AUTHORIZATION TO DISCHARGE UNDER THE
RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of Chapter 46-12 of the Rhode Island General Laws, as amended, the

Rhode Island Department of Environmental Management
Division of Fish and Wildlife
4808 Tower Hill Road
Wakefield, RI 02879

is authorized to discharge from a facility located at

Lafayette Trout Hatchery
424 Hatchery Road
North Kingstown, RI 02852

to receiving waters named

Hatchery Brook a/k/a Goose Nest Brook

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

This permit shall become effective on November 1, 2010.

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

This permit supersedes the permit issued on April 23, 2003.

This permit consists of 12 pages in Part I including effluent limitations, monitoring requirements, etc. and 10 pages in Part II including General Conditions.

Signed this 29th day of September, 2010.

Angelo S. Liberti

Angelo S. Liberti, P.E., Chief of Surface Water Protection
Rhode Island Department of Environmental Management
Office of Water Resources
Providence, Rhode Island

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through permit expiration, the permittee is authorized to discharge from outfall serial number 001 (Final Discharge from Raceway into Goose Nest Brook).

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations					Monitoring Requirement	
	Quantity - lbs./day		Concentration - specify units				
	Average Monthly	Maximum Daily	Average Monthly *(Minimum)	Average Weekly *(Average)	Maximum Daily *(Maximum)	Measurement Frequency	Sample Type
Flow[1]	2.5 MGD						Estimate[2]
BOD_5[1]			5 mg/l		10 mg/l	1/Month	Grab[2]
TSS[1]			5 mg/l		10 mg/l	1/Month	Grab[2]
pH[1]			(6.5)			1/Week	Grab[2]
Dissolved Oxygen[1]			(5.0 mg/l)	(6.5 mg/l)		1/Week	Grab[2]
Temperature[1]					68 °F	1/Week	Grab[2]
Ammonia, Total (as N)[1]			1.368 mg/l	(0.0) Weekly	4.496 mg/l	1/Month	Grab[2]
Phosphorus, Total[1]			0.025 mg/l		--- mg/l	1/Month	Grab[2]
Phosphorus, Dissolved[1]			--- mg/l		--- mg/l	1/Month	Grab[2]

--- Signifies a parameter which must be monitored and data must be reported.

Values in parentheses () are to be reported as Minimum/Average/Maximum for the reporting period rather than Average Monthly/Average Weekly/Maximum Daily.

[1]These parameters shall be gathered in conjunction with the Sampling Plan listed in Part I.A.7 of the permit.

[2]Samples should be taken at the end of the raceway prior to discharge to surface waters.

2. a. The pH of the effluent shall not be less than 6.5 standard units nor greater than 9.0 standard units at any time.

   b. The discharge shall not cause visible discoloration of the receiving waters.

   c. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.

3. 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, on a routine or frequent 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) 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 for 2-methyl-4,6-dinitro-phenol; 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 C.F.R. s122.21(g)(7); or

      (4) Any other notification level established by the Director in accordance with 40 C.F.R. s122.44(f) and Rhode Island 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 C.F.R. s122.21(g)(7); or

      (4) Any other notification level established by the Director in accordance with 40 C.F.R. s122.44(f) and Rhode Island Regulations.

   c. That they have begun or expect to begin to use or manufacture as an intermediate or final product or by-product any toxic pollutant which was not reported in the permit application.

4. The effluent shall not contain materials in concentrations or combinations that are hazardous or toxic to aquatic life or which would impair the uses designated by the classification of the receiving water. This permit does not authorize the use of Chlorine or Formaldehyde containing chemicals in the hatchery.

5. There shall be no discharge of untreated wastewaters resulting from cleaning accumulated solids in the raceways/tanks, screens, and associated equipment.

6. The disposal of solid waste materials from the facility shall comply with the appropriate State, Local, and Federal statutes.

7. Sampling Plan

The facility must adhere to the requirements of the following sampling plan when analyzing its effluent:

a. Water quality data for flow, pH, dissolved oxygen, and temperature shall be gathered by facility staff. pH and dissolved oxygen samples shall be analyzed in accordance with the following test methods approved under 40 CFR 136.3:
   - The approved method for pH is: Standard Method # 4500-H+B.
   - The approved method for DO is: Standard Method # 4500-O C for Winkler Titration and 4500-O G for electrode.

   In order for a device to be used, it must be approved by EPA for use with the method.

b. Water quality data for BOD_5, TSS, Ammonia, and Phosphorus shall be gathered by the facility's consultant who shall sample at random intervals without coordinating with the facility. The following test methods shall be used:
   - BOD_5: Standard Methods #:5210B
   - TSS: Standard Methods #:2540
   - Ammonia: 350.1
   - Total Phosphorus:
     - End of quiescent zone / final discharge from raceway into Goose Neck Brook: Standard Methods #4500-PF
   - Dissolved Phosphorus:
     - End of quiescent zone / final discharge from raceway into Goose Neck Brook: Standard Methods #4500-P D

c. The facility must keep records of when effluent samples were taken and when it performed solids removal and report the dates in cover letters to DMR's.

