

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Federal Clean Water Act as amended, (33 U.S.C. §§1251 et seq.; the "CWA"),

**U.S. Department of the Interior
Fish and Wildlife Service**

is authorized to discharge from the facility located at

**Pittsford National Fish Hatchery
4 Holden Road
North Chittenden, VT 05763**

to receiving water named

Furnace Brook (Lake Champlain Drainage Area)

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on the date of signature if no comments are received during public notice. If comments are received during public notice, this permit will become effective on the first day of the month following 60 days after signature.

This permit and the authorization to discharge expire at midnight, five (5) years from the last day of the month preceding the effective date.

This permit consists of 10 pages in Part I including effluent limitations and monitoring requirements and 25 pages in Part II, Standard Conditions.

Signed this ____ day of _____, 2008.

Stephen S. Perkins, Director
Office of Ecosystem Protection
Environmental Protection Agency
Boston, MA

PART I

A. EFFLUENT LIMITS AND MONITORING REQUIREMENTS

<p>1. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge from outfall serial numbers 001, 002, 003, and 004 treated fish culture water to Furnace Brook. Such discharges shall be limited and monitored by the permittee as specified below. Samples taken in compliance with the monitoring requirements specified below shall be taken at a location that provides a representative analysis of the effluent.</p>							
<u>EFFLUENT CHARACTERISTIC</u>		<u>EFFLUENT LIMITS</u>				<u>MONITORING REQUIREMENTS</u>	
PARAMETER	UNITS	AVERAGE MONTHLY	AVERAGE WEEKLY	MAXIMUM DAILY	ANNUAL TOTAL	MEASUREMENT FREQUENCY	SAMPLE TYPE
FLOW	MGD	2.6	***	3.0	****	Daily ¹	Instantaneous
BOD ₅	mg/l lbs/day	***	***	10 250	**** ****	2X/Quarter ²	Composite ³
TSS	mg/l lbs/day	**** ****	**** ****	10 250	**** ****	2X/Quarter ²	Composite ³
Total Ammonia, as N	mg/l	1.6	***	6.9	****	2X/Quarter ²	Composite ³
Total Phosphorus, as P	lbs/yr mg/l	**** Report	**** ****	**** Report	1523 ⁵ ****	Annually ⁵ Weekly	12-Month Total ⁵ Composite ³
pH	std units	(see condition I.A.3. of this permit)				Monthly	Grab
Dissolved Oxygen	mg/l	≥ 7.0 mg/l				Monthly, when formalin is in use ⁴	Grab
Formaldehyde	mg/l	***	***	0.7	***	Monthly, when formalin is in use ⁴	Grab

Footnotes:

1. Outfall numbers 001 through 004 are alternate discharge points to Furnace Brook, which are used depending on the flow pattern through the hatchery. Daily flows shall be added together from multiple outfalls when more than one is used during the day. Daily flows shall be recorded and the average monthly and maximum daily values shall be reported.
2. During each three-month period, one of the quarterly BOD, TSS, and Total Ammonia samples shall be taken immediately following a raceway cleaning and/or maintenance activity when pollutant concentrations in the discharge are likely to be at a maximum, rather than at a random operating time. The other quarterly sample for these pollutants shall be taken during normal operations when raceway cleaning is not occurring. The results of both samplings shall be reported separately on the DMRs.
3. Composite Sampling - The composite samples shall consist of at least 8 grab samples collected at approximately equal intervals during the day.
4. Sampling for dissolved oxygen and formaldehyde testing shall be conducted quarterly during formalin use, when effluent formaldehyde concentrations in the discharge are likely to be at maximum levels. Sampling is not required if formalin is not used during the quarter. In such cases, "No Discharge" shall be reported on the Discharge Monitoring Reports.
5. Consistent with the Total Maximum Daily Load adopted September 25, 2002, the phosphorus limitation necessary to protect downstream waters is 1,523 pounds per year. The total annual phosphorus load discharged by the facility shall be reported on the January DMR each year by adding the pounds of phosphorus discharged per month for January through December of the previous year. One composite sample shall be taken for phosphorus each week. The pounds per month shall be determined using the average monthly phosphorus concentration and the total monthly flow. The composite samples for phosphorus shall be taken at appropriate times to approximate the actual average phosphorus concentration over the sampling day (neither overweighting nor underweighting times of cleaning operations or other operational changes).

