



PAUL R. LEPAGE  
GOVERNOR

STATE OF MAINE  
DEPARTMENT OF  
ENVIRONMENTAL PROTECTION



PAUL MERCER  
COMMISSIONER

March 27, 2017

Mr. Todd Langevin  
Division of Fisheries and Wildlife  
State of Maine  
State House Station #41  
Augusta, ME 04333  
[Todd.langevin@maine.gov](mailto:Todd.langevin@maine.gov)

*Sent via electronic mail  
Delivery confirmation requested*

**RE: *Maine Pollutant Discharge Elimination System (MEPDES) Permit #ME0001139  
Maine Waste Discharge License (WDL) Application #W002029-6F-F-R  
Proposed Draft MEPDES#ME0001139 Permit Renewal  
ELA Rearing Station Embden***

Dear Mr. Todd Langevin:

Enclosed is a proposed draft MEPDES permit and Maine WDL which the Department proposes to issue for your facility as a final document after opportunity for your review and comment. By transmittal of this letter, you are provided with an opportunity to comment on the proposed draft permit and its conditions (special conditions specific to this permit are enclosed; standard conditions applicable to all permits are available upon request). If it contains errors or does not accurately reflect present or proposed conditions, please respond to this Department so that changes can be considered.

By copy of this letter, the Department is requesting comments on the proposed draft permit from various state and federal agencies, as required by our new regulations, and from any other parties who have notified the Department of their interest in this matter. If you have any questions regarding the matter, please feel free to call me.

All comments must be received in the Department of Environmental Protection office on or before the close of business **Wednesday, April, 26, 2017**. Failure to submit comments in a timely fashion will result in the final document being issued as drafted.

AUGUSTA  
17 STATE HOUSE STATION  
AUGUSTA, MAINE 04333-0017  
(207) 287-7688 FAX: (207) 287-7826

BANGOR  
106 HOGAN ROAD, SUITE 6  
BANGOR, MAINE 04401  
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312 CANCO ROAD  
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PRESQUE ISLE  
1235 CENTRAL DRIVE, SKYWAY PARK  
PRESQUE ISLE, MAINE 04769  
(207) 764-0477 FAX: (207) 760-3143

Todd Langevin  
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Comments in writing should be submitted to my attention at the following address:

Maine Department of Environmental Protection  
Bureau of Water Quality  
Division of Water Quality Management  
17 State House Station  
Augusta, ME 04333-0017  
[Aaron.A.Dumont@maine.gov](mailto:Aaron.A.Dumont@maine.gov)

Sincerely,



Aaron Dumont  
Division of Water Quality Management  
Bureau of Water Quality

Enclosure

cc: Mike Loughlin, MEDEP  
Barry Mower, MEDEP  
Pam Parker, MEDEP  
Lori Mitchel, MEDEP  
Sean Mahoney, Conservation Law Foundation  
DMR Environmental Review  
IFW Environmental Review  
David Pincumbe, USEPA  
Alex Rosenberg, USEPA  
Olga Vergara, USEPA  
Marelyn Vega, USEPA  
Richard Carvalho, USEPA  
Laury Zicari, USFWS



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

**IN THE MATTER OF**

ME. DEPT. INLAND FISHERIES & WILDLIFE ) MAINE POLLUTANT DISCHARGE  
EMBDEN, SOMERSET COUNTY, ME ) ELIMINATION SYSTEM PERMIT  
FISH HATCHERY ELA REARING STATION ) AND  
ME0001139 ) WASTE DISCHARGE LICENSE  
W-002029-6F-F-R ) **APPROVAL** ) **RENEWAL**

In compliance with the applicable provisions of *Pollution Control*, 38 M.R.S. §§ 411 – 424-B, *Water Classification Program*, 38 M.R.S. §§ 464 – 470 and *Federal Water Pollution Control Act*, Title 33 U.S.C. § 1251, and applicable rules of the Department of Environmental Protection (Department) has considered the application of the MAINE DEPARTMENT OF INLAND FISHERIES AND WILDLIFE (MDIFW, permittee), with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

**APPLICATION SUMMARY**

On March 15, 2016, the Department accepted as complete for processing an application from MDIFW for the renewal of combination Waste Discharge License (WDL) W-002029-6F-E-R/ Maine Pollutant Discharge Elimination System (MEPDES) permit ME0001139, which was issued on July 6, 2011, for a five year term. The July 6, 2011, permit authorized the discharge of a monthly average of 5.0 million gallons per day (MGD) of fish hatchery wastewater to Mill Stream, Class B from a state brook trout, brown trout, splake, and landlocked Atlantic salmon rearing facility in Embden, Maine.