8. Best Management Practices (BMP) Plan

a. The permittee shall maintain a BMP Plan to be followed in operating the facility; cleaning the raceways/tanks, screens, and other equipment; and disposing of any wastes. The purpose of the plan is to identify and describe the practices, which minimize the amount of pollutants discharged to surface and subsurface waters. Within thirty (30) days of the effective date of this permit, the permittee shall update its July 29, 2005 BMP Plan to address the requirements of this permit and submit the revised BMP Plan to the RIPDES Program for review and approval.

b. The plan shall be signed and certified as required in the General Conditions (Part II) of this permit. A current copy of the plan shall be maintained on-site.

c. The BMP Plan is an enforceable element of this permit and shall be implemented by the permittee at all times.

d. The permittee shall amend the BMP Plan within thirty (30) days whenever there is a change in facility design, construction, operation, or maintenance that affects the potential for the discharge of pollutants into surface or subsurface waters or if the RIPDES Program notifies the permittee of any deficiencies in the BMP Plan. The amendments to the BMP Plan shall be reviewed and approved by the RIPDES Program.

e. If the Plan is reviewed by the RIPDES Program, the permittee may be notified at any time that the Plan does not meet one or more of the minimum requirements of this part. After such notification, the permittee shall make changes to the Plan and shall submit a written certification that the requested changes have been made to the RIPDES Program. Unless otherwise provided, the permittee shall have thirty (30) days to make the necessary changes.

f. The BMP Plan shall include, at a minimum, the following items:

(1) Operations:

(i) A description of the pollution control equipment or methods used to enhance solids collection.

(ii) A description of how excessive solids build-up will be identified to trigger more frequent cleaning of the raceways/tanks and equipment, thereby minimizing the discharge of suspended and dissolved materials.

(iii) A description of the methods used in the feeding to minimize the amount of feed chemicals introduced into the discharge, including specific feeding strategies that limit feed input to the minimum amount reasonably necessary to achieve production goals and sustain targeted rates of aquatic animal growth in order to minimize the potential discharge of uneaten feed and waste products.

(iv) A description of the regular maintenance procedures used for the production and wastewater treatment systems in order to ensure that they are properly functioning.

(v) A description of the procedures used to ensure the proper storage of drugs, pesticides, and feed in a manner designed to prevent spills.

(vi) A description of the procedures for properly containing, cleaning, and disposing of any spilled material.

(vii) A description of the procedures used to inspect the production and wastewater treatment systems on a routine basis to identify and promptly repair any damage.

(2) Biological Pollution

(i) A description of the precautions that will be exercised by the facility to prevent aquatic organisms that are not indigenous to Rhode Island from becoming established in the local surface waters.

(ii) A description of the storage and treatment practices that will be implemented at Outfall 001 during plant upsets to prevent biological pollution (non-native organisms, fish parasites and fish diseases) from entering the receiving water.

(3) Cleaning of raceways/tanks and other equipment:

(i) A detailed description of how the accumulated solids are to be removed, dewatered, and methods for disposal. This shall include details identifying procedures for routine cleaning of rearing units and off-line settling basins, and procedures to minimize the discharge of accumulated solids during the inventorying, grading and harvesting of aquatic animals in the production system.

(ii) A description of where the removed material is to be placed and the techniques used to prevent it from reentering the surface waters from any on-site storage. If the material is removed from the site, describe who received the material and its method of disposal and/or reuse.

(iii) A detailed description of the procedures used to remove and dispose of aquatic animal mortalities on a regular basis to prevent discharge to the receiving waters.

(4) Personnel training:

(i) A description of the training to be provided for employees to assure they understand:

a. The goals and objectives of the BMPs;

b. The requirements of the RIPDES permit;

c. Their individual responsibilities for complying with the goals and objectives of the BMP Plan and the RIPDES permit;

d. The spill prevention and response procedures in order to ensure the proper clean-up and disposal of spilled material;

e. The proper operation and cleaning of production and wastewater treatment systems including training in feeding procedures and proper use of equipment.

(5) Medications and Chemicals used in the facility:

(i) List in the BMP Plan all medications or chemicals that are expected to be used in the tanks/raceways. For each medication or chemical, identify or provide:

a. the product name of the medication or chemical;

b. a copy of the Material Safety Data Sheet (MSDS);

c. the chemical formulation of the medication or chemical;

d. the purpose or use of the medication or chemical;

e. the dosage rate, frequency of application (hourly, daily, etc.), and duration (number of hours or days) of the treatment;

f. the method of application;

g. the method or methods used to detoxify the wastewater prior to discharge (if necessary);

h. information on the persistence and toxicity of each medication or chemical;

i. information on the U.S. Food and Drug Administration (USFDA) approval for the use of the medication or chemical on fish or fish related products for human consumption, and;

j. a copy of any available aquatic toxicity data for each medication or chemical used (vendor data, literature data, etc.): no effect level and LC-50 for typical aquatic organisms (salmon, trout, daphnia, minnows, etc.).

(6) Notification Requirements:

(i) The permittee must notify the RIPDES Program of the use of any Investigational New Animal Drug (INAD) or any extralabel drug use. 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. This notification shall include:

a. A written report to the RIPDES Program of an INAD's impending use within seven (7) days of agreeing or signing up to participate in an 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. Verbal notification to the RIPDES Program no later than seven (7) days after initiating use of a INAD or extralabel drug of the drugs used, method of application, and the reason for using that drug.

c. A written report to the RIPDES Program within thirty (30) days after initiating use of an INAD or extralabel drug that identifies the drug used, the reason for treatment, dates and times of the addition (including duration), method of application, and the amount added.

