY**			Zip Code:	**12983**		
Facility Location:		Latitude:	**44**	°	**21**	’	**17**	” N	& Longitude:	**74**	°	**17**	’	**02**	” W
Primary Outfall No.:	**001**	Latitude:	**44**	°	**21**	’	**10**	” N	& Longitude:	**74**	°	**17**	’	**11**	” W
Outfall Description:	**Fish Hatchery flow through**	Receiving Water:	**Hatchery Brook**						Class:	**AA**		Standard:	**AA(T)**		

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
BWP – Permit Writer
CO BWC - SCIS
RWE
RPA
EPA Region II
NYSEFC

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

SUMMARY OF ADDITIONAL OUTFALLS

Outfall	Wastewater Description	Outfall Latitude	Outfall Longitude
002	**Treated Sanitary – Visitor Center**	**44** ° **21** ' **15** " N	**74** ° **17** ' **02** " W
Receiving Water:	**Groundwater**		Class: **GA**
Outfall	Wastewater Description	Outfall Latitude	Outfall Longitude
003	**Treated Sanitary – Hatchery Residence**	**44** ° **21** ' **11** " N	**74** ° **17** ' **03** " W
Receiving Water:	**Groundwater**		Class: **GA**

DEFINITIONS

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

PERMIT LIMITS, LEVELS AND MONITORING

OUTFALL	LIMITATIONS APPLY	RECEIVING WATER	EFFECTIVE	EXPIRING
001	All Year	Hatchery Brook		

PARAMETER	EFFLUENT LIMITATION					MONITORING REQUIREMENTS				FN
	Type	Limit	Units	Limit	Units	Sample Frequency	Sample Type	Location		
								Inf.	Eff.	
Flow	Daily Maximum	4.1	MGD			Continuous	Recorder	X		
pH	Daily Minimum	6.5	SU			Weekly	Grab		X	
	Daily Maximum	8.5	SU							
Temperature	Daily Maximum	Monitor	°F				Grab		X	
BOD_5	Daily Maximum	5.0	mg/L			Monthly	24-hr. Comp.		X	
Total Suspended Solids (TSS)	Daily Maximum	10.0	mg/L			Monthly	24-hr. Comp.		X	
Settleable Solids	Daily Maximum	0.2	mL/L			Monthly	Grab		X	
Dissolved Oxygen	Daily Minimum	7.0	mg/L			Monthly	Grab		X	
Ammonia (as N)	Daily Maximum	0.98	mg/L			Monthly	24-hr. Comp.		X	
Total Phosphorus (as P)	12 MRA		mg/L	0.45	lbs/d	Weekly	24-hr. Comp.		X	1,2

PARAMETER	MAX DURATION OF APPLICATION	DAILY MAXIMUM IN-STREAM CONCENTRATION	UNITS	SAMPLE FREQUENCY	SAMPLE TYPE	FN
Hatchery Flow	-	Monitor	GPM	Per Application	Instantaneous	
Stream Flow	-	Monitor	CFS	Per Application	Instantaneous	
Hatchery Flow Treated	-	Monitor	GPM	Per Application	Instantaneous	
Formalin	6 hours	47	mg/L	Per Application	Calculated	3,4,5
Chloride	1 hour	1300	mg/L	Per Application	Calculated	3,4,5
Potassium Permanganate	1 hour	3.4	mg/L	Per Application	Calculated	3,4,5
Hydrogen Peroxide	1 hour	11.5	mg/L	Per Application	Calculated	3,4,5
Chloramine (T)	1 hour	5.6	mg/L	Per Application	Calculated	3,4,5
Diquat Product	1 hour	0.35	mg/L	Per Application	Calculated	3,4,5
Terramycin	6 hours	84	mg/L	Per Application	Calculated	3,4,5,6

Footnotes Listed on Next Page

FOOTNOTES:

1. This limit represents the net total phosphorus discharged from the facility through Outfall 001. The net effluent discharge is equal to the effluent total phosphorus discharge minus the influent total phosphorus. Influent phosphorus will be calculated as the product of the concentration measured at the currently used lake water influent, multiplied by the percentage of epilimnetic water used in the Hatchery inflow from Little Clear Pond.

2. Samples shall be collected from the influent to the facility and from the effluent of the wastewater treatment system at the locations specified on page 9 of this permit. The influent sample shall be a grab sample.

3. The in-stream concentration shall be calculated as: the concentration of therapeutic chemical applied to the fish divided by the dilution factor. The dilution factor shall be calculated as follows:

$$Dilution\ Factor\ = \frac{Total\ Hatchery\ Flow + Stream\ Flow}{Treated\ Hatchery\ Flow}$$

4. There shall be no re-treatment with the same chemical within any 24-hour period.

5. Therapeutic chemical usage, including in-stream concentrations, shall be reported on the Therapeutic Chemical Usage Form and appended to the DMR.

6. The discharge duration is limited to 1 hour.

BEST MANAGEMENT PRACTICES

1. The permittee shall continue implementation of the existing Best Management Practices (BMP) plan, approved by the Department on April 19, 1995.