I.A. (Continued)

2. The discharge shall not cause a violation of the water quality standards of the receiving waters.
3. The pH of the effluent shall not be less than 6.5 nor greater than 8.5 standard units (SU) at any time.
4. The discharge shall not cause objectionable discoloration of the receiving waters.
5. The effluent shall not contain visible oil sheen, foam, floating solids, or settleable solids at any time.
6. The permittee shall not discharge into the receiving water any pollutant or combination of pollutants in toxic amounts.
7. There shall be no use of sodium hypochlorite or other chlorination chemicals at the facility unless EPA is notified and the permit is modified.
8. The results of sampling for any parameter done more often than its required frequency in accordance with EPA approved methods must also be reported.
9. The permittee shall notify EPA and the State within 24-hours upon the occurrence of a water quality induced mortality of greater than 25 percent in any aquatic species under culture at the facility in accordance with reporting requirements in the Standard Conditions, Part II.D.1.e.
10. In accordance with 40 Code of Federal Regulations (CFR) §122.42, all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:
 - a. That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - (1) One hundred micrograms per liter (100 ug/L);
 - (2) Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2,4-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or
 - (4) Any other notification level established by the Director in accordance with 40 CFR §122.44(f) and Vermont regulations.

- b. That any activity has occurred or will occur which would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - (1) Five hundred micrograms per liter (500 ug/L);
 - (2) One milligram per liter (1 mg/L) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or
 - (4) Any other notification level established by the Director in accordance with 40 CFR §122.44(f) and Vermont regulations.
 - c. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.
11. No components of the effluent shall result in any demonstrable harm to aquatic life or violate any water quality standard which has been or may be promulgated. Upon promulgation of any such standard, this permit may be revised or amended in accordance with such standards, with the permittee being so notified.
12. This permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable standard or limitation promulgated or approved under sections 301(b)(2)(C) and (d), 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
- a. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - b. Controls any pollutants not limited in the permit.
13. Any change in: 1) the fish species to be raised at this facility or, 2) the development stage to be attained at this facility, will require written notification to EPA and possible permit modification.
14. Medications and Disease Control Chemicals
- a. The permittee shall use only medications and disease control chemicals in dosages and combinations as included in the Best Management Practices (BMP) plan [See Part I.A.15.d.iv.] and as approved for appropriate uses by the U.S. Food and Drug Administration (USFDA), U.S. Fish and Wildlife Service (USF&WS), and EPA.

- b. The permittee shall use these medications and chemicals as needed to treat a disease or disease-causing conditions. The prophylactic use of disease control medications is prohibited.
 - c. The permittee shall notify, within 24 hours by telephone and within 5 working days in writing, the Regional Administrator at EPA-Region I and the U.S. Fish and Wildlife Service of the emergency use or the immediate intended use of any medication and/or chemical not specifically identified in the Best Management Practices Plan as described below.
 - d. The Regional Administrator or the Director will notify the permittee when the use of a specific chemical described in item c., immediately above, is unacceptable or that the dosage, concentration, or frequency level must be modified to protect the aquatic community in the receiving water.
15. Best Management Practices (BMP) Plan
- a. A Best Management Practices (BMP) plan shall be developed. The plan shall identify Best Management Practices (BMPs) to be followed in operating the facility, cleaning the raceways/culture tanks, screens and other equipment and disposing of any solid waste. BMPs means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. The purpose of the plan is to identify and to describe the practices which prevent or minimize the amounts of pollutants (biological, chemical and medicinal) discharged to surface waters.
 - b. The BMP plan shall be completed and signed within **90 days after the effective date** of this permit. The permittee shall certify the BMP plan has been updated and that it meets the requirements of this permit. The certification shall be signed in accordance with the requirements identified in 40 CFR §122.22. A copy of the certification shall be sent to EPA within **120 days after the effective date** of this permit. A current copy of the plan shall be maintained at the facility.
 - c. The BMP plan shall be amended as necessary and appropriate during the life of the permit. Specifically, the permittee shall amend and sign the BMP plan within **30 days following a change** in facility design, construction, operation, or maintenance which affects the potential for the discharge of pollutants into surface waters. The amended BMP plan shall be certified and the amended plan and certification shall be forwarded to the regulatory agencies as described in item b above within **60 days after the facility change**.
 - d. The BMP Plan shall include, at a minimum, the following items:
 - i. During operations:
 - (1) A description of the pollution control equipment or methods used to enhance solids collection.