(ii) The permittee must notify the RIPDES Program of any failures in, or damage to, the structure of the raceways that result in an unanticipated discharge of pollutants. This notification shall include:

a. Verbal notification to the RIPDES Program within twenty-four (24) hours of discovery of a failure or damage that results in a discharge of pollutants, describing the cause of the failure or damage and identifying materials that have been released to the environment as a result of this failure.

b. A written report to the RIPDES Program within seven (7) days of discovery of the failure or damage documenting the cause, 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 reoccurrence.

(iii) The permittee must notify the RIPDES Program of any spills of drugs, pesticides, or feed that results in a discharge to receiving waters. This notification shall include:

a. Verbal notification to the RIPDES Program within twenty-four (24) hours of its occurrence

b. A written report within seven (7) days. The report shall include the identity and quantity of the material spilled.

(7) Recordkeeping:

(i) The permittee shall maintain records documenting the feed amounts and estimates of the numbers and weight of fish to calculate representative feed conversion ratios.

(ii) The permittee shall keep records documenting the frequency of cleaning, inspections, maintenance and repairs.

9. This permit serves as the State's Water Quality Certificate for the discharges described herein.

B. **DETECTION LIMITS**

The permittee shall assure that all wastewater testing required by this permit, is performed in conformance with the method detection limits listed below (the EPA method is noted for reference, other EPA approved methods found in 40 CFR Part 136 may be utilized). All sludge testing required by this permit shall be in conformance with the method detection limits found in 40 CFR 503.8. In accordance with 40 CFR Part 136, EPA approved analysis techniques, quality assurance procedures and quality control procedures shall be followed for all reports required to be submitted under the RIPDES program. These procedures are described in "Methods for the Determination of Metals in Environmental Samples" (EPA/600/4-91/010) and "Methods for Chemical Analysis of Water and Wastes" (EPA/600/4-79/020).

The report entitled "Methods for the Determination of Metals in Environmental Samples" includes a test which must be performed in order to determine if matrix interferences are present, and a series of tests to enable reporting of sample results when interferences are identified. Each step of the series of tests becomes increasingly complex, concluding with the complete Method of Standard Additions analysis. The analysis need not continue once a result which meets the applicable quality control requirements has been obtained. Documentation of all steps conducted to identify and account for matrix interferences shall be submitted along with the monitoring reports.

If, after conducting the complete Method of Standard Additions analysis, the laboratory is unable to determine a valid result, the laboratory shall report "could not be analyzed". Documentation supporting this claim shall be submitted along with the monitoring report. If valid analytical results are repeatedly unobtainable, DEM may require that the permittee determine a method detection limit (MDL) for their effluent or sludge as outlined in 40 CFR Part 136, Appendix B.

Therefore, all sample results shall be reported as: an actual value, "could not be analyzed", less than the reagent water MDL, or less than an effluent or sludge specific MDL. The effluent or sludge specific MDL must be calculated using the methods outlined in 40 CFR Part 136, Appendix B. Samples which have been diluted to ensure that the sample concentration will be within the linear dynamic range shall not be diluted to the extent that the analyte is not detected. If this should occur the analysis shall be repeated using a lower degree of dilution.

When calculating sample averages for reporting on discharge monitoring reports (DMRs):

1. "could not be analyzed" data shall be excluded, and shall not be considered as failure to comply with the permit sampling requirements;

2. results reported as less than the MDL shall be included as values equal to the MDL, and the average shall be reported as "less than" the calculated value.

For compliance purposes, DEM will replace all data reported as less than the MDL with zeroes, provided that DEM determines that all appropriate EPA approved methods were followed. If the re-calculated average exceeds the permit limitation it will be considered a violation.

LIST OF TOXIC POLLUTANTS

The following list of toxic pollutants has been designated pursuant to Section 307(a)(1) of the Clean Water Act. The Method Detection Limits (MDLs) represent the required Rhode Island MDLs.

Volatiles - EPA Method 624		MDL ug/l (ppb)
1V	acrolein	10.0
2V	acrylonitrile	5.0
3V	benzene	1.0
5V	bromoform	1.0
6V	carbon tetrachloride	1.0
7V	chlorobenzene	1.0
8V	chlorodibromomethane	1.0
9V	chloroethane	1.0
10V	2-chloroethylvinyl ether	5.0
11V	chloroform	1.0
12V	dichlorobromomethane	1.0
14V	1,1-dichloroethane	1.0
15V	1,2-dichloroethane	1.0
16V	1,1-dichloroethylene	1.0
17V	1,2-dichloropropane	1.0
18V	1,3-dichloropropylene	1.0
19V	ethylbenzene	1.0
20V	methyl bromide	1.0
21V	methyl chloride	1.0
22V	methylene chloride	1.0
23V	1,1,2,2-tetrachloroethane	1.0
24V	tetrachloroethylene	1.0
25V	toluene	1.0
26V	1,2-trans-dichloroethylene	1.0
27V	1,1,1-trichloroethane	1.0
28V	1,1,2-trichloroethane	1.0
29V	trichloroethylene	1.0
31V	vinyl chloride	1.0

Acid Compounds - EPA Method 625		MDL ug/l (ppb)
1A	2-chlorophenol	1.0
2A	2,4-dichlorophenol	1.0
3A	2,4-dimethylphenol	1.0
4A	4,6-dinitro-o-cresol	1.0
5A	2,4-dinitrophenol	2.0
6A	2-nitrophenol	1.0
7A	4-nitrophenol	1.0
8A	p-chloro-m-cresol	2.0
9A	pentachlorophenol	1.0
10A	phenol	1.0
11A	2,4,6-trichlorophenol	1.0