2. A copy of the BMP plan shall be maintained at the facility and shall be available to authorized Department representatives upon request.

3. The permittee shall submit a summary of the results of BMP activities and reviews performed during the preceding calendar year. The summary shall include a description of any changes made and their results and proposed changes to be made. The summary shall be submitted to the Regional Water Engineer no later than January 31st of each year.

SPECIAL CONDITIONS

1) The permittee shall report the use of any investigational new animal drug (INAD) or any extralabel drug use where such a use may lead to a discharge of the drug to waters of the state. Reporting is not required for an INAD or extralabel drug use that has been previously approved by FDA for a different species or disease if the INAD or extralabel use is at or below the approved dosage and involves similar conditions of use.

    a. In the case where a permittee intends to participate in an INAD study, the permittee shall provide a written report to the Regional Water Engineer (RWE) of an INAD's impending use within 7 days of agreeing or signing up to participate in the INAD study. The written report must identify the INAD to be used, method of use, the dosage, and the disease or condition the INAD is intended to treat.

    b. In the case of INAD and/or extralabel drug use at the facility, the permittee shall provide an oral report to the RWE as soon as possible, preferably in advance of use, but no later than 5 days after initiating use of that drug. The oral report must identify the drugs used, method of application, and the reason for using that drug. In addition, the permittee must provide a written report to the RWE within 30 days after initiating use of that drug. The written report must identify the drug used and include: the reason for treatment, date(s) and time(s) of the addition (including duration), method of application, and the amount added.

    Investigational new animal drug (INAD) means a drug for which there is a valid exemption in effect under section 512(j) of the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. 360b(j), to conduct experiments.

    Extralabel drug use means a drug approved under the Federal Food, Drug and Cosmetic Act that is not used in accordance with the approved label directions, see 21 CFR part 530.

2) In the event of failure in, or damage to, the structure of an aquatic animal containment system resulting in an unanticipated material discharge of pollutants to waters of the state, the permittee shall report the incident to the RWE within 24 hours of its occurrence in accordance with 6 NYCRR Part 750-2.7(c) and submit a written report within 5 days in accordance with 6 NYCRR Part 750-2.7(d) . The written incident report shall also contain the following information: documentation of the cause of containment system failure or damage, the estimated time elapsed until the failure or damage was repaired, an estimate of the material released as a result of the failure or damage, and steps being taken to prevent a recurrence.

3) In the event of a spill of drugs, pesticides or feed that results in a discharge to waters of the state, the permittee shall report the spill to the RWE within 24 hours of its occurrence in accordance with 6 NYCRR Part 750-2.7(c) and submit a written report within 5 days in accordance with 6 NYCRR Part 750-2.7(d) . The report shall include the identity and quantity of the material spilled.

DISCHARGE NOTIFICATION REQUIREMENTS

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

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

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

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

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

N.Y.S. PERMITTED DISCHARGE POINT

SPDES PERMIT No.: NY_____

OUTFALL No. :____

For information about this permitted discharge contact:

Permittee Name: _____

Permittee Contact: _____

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

OR:

NYSDEC Division of Water Regional Office Address:

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

(e) Upon request, the permittee shall make available electronic or hard copies of the sampling data to the public. In accordance with the RECORDING, REPORTING AND ADDITIONAL MONITORING REQUIREMENTS page of your permit, each DMR shall be maintained (either electronically or as a hard copy) on record for a period of five years.

(f) The permittee shall periodically inspect the outfall identification sign(s) in order to ensure they are maintained, are still visible, and contain information that is current and factually correct. Signs that are damaged or incorrect shall be replaced within 3 months of inspection.