**PERMIT SUMMARY**

This permitting action is carrying forward the terms and conditions of the July 6, 2011, permit except that it:

1. Eliminates the Biological Oxygen Demand (BOD<sub>5</sub>) limitations and monitoring requirements;
2. Eliminates Special Condition L. *Ambient Macroinvertebrate Biomonitoring*, from the previous permit, as the Department will conduct biomonitoring testing;
3. Eliminates Special Condition G. *Settling Basin Cleaning* from the previous permit;

**PERMIT SUMMARY (cont'd)**

4. Amends language in the Footnotes section of Special Condition A. *Effluent Limitations And Monitoring Requirements* and deletes Special Condition J. *Disinfecting/Sanitizing Agents* from the previous permits;
5. Eliminates Special Condition K. *Minimum Treatment Technology Requirement* from the previous permit;
7. Establishes additional requirements to be included in the facility Operations and Maintenance Plan;
8. Establishes Special Condition G. *Use of Drugs for Disease Control*;
9. Establishes Condition H. *Pesticides and Other Compounds* to replace Special Conditions H. *Diseases, Pathogens, and Therapeutic Agents* and Special Condition I. *Biosecurity and Disease Contingency Plan* from the 2011 permit;
10. Establishes Special Condition I. *Spills*; and
11. Amends the 1-Hour Treatment Maximum and 24-Hour Treatment Maximums for formalin from 49 mg/L and 27 mg/L to 45mg/L and 25 mg/L, respectively

**CONCLUSIONS**

BASED on the findings in the attached and incorporated **draft** Fact Sheet dated March 27, 2017, and subject to the Conditions listed below, the Department makes the following **CONCLUSIONS**:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.
2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with State law.
3. The provisions of the State's antidegradation policy, *Classification of Maine waters*, 38 M.R.S. § 464(4)(F), will be met, in that:
  - (a) Existing in-stream water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;
  - (b) Where high quality waters of the State constitute an outstanding national resource, that water quality will be maintained and protected;
  - (c) Where the standards of classification of the receiving waterbody are not met, the discharge will not cause or contribute to the failure of the waterbody to meet the standards of classification;

**CONCLUSIONS (cont'd)**

- (d) Where the actual quality of any classified receiving waterbody exceeds the minimum standards of the next highest classification that higher water quality will be maintained and protected; and
  - (e) Where a discharge will result in lowering the existing water quality of any waterbody, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.
4. The discharge will be subject to effluent limitations that require application of best practicable treatment as defined in 38 M.R.S. § 414-A(1)(D).

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**ACTION**

THEREFORE, the Department APPROVES the application of MAINE DEPARTMENT OF INLAND FISHERIES AND WILDLIFE (MDIFW) to discharge 5.0 MGD of fish hatchery wastewater to the Mill Stream, Class B, in Embden, Maine, SUBJECT TO ALL APPLICABLE STANDARDS AND REGULATIONS AND THE FOLLOWING CONDITIONS:

1. “*Maine Pollutant Discharge Elimination System Permit Standard Conditions Applicable to All Permits*,” revised July 1, 2002, copy attached.
2. The attached Special Conditions, including any effluent limitations and monitoring requirements.
3. This permit becomes effective upon the date of signature below and expires at midnight five (5) years after that date. If a renewal application is timely submitted and accepted as complete for processing prior to the expiration of this permit, the terms and conditions of this permit and all subsequent modifications and minor revisions thereto remain in effect until a final Department decision on the renewal application becomes effective. [*Maine Administrative Procedure Act*, 5 M.R.S. § 10002 and *Rules Concerning the Processing of Applications and Other Administrative Matters*, 06-096 CMR 2(21)(A) (effective October 19, 2013)].