Pesticides - EPA Method 608		MDL ug/l (ppb)
1P	aldrin	0.059
2P	alpha-BHC	0.058
3P	beta-BHC	0.043
4P	gamma-BHC	0.048
5P	delta-BHC	0.034
6P	chlordane	0.211
7P	4,4'-DDT	0.251
8P	4,4'-DDE	0.049
9P	4,4'-DDD	0.139
10P	dieldrin	0.082
11P	alpha-endosulfan	0.031
12P	beta-endosulfan	0.036
13P	endosulfan sulfate	0.109
14P	endrin	0.050
15P	endrin aldehyde	0.062
16P	heptachlor	0.029
17P	heptachlor epoxide	0.040

Pesticides - EPA Method 608		MDL ug/l (ppb)
18P	PCB-1242	0.289
19P	PCB-1254	0.298
20P	PCB-1221	0.723
21P	PCB-1232	0.387
22P	PCB-1248	0.283
23P	PCB-1260	0.222
24P	PCB-1016	0.494
25P	toxaphene	1.670

Base/Neutral - EPA Method 625		MDL ug/l (ppb)
1B	acenaphthene *	1.0
2B	acenaphthylene *	1.0
3B	anthracene *	1.0
4B	benzidine	4.0
5B	benzo(a)anthracene *	2.0
6B	benzo(a)pyrene *	2.0
7B	3,4-benzofluoranthene *	1.0
8B	benzo(ghi)perylene *	2.0
9B	benzo(k)fluoranthene *	2.0
10B	bis(2-chloroethoxy)methane	2.0
11B	bis(2-chloroethyl)ether	1.0
12B	bis(2-chloroisopropyl)ether	1.0
13B	bis(2-ethylhexyl)phthalate	1.0
14B	4-bromophenyl phenyl ether	1.0
15B	butylbenzyl phthalate	1.0
16B	2-chloronaphthalene	1.0
17B	4-chlorophenyl phenyl ether	1.0
18B	chrysene *	1.0
19B	dibenzo (a,h)anthracene *	2.0
20B	1,2-dichlorobenzene	1.0
21B	1,3-dichlorobenzene	1.0
22B	1,4-dichlorobenzene	1.0
23B	3,3'-dichlorobenzidine	2.0
24B	diethyl phthalate	1.0
25B	dimethyl phthalate	1.0
26B	di-n-butyl phthalate	1.0
27B	2,4-dinitrotoluene	2.0
28B	2,6-dinitrotoluene	2.0
29B	di-n-octyl phthalate	1.0
30B	1,2-diphenylhydrazine (as azobenzene)	1.0
31B	fluoranthene *	1.0
32B	fluorene *	1.0
33B	hexachlorobenzene	1.0
34B	hexachlorobutadiene	1.0
35B	hexachlorocyclopentadiene	2.0
36B	hexachloroethane	1.0
37B	indeno(1,2,3-cd)pyrene *	2.0
38B	isophorone	1.0
39B	naphthalene *	1.0
40B	nitrobenzene	1.0
41B	N-nitrosodimethylamine	1.0
42B	N-nitrosodi-n-propylamine	1.0
43B	N-nitrosodiphenylamine	1.0
44B	phenanthrene *	1.0
45B	pyrene *	1.0
46B	1,2,4-trichlorobenzene	1.0

OTHER TOXIC POLLUTANTS

	MDL ug/l (ppb)
Antimony, Total	5.0
Arsenic, Total	5.0
Beryllium, Total	0.2
Cadmium, Total	1.0
Chromium, Total	5.0
Chromium, Hexavalent***	20.0
Copper, Total	20.0
Lead, Total	3.0
Mercury, Total	0.5
Nickel, Total	10.0
Selenium, Total	5.0
Silver, Total	1.0
Thallium, Total	5.0
Zinc, Total	20.0
Asbestos	**
Cyanide, Total	10.0
Phenols, Total***	50.0
TCDD	**
MTBE (Methyl Tert Butyl Ether)	1.0
BOD	1 mg/L
TSS	1 mg/L
pH	0.1 pH units
DO (winkler titration)	20
DO (electrode)	50
Ammonia	50
Total Phosphorus	10
Dissolved Phosphorus	3

* Polynuclear Aromatic Hydrocarbons
** No Rhode Island Department of Environmental Management (RIDEM) MDL
*** Not a priority pollutant

NOTE:

The MDL for a given analyte may vary with the type of sample. MDLs which are determined in reagent water may be lower than those determined in wastewater due to fewer matrix interferences. Wastewater is variable in composition and may therefore contain substances (interferents) that could affect MDLs for some analytes of interest. Variability in instrument performance can also lead to inconsistencies in determinations of MDLs.

To help verify the absence of matrix or chemical interference the analyst is required to complete specific quality control procedures. For the metals analyses listed above the analyst must withdraw from the sample two equal aliquots; to one aliquot add a known amount of analyte, and then dilute both to the same volume and analyze. The unspiked aliquot multiplied by the dilution factor should be compared to the original. Agreement of the results within 10% indicates the absence of interference. Comparison of the actual signal from the spiked aliquot to the expected response from the analyte in an aqueous standard should help confirm the finding from the dilution analysis. (Methods for Chemical Analysis of Water and Wastes EPA-600/4-79/020).