MONITORING LOCATIONS

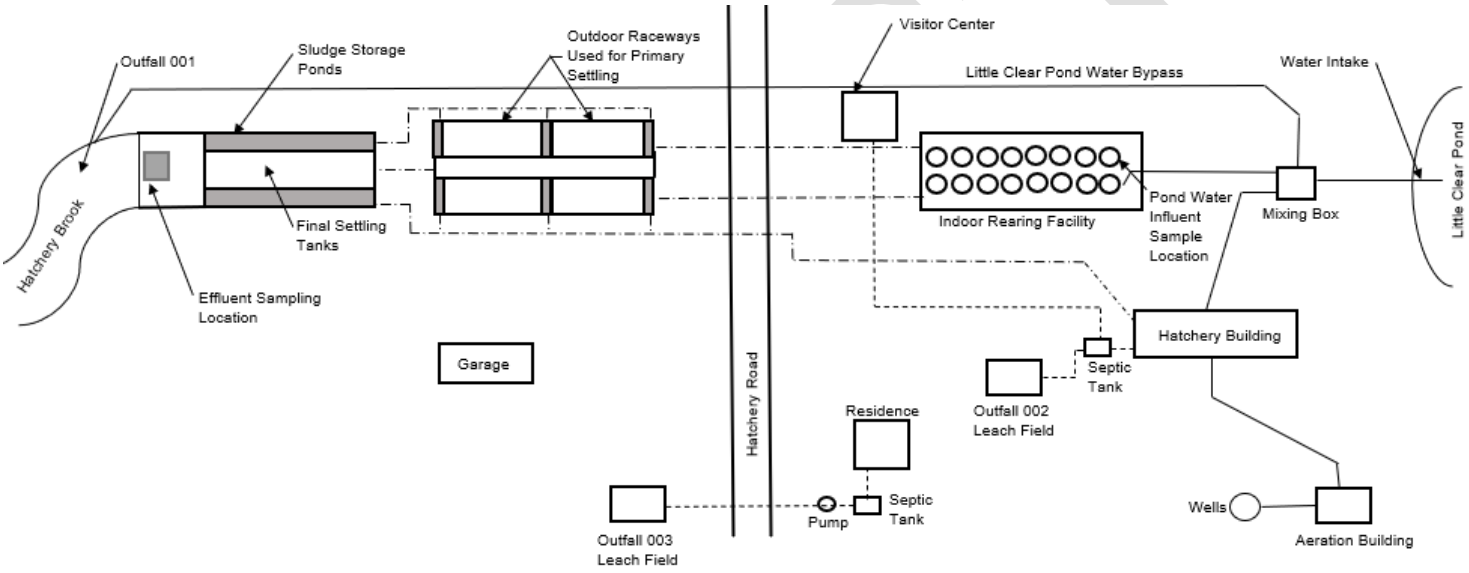
The permittee shall take samples and measurements, to comply with the monitoring requirements specified in this permit, at the locations(s) specified below:

1. Hatchery flow will be the sum of the lake water to the production building, measured with a flow meter, and well and lake water to the hatchery building measured at each start tank or incubator used.

2. Stream flow will be measured at the mixing box.

3. Treated hatchery flow will be measured at the inflow to the units being treated.

4. Effluent samples will be taken at Outfall 001.



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)

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)

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 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/8461.html. **Hardcopy paper DMRs will only be accepted 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 to the Regional Water Engineer and Bureau of Water Permits at the following addresses:

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

Department of Environmental Conservation
Regional Water Engineer, Region 5
232 Golf Course Road, Warrensburg, New York, 12885-1172 Phone: (518) 623-1200

D. Schedule of Additional Submittals:

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

SCHEDULE OF ADDITIONAL SUBMITTALS		
Outfall(s)	**Required Action**	**Due Date**
001	BMP PLAN The permittee shall review the completed BMP plan on an annual basis. The BMP plan shall be modified whenever: (a) changes at the facility materially increase the potential for releases of pollutants, (b) actual releases indicate the plan is inadequate, or (c) a letter from the Department identifies inadequacies in the plan. The permittee shall certify in writing, as an attachment to the December Discharge Monitoring Report (DMR), that the annual review has been completed. All BMP plan revisions must be submitted to the Regional Water Engineer within 30 days.	Annually, no later than January 31st

E. Monitoring and analysis shall be conducted using sufficiently sensitive test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

F. More frequent monitoring of the discharge(s), monitoring point(s), or waters of the State than required by the permit, where analysis is performed by a certified laboratory or where such analysis is not required to be performed by a certified laboratory, shall be included in the calculations and recording of the data on the corresponding DMRs.

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

H. Unless otherwise specified, all information recorded on the DMRs shall be based upon measurements and sampling carried out during the most recently completed reporting period.

I. Any laboratory test or sample analysis required by this permit for which the State Commissioner of Health issues certificates of approval pursuant to section 502 of the Public Health Law shall be conducted by a laboratory which has been issued a certificate of approval. Inquiries regarding laboratory certification should be directed to the New York State Department of Health, Environmental Laboratory Accreditation Program.

SPDES Permit Fact Sheet
NYSDEC
Adirondack Fish Culture Station
NY0035335

Contents

Summary of Permit Changes

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

- Updated permit format, definitions, and general conditions.
- Revised the facility address.
- Updated the coordinates of Outfall 001.
- Corrected the name of receiving water from Little Clear Pond Outlet to Hatchery Brook.
- Revised the daily maximum flow from 3.6 MGD to 4.1 MGD.
- Revised Ammonia (as N) from 1.07 mg/L to 0.98 mg/L.
- Added requirement for Temperature monitoring.

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

Administrative History

2/1/2005 The last full technical review was performed and the SPDES permit became effective with a new five-year term and expiration date of 1/31/2010. The 2005 permit, along with all subsequent modifications,has formed the basis of this permit.

The permit was administratively renewed in 2010 and again in 2015, and 2020. The current permit administrative renewal is effective until 1/31/2025.

3/22/2023 The NYSDEC submitted a request to modify the permit to revise the daily maximum flow from 3.6 MGD to 4.1 MGD.

3/22/2023 The NYSDEC submitted a NY-2C permit application.