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

DONE AND DATED AT AUGUSTA, MAINE, THIS \_\_\_ DAY OF \_\_\_\_\_ 2017.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
PAUL MERCER, Commissioner

Date of initial receipt of application March 14, 2016  
Date of application acceptance March 15, 2016

Date filed with Board of Environmental Protection \_\_\_\_\_

This Order prepared by Aaron Dumont, Bureau of Water Quality

**SPECIAL CONDITIONS**

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

1. The permittee is authorized to discharge **fish hatchery wastewater from Outfall #005A** to Mill Stream. Such discharges are limited and must be monitored by the permittee as specified below<sup>(1)(2)</sup>:

| Effluent Characteristic   | Discharge Limitations          |                                |                              |                            |                            |                                    | Minimum Monitoring Requirements |
|---|--------------------------------|--------------------------------|------------------------------|----------------------------|----------------------------|------------------------------------|---------------------------------|
|   | Monthly Average as specified   | Daily Maximum as specified     | Monthly Average as specified | Daily Maximum as specified | Daily Minimum as specified | Measurement Frequency as specified | Sample Type as specified        |
| Flow<br><i>[50050]</i>  | 5.0 MGD<br><i>[03]</i>         | ---                            | ---                          | ---                        | ---                        | Daily<br><i>[01/01]</i>            | Measure<br><i>[MS]</i>          |
| Total Suspended Solids<br><i>[00530]</i>  | 250 lbs./day<br><i>[26]</i>    | 417 lbs./day<br><i>[26]</i>    | 6 mg/L<br><i>[19]</i>        | 10 mg/L<br><i>[19]</i>     | ---                        | 1/Month<br><i>[01/30]</i>          | Composite<br><i>[CP]</i>        |
| Total Phosphorus <sup>(3)</sup><br><b><i>(June 1 – September 30<sup>th</sup>)</i></b>                   | 1.5 lbs./day<br><i>[26]</i>    | Report lbs./day<br><i>[26]</i> | 0.035 mg/L<br><i>[19]</i>    | Report mg/L<br><i>[19]</i> | ---                        | 2/Month<br><i>[02/30]</i>          | Composite<br><i>[CP]</i>        |
| Fish on Hand<br><i>[45604]</i>  | Report lbs./day<br><i>[26]</i> | Report lbs./day<br><i>[26]</i> | ---                          | ---                        | ---                        | 2/Month<br><i>[2/30]</i>           | Calculated<br><i>[CA]</i>       |
| Formalin <sup>(4)</sup><br><i>[51064]</i>   | Report lbs./day<br><i>[26]</i> | 150 lbs./day<br><i>[26]</i>    | Report mg/L<br><i>[26]</i>   | ---                        | ---                        | 1/Occurrence<br><i>[01/OC]</i>     | Calculated<br><i>[CA]</i>       |
| Dissolved Oxygen <sup>(5)</sup><br><b><i>(June 1 – September 30<sup>th</sup>)</i></b><br><i>[00300]</i> | ---                            | ---                            | Report mg/L<br><i>[19]</i>   | Report mg/L<br><i>[19]</i> | 7.5 mg/L<br><i>[19]</i>    | 2/Month<br><i>[2/30]</i>           | Measured<br><i>[MS]</i>         |

The italicized numeric values bracketed in the table and in subsequent text are code numbers that Department personnel utilize to code the monthly Discharge Monitoring Reports.