For Methods 624 and 625 the laboratory must on an ongoing basis, spike at least 5% of the samples from each sample site being monitored. For laboratories analyzing 1 to 20 samples per month, at least one spiked sample per month is required. The spike should be at the discharge permit limit or 1 to 5 times higher than the background concentration determined in Section 8.3.2, whichever concentration would be larger. (40 CFR Part 136 Appendix B Method 624 and 625 subparts 8.3.1 and 8.3.11).

C. MONITORING AND REPORTING

1. Monitoring

All monitoring required by this permit shall be done in accordance with sampling and analytical testing procedures specified in Federal Regulations (40 CFR Part 136).

2. Reporting

Monitoring results obtained during the previous calendar quarter shall be summarized and reported on Discharge Monitoring Report (DMR) Forms, postmarked no later than the 15th day of the month following the completed calendar quarter. A copy of the analytical laboratory report(s), specifying analytical methods used, shall be included with each report submission.

Monitoring shall be reported as follows:

Quarter Testing to be Performed	Report Due No Later Than	Results Submitted on DMR for
January 1 - March 31	April 15	March
April 1 - June 30	July 15	June
July 1 - September 30	October 15	September
October 1 - December 31	January 15	December

The first report is due on January 15, 2011.

A signed copy of the DMRs shall be submitted to:

Rhode Island Department of Environmental Management
RIPDES Program
235 Promenade Street
Providence, Rhode Island 02908-5767

An additional copy of each DMR shall also be submitted to the North Kingstown Department of Water Supply.

All other reports and submittals required by this permit shall be submitted to:

Rhode Island Department of Environmental Management
RIPDES Program
235 Promenade Street
Providence, Rhode Island 02908-5767

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
235 PROMENADE STREET
PROVIDENCE, RHODE ISLAND 02908-5767

STATEMENT OF BASIS

RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM (RIPDES) PERMIT TO DISCHARGE TO WATERS OF THE STATE

RIPDES PERMIT NO. **RI0110035**

NAME AND ADDRESS OF APPLICANT:

Rhode Island Department of Environmental Management
Division of Fish and Wildlife
4808 Tower Hill Road
Wakefield, RI 02879

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Lafayette Trout Hatchery
424 Hatchery Road
North Kingstown, RI 02852

RECEIVING WATER: **Hatchery Brook a/k/a Goose Nest Brook**

CLASSIFICATION: **B**

I. Proposed Action, Type of Facility, and Discharge Location

The above named applicant has applied to the Rhode Island Department of Environmental Management – Office of Water Resources for the reissuance of a (RIPDES) Permit to discharge into the designated receiving water. The facility is engaged in the farming and husbandry of freshwater fish to stock ponds and rivers in the State of Rhode Island.

II. Description of Discharge

A quantitative description of the discharge in terms of significant effluent parameters based on DMR data from October 2004 to September 2009 is shown on Attachment A-1.

III. Permit and Administrative Compliance Order Limitations and Conditions

The final effluent limitations and monitoring requirements may be found in the draft permit. RIPDES is willing to enter into a consent agreement with the facility to achieve effluent limitations for Phosphorus.

IV. Permit Basis and Explanation of Effluent Limitation Derivation

Introduction
The Rhode Island Department of Environmental Management, Division of Fish and Wildlife owns and operates the Lafayette Trout Hatchery located on Hatchery Road in North Kingstown, Rhode Island. The facility is engaged in the hatching and rearing of salmonids (trout) to supply State

waters. The discharge consists of flow-through water (with no recycling) which becomes the headwaters of Hatchery Brook.

The requirements set forth in this permit are from the State's Water Quality Regulations and the State's Regulations for the Rhode Island Pollutant Discharge Elimination System, both filed pursuant to RIGL Chapter 46-12, as amended. RIDEM's primary authority over the permit comes from EPA's delegation of the program in September 1984 under the Federal Clean Water Act (CWA).

Development of RIPDES permit limitations is a multi-step process consisting of: determining if Federal effluent guidelines apply; calculation of allowable water quality-based discharge levels based on background data and available dilution; comparing existing and proposed limits; and comparing discharge data to proposed limits. A description of these steps is presented below.

The RIPDES Program began to consider the specific issues addressed by this permit reissuance in conjunction with its review of the Best Management Practices Plan that the Office of Fish and Wildlife submitted to RIPDES on March 28, 2005. Fish and Wildlife submitted a revised BMP plan to RIPDES on July 29, 2005, in response to RIPDES' comments. The revised BMP plan contained a timeline for Fish and Wildlife to implement solids removal BMP's at the Lafayette Hatchery. The solids removal BMP plan called for the hatchery to convert its downstream raceways into settling basins, which Fish and Wildlife staff were to clean out once every 2-4 weeks with a vacuum pump which would deposit settling basin sludge into a tank truck to be hauled offsite.

Technology-Based Limits

On June 30 2004, the Environmental Protection Agency (EPA) finalized a new rule establishing effluent limitation guidelines (ELGs) for concentrated aquatic animal production (CAAP), or aquaculture, facilities. 40 CFR Part 451.12 mandates the implementation of Best Available Technology (BAT) which requires CAAP's to complete and implement a best management practices plan. This permit requires the hatchery to update its July 29, 2005 BMP plan so that it is consistent with the requirements of 40 CFR Part 451. The updated BMP Plan must be submitted to the RIPDES Program for review and approval within thirty (30) days of the effective date of this permit.