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

Facility Information

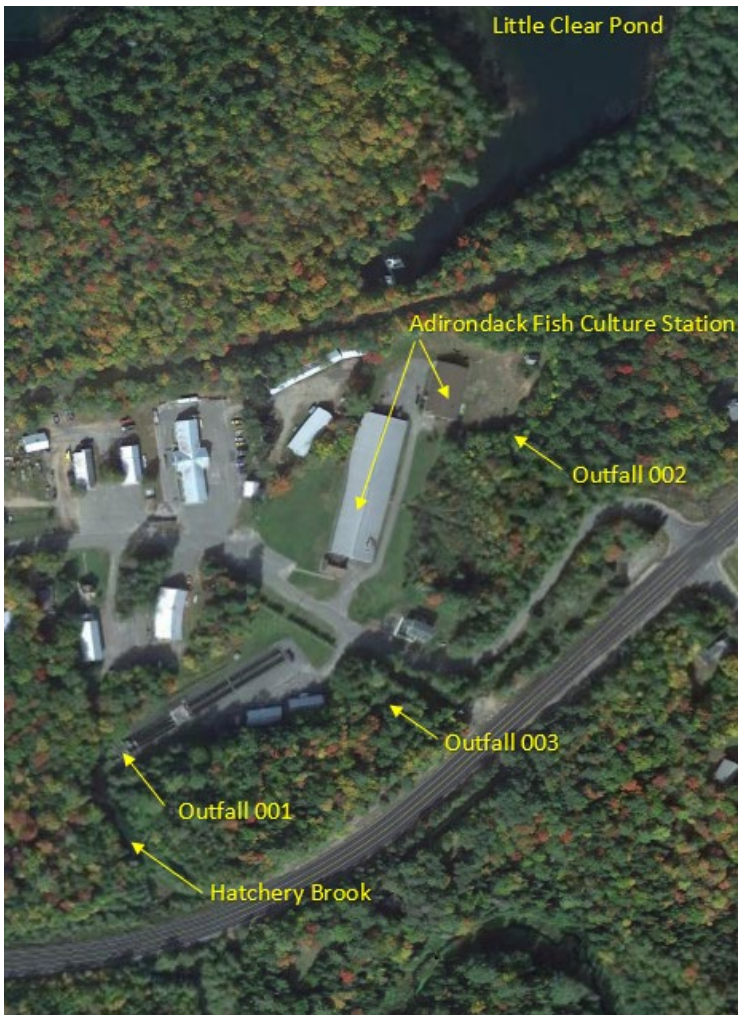
The facility is a fish hatchery (SIC code 0921) that raises fish for the purpose of game fish stocking. The facility is a concentrated aquatic animal production facility as defined in 40 CFR 122.25 - Appendix C which requires a SPDES permit. Since the facility production values do not exceed 100,000 pounds or more of aquatic animals per year in a flow-through, recirculating, net pen or submerged cage system, 40 CFR 451 is not applicable.

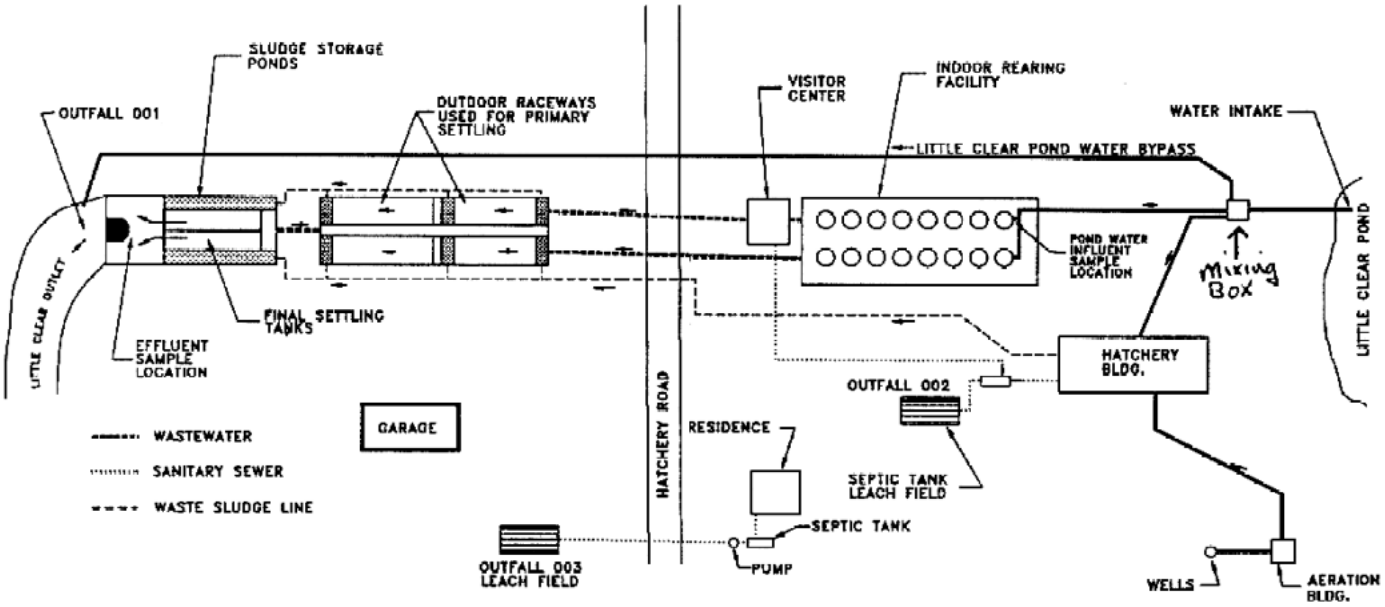
The treatment plant which currently treats 3.6 MGD is a flow through system which consists of:

- Primary Treatment: Raceways
- Secondary Treatment: Sludge Storage Ponds

The facility does not have any planned improvements.

Site Overview





Enforcement History

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

Existing Effluent Quality

The Pollutant Summary Table presents the existing effluent quality and effluent limitations. The existing effluent quality was determined from Discharge Monitoring Reports and the application submitted by the permittee for the period 5/2/2018 to 5/2/2023. Appendix Link

Interstate Water Pollution Control Agencies

Outfall(s) 001 is located within the New England Interstate Water Pollution Control Commission (NEIWPCC) compact area which places additional requirements in the SPDES permit. Appendix Link

Additional Site-Specific Concerns

Additional information on required phosphorus removal can be found in the Impaired Waterbody Information section of this factsheet.

Receiving Water Information

The facility discharges via the following outfalls:

Outfall No.	SIC Code	Wastewater Type	Receiving Water
001	0921	Process Wastewater	Hatchery Brook, Class AA(T)

Reach Description: Hatchery Brook (C-15-P110-6-P114-9-1) is a tributary of Upper Saranac Lake and part of the Lake Champlain watershed. The segment of Hatchery Brook at the point of discharge is classified as AA(T) (6NYCRR 830.6 – Table I – Item 181).

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

Impaired Waterbody Information

The Hatchery Brook segment (PWL No. 1003-0087) is not listed on the 2018 New York State Section 303(d) List of Impaired/Total Maximum Daily Load (TMDL) waters, and therefore, there are no applicable wasteload allocations (WLAs) for this discharge. However, this waterbody segment is located within the Lake Champlain Watershed and is subject to the applicable requirements of the Lake Champlain Phosphorus TMDL, as discussed below.

Lake Champlain TMDL Watershed Information

On 9/25/2002, a TMDL was approved for the Lake Champlain watershed to address phosphorus. As part of the TMDL, the discharges from the following outfalls are subject to the listed wasteload allocations (WLA) for the following parameters:

Outfall No.	Parameter	Wasteload Allocation
001	Total Phosphorus as P	0.45 lbs/day

The NYSDEC is required to sample and report Total Phosphorus as P. The Total Phosphorus 12-month rolling average is defined as the sum of the current month's monthly average in lbs/day added to the monthly average in lbs/day from the eleven previous months divided by 12. See the Pollutant Summary Table for a discussion on the derivation of Total Phosphorus effluent limits.

Critical Receiving Water Data & Mixing Zone

Outfall No.	Acute Dilution Ratio A(A)	Chronic Dilution Ratio A(C)	Human, Aesthetic, Wildlife Dilution Ratio (HEW)	Basis
001	1:1	1:1	1:1	TOGS 1.3.1 ISEL Limits

Intermittent stream effluent limits (ISEL) have been applied based on the previous water quality review. Consistent with TOGS 1.3.1, the water quality standards will be applied as end-of-pipe limitations with no mixing or dilution.

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

Permit Requirements

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

Whole Effluent Toxicity (WET) Testing

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

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)[1] determination. Appendix Link

[1] As prescribed by 6 NYCRR Part 617

Discharge Notification Act Requirements

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

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

Mercury[2]

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 Adirondack Fish Culture Station, however, is a flow through facility; the only influent source is Little Clear Pond and onsite wells. The Department determined that the MDV addresses "treated wastewater from wastewater treatment facilities and combined sewer overflow (CSO) collection systems" and was not intended to address flow through systems where no additional mercury is added through their processes. Therefore, the MDV is not applicable to fish hatcheries, and the MMPs and mercury monitoring requirements were not included in the permit.

Schedule(s) of Additional Submittals

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

- Updated BMP Plan

[2] In accordance with DOW 1.3.10 Mercury – SPDES Permitting & Multiple Discharge Variance (MDV), December 30, 2020.