**FOOTNOTES:** See Page 5 of this permit for applicable footnotes.

## SPECIAL CONDITIONS

### A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)

#### Footnotes

1. **Sampling** – All effluent monitoring must be conducted at a location following the last treatment unit in the treatment process, as to be representative of end-of-pipe effluent characteristics. Any change in sampling location must be approved by the Department in writing. The permittee must conduct sampling and analysis in accordance with; a) methods approved by 40 Code of Federal Regulations (CFR) Part 136, b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136, or c) as otherwise specified by the Department. Samples that are sent out for analysis must be analyzed by a laboratory certified by the State of Maine's Department of Health and Human Services for wastewater. Samples that are sent to a laboratory operated by a waste discharge facility licensed pursuant to *Waste discharge licenses*, 38 M.R.S. § 413 are subject to the provisions and restrictions of *Maine Comprehensive and Limited Environmental Laboratory Certification Rules*, 10-144 CMR 263 (effective date April 1, 2010). If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report (DMR).
2. **Composite Samples** – Composite samples must consist of a minimum of at least four (4) equally-spaced grab samples collected during a single discharge day, or other sampling protocol approved by the Department. Alternatively, the permittee may collect 24-hour composite samples using an automated sampler. The permittee must indicate the type of sample collected on the monthly DMR.
3. **Total Phosphorus** – Total phosphorus monitoring must be performed in accordance with **Attachment A** of this permit entitled, *Protocol For Total P Sample Collection and Analysis for Waste Water – May, 2014*, unless otherwise specified by the Department.
4. **Formalin** – Formalin monitoring must be conducted when in use at the facility and must consist of a calculated effluent mass value. Therefore, the following calculation must be applied to assess the total mass of formalin discharged per occurrence (lbs./day):  
Formalin applied (gallons) x 9.03<sup>1</sup> (lbs./gallon) = Total formalin in effluent (lbs./day)

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<sup>1</sup> Per Material Safety Data Sheet, Parasite-S has a specific gravity of 1.0775-1.0865 giving it an average density of 9.03 lbs./gallon.



## **SPECIAL CONDITIONS**

### **A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (cont'd)**

The permittee must provide this information and calculations to the Department in a document accompanying the monthly DMR. The formalin limit corresponds to two types of treatments:

1. One hour per day treatment typical of hatchery and rearing facility discharges; and
2. Maximum of up to 24 hours of treatment and discharge for addressing emergency conditions at the facility.

**Formalin discharges lasting longer than 1-hour in duration must be conducted no more frequently than once every four days. The permittee must provide a list of dates on which treatments greater than 1-hour were performed, and the length of time of each such treatment, with each monthly DMR.**

For instances when a permittee has not used formalin for an entire reporting period, the permittee must report "NODI-9" for this parameter on the monthly DMR.

5. **Supplemental Data Forms:** In addition to specified DMR reporting requirements, the permittee must submit all data from effluent dissolved oxygen monitoring to the Department in a supplemental report accompanying the appropriate monthly discharge monitoring report pursuant to Permit Special Condition E.

### **B. NARRATIVE EFFLUENT LIMITATIONS**

1. The permittee must not discharge effluent that contains a visible oil sheen, foam or floating solids at any time which would impair the uses designated for the classification of the receiving waters.
2. The permittee must not discharge effluent that contains materials in concentrations or combinations which are hazardous or toxic to aquatic life, or which would impair the uses designated for the classification of the receiving waters.
3. The permittee must not discharge effluent that causes visible discoloration or turbidity in the receiving waters or that impairs the uses designated for the classification of the receiving waters.
4. The permittee must not discharge effluent that lowers the quality of any classified body of water below such classification, or lowers the existing quality of any body of water if the existing quality is higher than the classification.

## SPECIAL CONDITIONS

### C. AUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with: 1) the permittee's General Application for Waste Discharge Permit, accepted for processing on March 16, 2016; 2) the terms and conditions of this permit; and 3) only from Outfall #005A. Discharges of wastewater from any other point source are not authorized under this permit, and must be reported in accordance with Standard Condition D(f)(1), *Twenty-four hour reporting*, of this permit.

### D. NOTIFICATION REQUIREMENT

In accordance with Standard Condition D, the permittee must notify the Department of the following:

1. Any substantial change in the volume or character of pollutants being introduced into the wastewater collection and treatment system.
2. For the purposes of this section, adequate notice must include information on:
  - a. The quality and quantity of wastewater introduced to the wastewater collection and treatment system; and
  - b. Any anticipated change in the quality and quantity of the wastewater to be discharged from the treatment system.