BPJ Limits

In accordance with Section 402 (a)(1) of the CWA and 40 CFR 125.3, if there are no technology-based effluent guidelines for a given pollutant, the DEM is authorized to use Best Professional Judgement (BPJ) to establish effluent limitations. Limits for BOD and TSS in this permit are based upon BPJ.

Biochemical Oxygen Demand (BOD) – The BOD limits were derived in conjunction with the issuance of the 2003 permit from a review of effluent data from fish hatcheries in Rhode Island, as well as a review of EPA permits developed for fish hatcheries located in Massachusetts and New Hampshire, and a review of general permits developed for similar facilities in Idaho, Oregon, and South Carolina. A recent review of six hatchery permits drafted by EPA Region 1 indicated that a max. daily BOD limit of 10 mg/l was consistent with the limits in EPA Region 1's draft permits, therefore, BOD limits are being maintained from the 2003 permit at 5 mg/l average monthly and 10 mg/l maximum daily. A review of the historic BOD Discharge Monitoring Report (DMR) data indicates that the facility is able to meet these limits. The draft permit carries forward the quarterly monitoring frequency from the previous permit.

Total Suspended Solids (TSS) – The TSS limits were derived in conjunction with the issuance of the 2003 permit from a review of effluent data from fish hatcheries in Rhode Island, as well as a review of EPA permits developed for fish hatcheries located in Massachusetts and New Hampshire, and a review of general permits developed for similar facilities in Idaho, Oregon, and South Carolina. A review of six hatchery permits drafted by EPA Region 1 indicated that a max. daily TSS limit of 10 mg/l was consistent with the limits in EPA Region 1's draft permits. Therefore, TSS limits are being maintained from the 2003 permit at 5 mg/l average monthly and 10 mg/l maximum daily. A review of the DMR data indicates that the facility is able to comply with

the new limits. The draft permit carries forward the quarterly monitoring frequency from the previous permit.

Water Quality-Based Limits

Water quality based limits are calculated using background data, when available, and in-stream dilution. Appendix B of the Rhode Island Water Quality Regulations describes the flows used to determine the in-stream dilution. Specifically, the river flow to be utilized for freshwater human health non-carcinogen criteria is the 30 consecutive day low flow with a recurrence frequency of once in five years (30Q5), freshwater human health carcinogenic criteria use the harmonic mean flow, and aquatic life criteria use the 7 consecutive day low flow with a recurrence frequency of once in 10 years (7Q10). These river flows in addition to the facility design flow are used to determine the available dilution. However, since this facility's discharge forms the headworks of Hatchery Brook, the 30Q5, harmonic mean, and 7Q10 river flows are zero. As a result, no dilution is available.

Based on the available dilution and the water quality criteria the allowable water quality-based discharge concentrations are established using 80% allocation when no background data is available and 90% allocation when background data was available. There is no background data available, therefore, the allowable water quality-based discharge levels are set equal to 80% of the water quality criteria for Class B waters as listed in Appendix B of the Rhode Island Water Quality Regulations.

In accordance with 40 CFR Part 122.4(d)(1)(iii), it is only necessary to establish limitations for those pollutants in the discharge which have the reasonable potential to cause or contribute to Phosphorus in this permit are water quality-based.

Total Ammonia as N - The draft permit maintains average monthly and maximum daily Ammonia limits that are water quality-based. These limits were deemed necessary since concentrated aquatic animal facilities are known contributors of ammonia. As indicated above, since no dilution is available and since there is no background data, the allowable water quality-based discharge levels are equal to 80% of the water quality criteria for Class B waters as listed in Appendix B of the Rhode Island Water Quality Regulations. Since the Ammonia criteria are based on pH and temperature, limits for those constituents were also placed in the permit. The highest pH and the highest temperature yield the lowest Ammonia criteria. The Ammonia limits were based upon an in-stream pH of 8.0 s.u. and the maximum temperature limit of 20 ^{o}C (68 ^{o}F). The limits are 1.368 mg/l average monthly and 4.496 mg/l maximum daily. A review of the historic Ammonia Discharge Monitoring Report (DMR) data indicates that the facility is able to meet these limits. The draft permit includes monthly monitoring.

Temperature – The draft permit includes a maximum temperature limit of 68 ^{o}F. This limit is consistent with the maximum temperature limit for heated discharges to fresh water coldwater habitats and will also ensure that ammonia toxicity will not be exhibited in the receiving water, since the water quality-based Ammonia limit is dependent on temperature. The draft permit includes a weekly monitoring frequency. Historical data indicates that the facility is able to comply with this permit limit.

pH – The draft permit includes a minimum pH limit of 6.5 s.u. and a maximum pH limit of 9.0 s.u., which is equivalent to the water quality criteria for freshwater receiving waters contained in the Rhode Island Water Quality Regulations. The weekly monitoring frequency is being maintained. Historical data indicates that the facility will be able to comply with these limits.

Total Phosphorus – The Office of Water Resources has documented receiving water impacts in the Belleville Pond system in conjunction with its development of the Belleville Ponds TMDL. The main impact is the overgrowth of aquatic and emergent plants which the TMDL group attributes to Phosphorus inputs to the pond system. The following is a list of plant species that have been documented as being present in the Belleville Pond system:

- Fanwort covers much of the pond bottom;
- Chinese water chestnut;
- coontail and duckweed;

- other aquatics include white and yellow water lily, water shield, bladderwort, and macrophytic algae; and
- Phragmites dominate the shoreline of the pond

Inspection of historic photographs shows that the pond is filling in with plants and/or sediment. The Office of Water Resources has documented that most of the surface (specifically the western half of the pond) is covered in some form of plant, be it floating or submerged, or an algae.