OUTFALL AND RECEIVING WATER SUMMARY TABLE

Outfall	Latitude	Longitude	Receiving Water Name	Water Class	Water Index No. / Priority Waterbody Listing (PWL) No.	Major / Sub Basin	Hardness (mg/l)	1Q10 (MGD)	7Q10 (MGD)	30Q10 (MGD)	Critical Effluent Flow (MGD)	Dilution Ratio		
												A(A)	A(C)	HEW
001	44° 21' 10" N	74° 17' 11" W	Hatchery Brook	AA(T)	1003-0087 PWL: C-15-P110-6-P114-9-1	10 / 03	-	-	-	-	3.6	1:1	1:1	1:1

POLLUTANT SUMMARY TABLE

Outfall 001

Outfall #	001	**Description of Wastewater:** Process wastewater from aquaculture.													
		Type of Treatment: Settling raceways and ponds.													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[3]	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
General Notes: Existing discharge data from 5/2/2018 to 5/2/2023 was obtained from Discharge Monitoring Reports provided by the permittee. All applicable water quality standards were reviewed for development of the WQBELs. The standard and WQBEL shown below represent the most stringent.															
Flow Rate	MGD	Daily Max	3.6	3.22 Actual Average	58/0	**4.1**	Design Flow	Narrative: No alterations that will impair the waters for their best usages.					703.2	-	**TBEL**
	The flow limit is set at the design flow of the wastewater treatment facility. The facility flow rate is increasing to 4.1 MGD.														
pH	SU	Minimum	6.5	7.17	58/0	6.0	TOGS 1.2.1	-	-	6.5 – 8.5	Range	**6.5 - 8.5**	703.3	-	**WQBEL**
		Maximum	8.5	7.79	58/0	9.0									
	Consistent with TOGS 1.3.1, intermittent stream effluent limits (ISEL) are applied to effluent discharges to streams where little or no streamflow is available for dilution. As such, the water quality standards will be applied as end-of-pipe limitations with no mixing or dilution.														
Temperature	°F	Daily Max	-	65.1 Summer 36.3 Winter	52	**Monitor**	750-1.13	-	No discharge at a temperature over 70F (21C) shall be permitted at any time to streams classified for trout				704.2	-	**Monitor**
	Consistent with 6 NYCRR 750-1.13(a), monitoring is required and may be used to inform future permitting decisions. This requirement is new.														

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

Outfall #	001	**Description of Wastewater:** Process wastewater from aquaculture.													
		Type of Treatment: Settling raceways and ponds.													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[3]	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
Dissolved Oxygen (DO)	mg/L	Daily Min	7.0	9.70	58/0	7.0	TOGS 1.3.1	-	-	5.0	A(C)	**7.0**	TOGS 1.3.1	-	**ISEL**
	Consistent with TOGS 1.3.1, intermittent stream effluent limits (ISEL) are applied to effluent discharges to streams where little or no streamflow is available for dilution. These limits represent the highest degree of treatment that can reasonably be achieved by a wastewater treatment facility treating domestic type waste.														
5-day Oxygen Demand (BOD_5)	mg/L	Daily Max	5.0	2.04	58/0	5.0	TOGS 1.3.1	-	Dissolved Oxygen= 5.0 mg/L (Surrogate Standard) 703.3			**5.0**	703.3	-	**TBEL/ISEL**
	Consistent with TOGS 1.3.1, intermittent stream effluent limits (ISEL) are applied to effluent discharges to streams where little or no streamflow is available for dilution. These limits represent the highest degree of treatment that can reasonably be achieved by a wastewater treatment facility treating domestic type waste. These limits are more stringent than the secondary treatment standards under 40CFR Part 133.102.														
Total Suspended Solids (TSS)	mg/L	Monthly Avg	10.0	0.08	58/0	10	TOGS 1.3.1	None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages.				**10.0**	TOGS 1.3.1	-	**ISEL**
	Consistent with TOGS 1.3.1, intermittent stream effluent limits (ISEL) are applied to effluent discharges to streams where little or no streamflow is available for dilution. These limits represent the highest degree of treatment that can reasonably be achieved by a wastewater treatment facility treating domestic type waste. These limits are more stringent than the secondary treatment standards under 40CFR Part 133.102.														
Settleable Solids	mL/L	Daily Max	0.2	<.1	58/0	**0.2**	Antibacksliding	None from sewage, industrial wastes or other wastes that will cause deposition or impair the waters for their best usages. 703.2					-	-	**TBEL**
	The limitation contained in this permit for Settleable Solids is at least as stringent as the previous permit limit. To prevent backsliding and ensure protection of water quality, the current permit limit of 0.2 ml/l is being maintained.														
Nitrogen, Ammonia (as N)	mg/L	Monthly Avg	1.07	0.06	58/0	1.07	TOGS 1.3.1	-	-	0.98	A(C)	**0.98**	703.5	-	**WQBEL**
	Consistent with TOGS 1.3.1, intermittent stream effluent limits (ISEL) are applied to effluent discharges to streams where little or no streamflow is available for dilution. As such, the water quality standards will be applied as end-of-pipe limitations with no mixing or dilution. Ammonia Limits were calculated from an assumed pH of 7.5 and a temperature of 24°C.														
Total Phosphorus	lb/d	12 MRA	0.45	0.15	58/0	**0.45**	TMDL	None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usages.				-	-	-	**TMDL**
	Consistent with the TMDL, and to maximize phosphorus removal[4] to improve the water quality of Lake Champlain, the permit includes a total phosphorus expressed as a 12-month rolling average limitation of 0.45 lbs/day. Daily loading limits are provided in the Lake Champlain TMDL discussion in this factsheet.														
Formalin	mg/L	Per Application	47	23.5	38/0	**47**	BPJ	-	-	-	-	-	-	-	**TBEL**

[4] Consistent with NYCRR 750-2.8(a)(5).