### E. MONITORING AND REPORTING

#### Electronic Reporting

*NPDES Electronic Reporting*, 40 C.F.R. 127, requires MEPDES permit holders to submit monitoring results obtained during the previous month on an electronic discharge monitoring report to the regulatory agency utilizing the USEPA electronic system.

DMRs submitted using the USEPA NetDMR system, must be:

1. Submitted by a facility authorized signatory; and
2. Submitted no later than **midnight on the 15<sup>th</sup> day of the month** following the completed reporting period.

Documentation submitted in support of the electronic DMR may be attached to the electronic DMR. Toxics reporting must be done using the DEP toxsheet reporting form. An electronic copy of the Toxsheet reporting document must be submitted to your Department compliance inspector as an attachment to an email. In addition, a hardcopy form of this sheet must be signed and submitted to your compliance inspector, or a copy attached to your NetDMR submittal will suffice.

**SPECIAL CONDITIONS**

**E. MONITORING AND REPORTING (cont'd)**

Documentation submitted electronically to the Department in support of the electronic DMR must be submitted no later than midnight on the 15<sup>th</sup> day of the month following the completed reporting period.

Non-electronic Reporting

If you have received a waiver from the Department concerning the USEPA electronic reporting rule, or are permitted to submit hardcopy DMR's to the Department, then your monitoring results obtained during the previous month must be summarized for each month and reported on separate Discharge Monitoring Report (DMR) forms provided by the Department and **postmarked on or before the thirteenth (13<sup>th</sup>) day of the month or hand-delivered to a Department Regional Office such that the DMR's are received by the Department on or before the fifteenth (15<sup>th</sup>) day of the month** following the completed reporting period.

Toxsheet reporting forms must be submitted electronically as an attachment to an email sent to your Department compliance inspector. In addition, a signed hardcopy of your toxsheet must also be submitted.

A signed copy of the DMR and all other reports required herein must be submitted to the Department assigned compliance inspector (unless otherwise specified) following address:

Department of Environmental Protection  
Eastern Maine Regional Office  
Bureau of Water Quality  
Division of Water Quality Management  
106 Hogan Road  
Bangor, Maine 04401

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## SPECIAL CONDITIONS

### F. OPERATION & MAINTENANCE PLAN

The permittee must have a current written Operation & Maintenance (O&M) Plan for the facility. The plan must provide a systematic approach by which the permittee must at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit.

An acceptable O&M plan must ensure the following items are adequately addressed:

#### 1. Solids Control

- a. Methods and practices to ensure efficient feed management and 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 potential discharges to waters of the State.
- b. In order to minimize the discharge of accumulated solids from the settling basin, settling tanks, and production systems, identify and implement procedures for routine cleaning of rearing units and settling tanks, and procedures to minimize any discharge of accumulated solids during the inventorying, grading, and harvesting of aquatic animals in the production system.
- c. Procedure for removal and disposal of mortalities to prevent discharge to waters of the State.

#### 2. Materials Storage

- a. Ensure proper storage of drugs<sup>2</sup>, pesticides<sup>3</sup>, feed, and any petroleum and/or hazardous waste products in a manner designed to prevent spills that may result in the discharge of drugs, pesticides, or feed to waters of the State.
- b. Implement procedures for properly containing, cleaning, and disposing of any spilled material that has the potential to enter waters of the State.

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<sup>2</sup> **Drug.** “Drug” means any substance defined as a drug in section 201(g)(1) of the *Federal Food, Drug and Cosmetic Act* [21 U.S.C. § 321].

<sup>3</sup> **Pesticide.** “Pesticide” means any substance defined as a “pesticide” in section 2(u) of the *Federal Insecticide, Fungicide, and Rodenticide Act* [7 U.S.C. § 136 (u)].

## SPECIAL CONDITIONS

### F. OPERATION & MAINTENANCE (O&M) PLAN (cont'd)

#### 3. Structural Maintenance

- a. Inspect the production system and the wastewater treatment system on a routine basis in order to identify and promptly repair any damage.
- b. Conduct regular maintenance of the production system and the wastewater treatment system in order to ensure that they are properly functioning.

#### 4. Recordkeeping

- a. Maintain records for fish rearing units documenting the feed amounts and estimates of the numbers and weight of fish.
- b. Maintain records that document the frequency of cleaning, inspections, repairs and maintenance.