To control the documented excessive plant growth in Belleville Pond, the Office of Water Resources developed a TMDL document dated December 2009 that assigns the Lafayette Hatchery a Total Phosphorus limit of 0.025 mg/L at the outfall. Consistent with this TMDL, the permit includes a Total Phosphorus limit of 0.025 mg/L based on the hatchery's historic effluent data shown in Attachment A-1, RIPDES anticipates that the Lafayette Hatchery will not be able to comply with a Total Phosphorus limit of 0.025 mg/L, therefore, RIPDES is willing to enter into a consent agreement to bring the Lafayette hatchery into compliance. Upon the issuance of the hatchery permit, it is anticipated that Water Resources and Fish and Wildlife will enter into a consent agreement to bring the Lafayette hatchery into compliance with the new Phosphorus limit. The Belleville Pond TMDL document provides a more detailed discussion of this waste load allocation approach.

Dissolved Phosphorus – Effluent monitoring for dissolved phosphorus was added to this permit to provide additional information to characterize the distribution between dissolved phosphorus and total phosphorus. The test method which is to be used is referenced in the sampling plan.

Dissolved Oxygen (DO) – The draft permit includes limits for DO that are based upon water quality standards from the Rhode Island Water Quality Regulations. The discharge from this facility is to a Class B Cold Water Fish Habitat that has an instantaneous minimum DO Standard of 5.0 mg/L and a 7 day mean minimum DO standard of 6.5 mg/L. Therefore, the minimum DO limit is 5.0 mg/L and the minimum average DO limit is 6.5 mg/L. The draft permit includes a weekly monitoring frequency. Historical data indicates that the facility will be able to comply with this permit limit.

Permit limits were eliminated for Total Residual Chlorine (TRC) and Formaldehyde in conjunction with this reissuance because the Lafayette Hatchery does not use these chemicals and, as a result, the permit does not authorize the use of chlorine or formaldehyde containing chemicals.

Antidegradation

The Office has determined that all permit limitations are consistent with the Rhode Island Antidegradation policy. Limitations were established in the permit to restrict the permittee's discharge and ensure that water quality criteria will be met. Since the draft permit is being reissued with allowable discharge limits as or more stringent than the current permit with no change in outfall location, antidegradation regulations do not apply.

Antibacksliding

Antibacksliding, as defined at 40 CFR 122.44(1)(l) requires reissued permits to contain limitations that are as stringent or more stringent that the limits in the previous permit unless the circumstances allow the application of one of the defined exceptions to this regulation. All proposed limits are at least as stringent as those in the previous permit, therefore, antibacksliding regulations have been met.

Remaining Conditions

The remaining general and specific conditions of the permit are based on the RIPDES regulations as well as 40 CFR Parts 122 through 125 and consist primarily of management requirements common to all permits. The effluent monitoring requirements have been specified in accordance with RIPDES regulations as well as 40 CFR 122.41 (j), 122.44 (i), and 122.48 to yield data representative of the discharge.

V. Comment Period, Hearing Requests, and Procedures for Final Decisions

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to the Rhode Island Department of Environmental Management, Office of Water Resources, 235 Promenade Street, Providence, Rhode Island, 02908-5767. Any person, prior to such date, may submit a request in writing for a public hearing to consider the draft permit to the Rhode Island Department of Environmental Management. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty (30) days public notice whenever the Director finds that response to this notice indicates significant public interest. In reaching a final decision on the draft permit the Director will respond to all significant comments and make these responses available to the public at DEM's Providence Office.

Following the close of the comment period, and after a public hearing, if such hearing is held, the Director will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Within thirty (30) days following the notice of the final permit decision any interested person may submit a request for a formal hearing to reconsider or contest the final decision. Requests for formal hearings must satisfy the requirements of Rule 49 of the Regulations for the Rhode Island Pollutant Discharge Elimination System.

VI. DEM Contact

Additional information concerning the permit may be obtained between the hours of 8:30 a.m. and 4:00 p.m., Monday through Friday, excluding holidays from:

Samuel Kaplan, P.E.
Sanitary Engineer
RIPDES Program
Office of Water Resources
Department of Environmental Management
235 Promenade Street
Providence, Rhode Island 02908
Telephone: (401) 222-4700, extension: 7046

7/21/10
Date

Eric A. Beck, P.E.
Supervising Sanitary Engineer
RIPDES Permitting Section
Office of Water Resources
Department of Environmental Management

ATTACHMENT A-1

DESCRIPTION OF DISCHARGE: The discharge from the farming and husbandry of freshwater fish to stock in ponds and rivers in the State of Rhode Island.