Outfall #	001	**Description of Wastewater:** Process wastewater from aquaculture.													
		Type of Treatment: Settling raceways and ponds.													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[3]	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
	NYSDEC previously developed water quality criteria for therapeutic chemical use in fish hatcheries. To ensure protection of water quality, the current permit limit will remain in effect.														
Chloride	mg/L	Per Application	1300	665.9	29/0	**1300**	BPJ	-	-	-	-	-	-	-	**TBEL**
	NYSDEC previously developed water quality criteria for therapeutic chemical use in fish hatcheries. To ensure protection of water quality, the current permit limit will remain in effect.														
Potassium	mg/L	Per Application	3.4	-	0/0	**3.4**	BPJ	-	-	-	-	-	-	-	**TBEL**
	NYSDEC previously developed water quality criteria for therapeutic chemical use in fish hatcheries. To ensure protection of water quality, the current permit limit will remain in effect.														
Hydrogen Peroxide	mg/L	Per Application	11.5	-	0/0	**11.5**	BPJ	-	-	-	-	-	-	-	**TBEL**
	NYSDEC previously developed water quality criteria for therapeutic chemical use in fish hatcheries. To ensure protection of water quality, the current permit limit will remain in effect.														
Chloramine	mg/L	Per Application	5.6	1.75	13/0	**5.6**	BPJ	-	-	-	-	-	-	-	**TBEL**
	NYSDEC previously developed water quality criteria for therapeutic chemical use in fish hatcheries. To ensure protection of water quality, the current permit limit will remain in effect.														
Diquat Product	mg/L	Per Application	0.35	-	0/0	**0.35**	BPJ	-	-	-	-	-	-	-	**TBEL**
	NYSDEC previously developed water quality criteria for therapeutic chemical use in fish hatcheries. To ensure protection of water quality, the current permit limit will remain in effect.														
Terramycin	mg/L	Per Application	84	-	0/0	**84**	BPJ	-	-	-	-	-	-	-	**TBEL**
	NYSDEC previously developed water quality criteria for therapeutic chemical use in fish hatcheries. To ensure protection of water quality, the current permit limit will remain in effect.														
Hatchery Flow	GPM	Per Application	Report	2197	47/0	**Report**	BPJ	-	-	-	-	-	-	-	**TBEL**
	NYSDEC previously developed water quality criteria for therapeutic chemical use in fish hatcheries. To ensure protection of water quality, the current permit limit will remain in effect.														
Stream Flow	CFS	Per Application	Report	14.8	47/0	**Report**	BPJ	-	-	-	-	-	-	-	**TBEL**
	NYSDEC previously developed water quality criteria for therapeutic chemical use in fish hatcheries. To ensure protection of water quality, the current permit limit will remain in effect.														
Hatchery Flow, Treated	GPM	Per Application	Report	268.3	47/0	**Report**	BPJ	-	-	-	-	-	-	-	**TBEL**

Outfall #	001	**Description of Wastewater:** Process wastewater from aquaculture.													
		Type of Treatment: Settling raceways and ponds.													
Effluent Parameter	Units	Averaging Period	Existing Discharge Data			TBELs		Water Quality Data & WQBELs						ML	Basis for Permit Requirement
			Permit Limit	Existing Effluent Quality[3]	# of Data Points Detects / Non-Detects	Limit	Basis	Ambient Bkgd. Conc.	Projected Instream Conc.	WQ Std. or GV	WQ Type	Calc. WQBEL	Basis for WQBEL		
	NYSDEC previously developed water quality criteria for therapeutic chemical use in fish hatcheries. To ensure protection of water quality, the current permit limit will remain in effect.														

Appendix: Regulatory and Technical Basis of Permit Authorizations

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

Regulatory References

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

- Clean Water Act (CWA) 33 section USC 1251 to 1387
- Environmental Conservation Law (ECL) Articles 17 and 70
- Federal Regulations
  - 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 factsheet:

SPDES Permit Requirements	Regulatory Reference
Anti-backsliding	6 NYCRR 750-1.10(c)
Best Management Practices (BMPS) for CSOs	6 NYCRR 750-2.8(a)(2)
Environmental Benefits Permit Strategy (EBPS)	6 NYCRR 750-1.18, NYS ECL 17-0817(4), TOGS 1.2.2 (revised January 25,2012)
Exceptions for Type I SSO Outfalls (bypass)	6 NYCRR 750-2.8(b)(2), 40 CFR 122.41
Mercury Multiple Discharge Variance	Division of Water Program Policy 1.3.10 (DOW 1.3.10)
Mixing Zone and Critical Water Information	TOGS 1.3.1 & Amendments
PCB Minimization Program	40 CFR Part 132 Appendix F Procedure 8, 6 NYCRR 750-1.13(a) and 750-1.14(f), and TOGS 1.2.1
Pollutant Minimization Program (PMP)	6 NYCRR 750-1.13(a), 750-1.14(f), TOGS 1.2.1
Schedules of Compliance	6 NYCRR 750-1.14
Sewage Pollution Right to Know (SPRTK)	NYS ECL 17-0826-a, 6 NYCRR 750-2.7
State Administrative Procedure Act (SAPA)	State Administrative Procedure Act Section 401(2), 6 NYCRR 621.11(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 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 wasteload allocations (WLAs) are allocated equitably.

Interstate Water Pollution Control Agencies

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

Existing Effluent Quality

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

Permit Requirements

Basis for Effluent Limitations

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

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

Anti-backsliding

Anti-backsliding requirements are specified in the CWA sections 402(o) and 303(d)(4), ECL 17-0809, and regulations at 40 CFR 122.44(*l*) and 6 NYCRR 750-1.10(c) and (d). Generally, the relaxation of effluent limitations in permits is prohibited unless one of the specified exceptions applies, which will be cited on a case-by-case basis in this factsheet. Consistent with current case law[5] and USEPA interpretation[6] anti-backsliding requirements do not apply should a revision to the final effluent limitation take effect before the scheduled date of compliance for that final effluent limitation.

[5] American Iron and Steel Institute v. Environmental Protection Agency, 115 F.3d 979, 993 n.6 (D.C. Cir. 1997)
[6] U.S. EPA, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; 65 Fed. Reg. 31682, 31704 (May 18, 2000); Proposed Water Quality Guidance for the Great Lakes System, 58 Fed. Reg. 20802, 20837 & 20981 (April 16, 1993)

Antidegradation Policy

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

Effluent Limitations

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

Technology-based Effluent Limitations (TBELs) for Industrial Facilities

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

USEPA Effluent Limitation Guidelines (ELGs) Applicable to Facility

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

Best Professional Judgement (BPJ)

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

Water Quality-Based Effluent Limitations (WQBELs)

In addition to the TBELs, permits must include additional or more stringent effluent limitations and conditions, including those necessary to protect water quality. CWA sections 101 and 301(b)(1)(C), 40 CFR 122.44(d)(1), and 6 NYCRR Parts 750-1.11 require that permits include limitations for all pollutants or parameters which are or may be discharged at a level which may cause or contribute to an exceedance of any State water quality standard adopted pursuant to NYS ECL 17-0301. Water quality standards can be found under 6 NYCRR Parts 700-704. The limitations must be stringent enough to ensure that water quality standards are met and must be consistent with any applicable WLA which may be in effect through a TMDL for the receiving water. These and other requirements are summarized in TOGS 1.1.1, 1.3.1,

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

Mixing Zone Analyses

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

Critical Flows

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

Reasonable Potential Analysis (RPA)

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

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

2) identify water quality criteria applicable to these pollutants;

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

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

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

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

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

Minimum Level of Detection

Pursuant to 40 CFR 122.44(i)(1)(iv) and 6 NYCRR 750-2.5(d), SPDES permits must contain monitoring requirements using sufficiently sensitive test procedures approved under 40 CFR Part 136. A method is "sufficiently sensitive" when the method's minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant parameter; or the lowest ML of the analytical methods approved under 40 CFR Part 136. The ML represents the lowest level that can be measured within specified limitations of precision and accuracy during routine laboratory operations on most effluent matrices. When establishing effluent limitations for a specific parameter (based on technology or water quality requirements), it is possible that the calculated limitation will fall below the ML established by the approved analytical method(s). In these instances, the calculated limitation is included in the permit with a compliance level set equal to the ML of the most sensitive method.

Monitoring Requirements

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

Other Conditions

Mercury

The multiple discharge variance (MDV) for mercury was developed in accordance with 6 NYCRR 702.17(h) "to address widespread standard or guidance value attainment issues including the presence of a ubiquitous pollutant or naturally high levels of a pollutant in a watershed." The first MDV was issued in October 2010, and

subsequently revised and reissued in 2015; each subsequent iteration of the MDV is designed to build off the previous version, to make reasonable progress towards the water quality standard (WQS) of 0.7 ng/L dissolved mercury. The MDV is necessary because human-caused conditions or sources of mercury prevent attainment of the WQS and cannot be remedied (i.e., mercury is ubiquitous in New York waters at levels above the WQS and compliance with a water quality based effluent limitation (WQBEL) for mercury cannot be achieved with demonstrated effluent treatment technologies). The Department has determined that the MDV is consistent with the protection of public health, safety, and welfare. During the effective period of this MDV, any increased risks to human health are mitigated by fish consumption advisories issued periodically by the NYSDOH.

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

Schedules of Compliance

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

Schedule(s) of Additional Submittals

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