- (2) A description of how excessive solids buildup will be identified to trigger more frequent cleaning of the raceways/culture tanks and equipment thereby preventing more suspended and dissolved materials in the discharge.
 - (3) A description of feeding methods used to minimize the amount of feed residual in the discharge.
 - (4) A description of the preventative maintenance program for cleaning equipment so that delays in cleaning due to equipment failures are avoided.
 - (5) A description of the analyses and model (if one is used) used to determine the time of maximum concentration based on dosage, injection point, facility flow, etc.
- ii. Biological Pollution
- (1) Describe, in detail, the precautions that will be exercised by the facility to prevent aquatic organisms that are not indigenous to the New England area and/or the United States from becoming established in the local surface waters.
 - (2) A description for storage and treatment of discharges during plant upsets to prevent biological pollution (non-native organisms, fish parasites, and fish diseases) from entering the receiving water in the case of an untreated discharge bypass.
- iii. Cleaning of culture tanks/raceways and other equipment
- (1) Describe in detail how the accumulated solids are to be removed, dewatered and methods of disposal.
 - (2) Describe where the removed material is to be placed and the techniques used to prevent it from re-entering the surface waters from any on-site storage. If the material is to be removed from the site, describe who receives the material and its method of disposal and/or reuse.
- iv. Medications and chemicals used in the facility
- (1) List in the plan all medications and chemicals that are expected to be used in the culture tanks/raceways. For each medication or chemical, identify:
 - (a) Product name of the medication or chemical.
 - (b) The chemical formulation of the medication or chemical.

- (c) The purpose or use of the chemical.
 - (d) The dosage concentration, frequency of application (hourly, daily, etc.) and the duration (hours, days) of treatment.
 - (e) The method of application.
 - (f) Material Safety Data Sheets (MSDS), Chemical Abstracts Service (CAS) Registry number for each active therapeutic ingredient.
 - (g) The method or methods used to detoxify the wastewater prior to discharge following application of chemical and/or medication.
 - (h) Information on the persistence and toxicity of each medication or chemical.
 - (i) Information on the Food and Drug Administration (USFDA) approval for the use of said medication or chemical on fish or fish related products used for human consumption.
 - (j) Available aquatic toxicity data for each medication or chemical used (vendor data, literature data, etc.); LC₅₀ at 48 and/or 96 hours and No Observed Effect Level (NOEL) concentrations for typical aquatic organisms (salmon, trout, daphnia, fathead minnow, etc.).
- v. Personnel Training
- (1) Describe the training to be provided for employees to assure they understand the goals and objectives of the BMPs, the requirements of the NPDES Permit and their individual responsibilities for complying with the goals and objectives of the BMP Plan and the NPDES permit.
- vi. BMP Records Maintenance
- (1) Records of the calculations done at the time of sampling must be maintained at the facility in order that an inspector may verify that the sampling was properly conducted.

B. SPECIAL CONDITION -- REPRESENTATIVE SAMPLING METHOD

The four outfalls at the Pittsford National Fish Hatchery do not currently allow for the collection of a representative sample of the total hatchery effluent when more than one outfall is discharging at the same time. Therefore, as a condition of this permit, on or before **30 days after the effective date of the permit**, the

permittee shall provide a report to the US EPA which contains a method for providing a representative sample of the combined discharges from the four permitted outfalls from the fish hatchery. The representative sampling method may be achieved by: a) construction of a connecting outfall manifold so that all wastewater enters Furnace Brook through a single sampling point; b) changes in operations so that only one outfall discharges at any one time; c) installation of composite sampling equipment on multiple outfalls which takes samples which are flow proportional by both outfall and time; or d) some other appropriate method.

The report shall also contain a plan and schedule for implementation of the representative sampling method. The plan and schedule shall result in full implementation of the representative sampling method as soon as practicable, but **not later than 120 days after the effective date of the permit**.

C. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfall(s) listed in Part I A.1. of this permit. Discharges of wastewater from any other point sources are not authorized by this permit and shall be reported in accordance with Section D.1.e. (1) of the Part II Standard Conditions of this permit (Twenty-four hour reporting).

D. MONITORING AND REPORTING

Monitoring results obtained during each calendar month shall be summarized and reported on Discharge Monitoring Form(s) postmarked no later than the 15th day of the following month.

Signed and dated originals of these, and all other reports required herein, shall be submitted to EPA at the following address:

U.S. Environmental Protection Agency
Water Technical Unit (SEW)
P.O. Box 8127
Boston, Massachusetts 02114-8127

Additional monitoring and recordkeeping requirements are contained in Section C of the Part II Standard Conditions of this permit. Section C includes, but is not limited to, the requirements to record: the date, exact place, and time of sampling, measurements, and analyses; the individual(s) who performed the sampling, measurements, and analyses; the analytical techniques or methods used; and the results of such analyses. Section C of Part II also includes the requirements to retain records of all monitoring information, including all data, for a period of at least 3 years from the date of the sample, measurement, report or application.

Additional reporting requirements are contained in Section D of the Part II Standard Conditions of this permit. Section D requires reporting of monitoring results on a Discharge Monitoring Report (DMR), as well as reporting within 24 hours of any noncompliance which may endanger health or the environment. Section D also requires reporting to EPA if a variety of conditions exist, including planned changes to the facility and anticipated or unanticipated noncompliance. This section also sets the signatory and public availability requirements of reports sent to EPA.