DISCHARGE: 001A – Flow-through hatchery water

AVERAGE EFFLUENT CHARACTERISTICS AT POINT OF DISCHARGE:

PARAMETER	**AVERAGE[1]**	**MAXIMUM[2]**
FLOW (MGD)	1.8043 MGD	2.01 MGD
BOD_5 (PPM)	1.7217 mg/l	4.5 mg/l
Ammonia Total (as N)	0.3674 mg/l	0.4626 mg/l
Dissolved Oxygen (DO) (PPM)	7.732 mg/l	7.223 mg/l minimum
pH	6.774 S.U. (minimum)	7.128 S.U. (maximum)
Phosphorus, total (as P)		0.1313 mg/L
TSS	4.33 mg/l	8.6667 mg/l
Temperature	52.75 deg. F (maximum)	

[1]Data represents the mean of the monthly average data from October 2004 to September 2009.
[2]Data represents the mean of the daily maximum data from October 2004 to September 2009.
[3]Data is from October 2004 to December 2004.

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

September 29, 2010

Ms. Christine A. Dudley
Supervising Biologist – Freshwater Fisheries
Rhode Island Department of Environmental Management
Division of Fish and Wildlife
Great Swamp Field Headquarters
277 Great Neck Road
West Kingston, RI 02892

RE: Final RIPDES Permit for Lafayette Hatchery
RIPDES Application No. RI0110035

Dear Ms. Dudley:

Enclosed is your final Rhode Island Pollutant Discharge Elimination System (RIPDES) Permit issued pursuant to the referenced application. As indicated on page 1 of the permit, this permit becomes effective on November 1, 2010. As outlined in the public notice and fact sheet for this permit, the Office of Water Resources is planning to issue a consent agreement that contains interim effluent limitations and a compliance schedule for Total Phosphorus. In order to allow the Division of Fish and Wildlife and the Office of Water Resources to enter into a consent agreement, Fish and Wildlife must submit a Hearing request and a Stay request in accordance with the attached instructions within thirty (30) days of receiving this letter. Once a Hearing Request and a Stay Request have been submitted, the Office of Water Resources will develop a proposed consent agreement and send it to Fish and Wildlife for review and signature.

Also enclosed is a copy of the Department's response to the comments received on the draft permit and information relative to hearing requests and stays of RIPDES Permits.

The RIPDES Program would like to remind the Division of Fish and Wildlife that, in accordance with Part I.A.8.a of the attached permit, an updated BMP Plan must be submitted to the RIPDES program within thirty (30) days of the effective date of this permit. Therefore, since this permit becomes effective on November 1, 2010, this plan must be submitted by December 1, 2010.

We appreciate your cooperation throughout the development of this permit. Should you have any questions concerning this permit, feel free to contact Samuel Kaplan of the State Permits Staff at (401) 222-4700, extension 7046.

Sincerely,

Eric A. Beck, P.E.
Supervising Sanitary Engineer

EAB:sk

Enclosures

cc: Tim Cranston, N. Kingstown Water Dept.
ecc: Scott Ribas, DEM
Peter Angelone, DEM
Catherine Sparks, DEM
Mark Gibson, DEM
Elizabeth Scott, DEM
Eric Beck, DEM
Joseph Haberek, DEM
Annie McFarland, DEM
David Turin, EPA

RESPONSE TO COMMENTS

From July 26, 2010 to September 3, 2010 the Department of Environmental Management solicited public comment on the RIPDES Permit for the Lafayette Hatchery. RIPDES received one set of comments during the public notice period. The comments were made by a North Kingstown citizen in his capacity as a town water department employee and also as a citizen of the town. He had the following comments:

Comment 1: Extreme long-term turbidity has been observed at the stream crossing near the intersection of Lafayette Road and Audubon Road as well as in the stream that runs adjacent to Oak Hill Road between Oak Hill Pond and Secret Lake after storms. The stream crossing at the intersection is hydraulically linked to Oak Hill Pond and to Secret Lake.

Response 1: The RIPDES permit for the hatchery includes a Total Phosphorus limit of 25ppb. This new limit is being set at a level which is protective of the receiving water without dilution and will, therefore, address nutrient levels that can cause increased turbidity from excessive plant growth. Turbidity which is the result of stormwater discharges is being addressed separately under the TMDL document for Belleville Pond.

Comment 2: Trout fingerlings have been observed and captured on a regular basis in quantity at the stream crossing at the intersection of Lafayette Road and Audubon Road, which the commenter attributed to fingerlings being released from the hatchery.

Response 2: Wild brook trout inhabit the coldwater stream that flows across Lafayette Road into Oak Hill Pond and ultimately into Bellville Pond. A variety of sizes of Wild Brook Trout fingerlings, ranging from 43 – 205 mm have been collected indicating a self sustaining population. This self-sustaining population is the likely source of the fingerlings not fish which have escaped from the hatchery.

HEARING REQUESTS

If you wish to contest any of the provisions of this permit, you may request a formal hearing within thirty (30) days of receipt of this letter. The request should be submitted to the Administrative Adjudication Division at the following address:

Bonnie Stewart, Clerk
Department of Environmental Management
Office of Administrative Adjudication
235 Promenade Street, 3rd Floor
Providence, Rhode Island 02908

Any request for a formal hearing must conform to the requirements of Rule 49 of the State Regulations.

STAYS OF RIPDES PERMITS

Should the Department receive and grant a request for a formal hearing, the contested conditions of the permit will not automatically be stayed. However, the permittee, in accordance with Rule 50, may request a temporary stay for the duration of adjudicatory hearing proceedings. Requests for stays of permit conditions should be submitted to the Office of Water Resources at the following address:

Angelo S. Liberti, P.E.
Chief of surface Water Protection
Office of Water Resources
235 Promenade Street
Providence, Rhode Island 02908

All uncontested conditions of the permit will be effective and enforceable in accordance with the provisions of Rule 49.