#### 5. Training

- a. In order to ensure the proper clean-up and disposal of spilled material adequately, train all relevant personnel in spill prevention and how to respond in the event of a spill.
- b. Train staff on the proper operation and cleaning of production and wastewater treatment systems including training in feeding procedures and proper use of equipment to prevent unauthorized discharges.

**By December 31 of each year, or within 90 days of any process changes or minor equipment upgrades,** the permittee must evaluate and modify the O&M Plan including site plan(s) and schematic(s) for the wastewater treatment facility to ensure that it is up-to-date. The O&M Plan must be kept on-site at all times and made available to Department and USEPA personnel upon request.

**Within 90 days of completion of new and or substantial upgrades of the wastewater treatment facility,** the permittee must submit the updated O&M Plan to their Department inspector for review and comment.

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**SPECIAL CONDITIONS**

**G. USE OF DRUGS FOR DISEASE CONTROL**

1. **General requirements.** All drugs used for disease prevention or control must be approved or authorized by the U.S. Food and Drug Administration (FDA), and all applications must comply with applicable FDA requirements.
2. **FDA-approved drugs.** Drugs approved by the FDA for fish culture purposes may be used in accordance with label instructions.
  - a. Preventative treatments: The discharge of any approved drug administered as a preventative measure is not authorized by this permit, unless the following conditions are met: the drug must be approved by FDA, and the treatment and route of administration must be consistent with the drug's intended use. Discharges may occur through direct application of a drug or indirectly through feed, injection, ingestion, or immersion at the facility.
  - b. Drugs identified in the permittee's application: A list of drugs, pesticides and other compounds proposed for use at Maine Department of Inland Fisheries and Wildlife ELA Rearing Station during the term of the permit, which was provided by the permittee on Form DEPLW1999-18 included with its March 15, 2016 General Application for Waste Discharge Permit, is included as **Attachment B** of this permit.

| <u>Name</u>           | <u>Freq. of Use</u> | <u>Concentration</u> | <u>Qty. Used/Year</u> |
|-----------------------|---------------------|----------------------|-----------------------|
| Parasite-S (formalin) | As needed           | 1:4000               | 1500 lbs.(as needed)  |
| Tricaine-S            | As needed           | 15 – 300 ppm         | <20 grams             |

- c. Drugs not identified in the permittee's application: When the need to treat or control diseases requires the use of a FDA-approved drug not identified in the application, or **Attachment B** of the permit. The permittee must notify the Department orally or by electronic mail prior to initial use of the drug.
  1. The notification must include a description of the drug, its intended purpose, the method of application, the amount, the concentration, the duration of the use, and information on aquatic toxicity.
  2. **Within seven (7) days of** the initial notification the permittee must submit a written report that includes all of the information outlined in Section G.2.c(1) above.
  3. The Department may require submission of an application for permit modification, including public notice requirements, if the drug is to be used for more than a 30 consecutive day period.

## SPECIAL CONDITIONS

### G. USE OF DRUGS FOR DISEASE CONTROL (cont'd)

4. If, upon review of information regarding the extralabel use of a drug pursuant to this section, the Department determines that significant adverse effects are likely to occur, it may deny, restrict or limit use of the drug.
- 3. Extralabel drug use.** Extralabel drug use is not authorized by this permit, unless in accordance with a specific prescription written for that use by a licensed veterinarian.
- a. Notification. The permittee must notify the Department orally or by e-mail prior to initial extralabel use of a drug.
    1. The notification must include a description of the drug, its intended purpose, the method of application, the amount, concentration, and duration of the use, information on aquatic toxicity, and a description of how and why the use qualifies as an extralabel drug use under FDA requirements.
    2. ***Within seven (7) days of*** the initial notification the permittee must submit a written report that includes all of the information outlined in Section G.3.a(1) above. Notice must include documentation that a veterinarian has prescribed the drug for the proposed use. A copy of the veterinarian's prescription must be maintained on-site during treatment for Department review.
    3. If, upon review of information regarding the extralabel use of a drug pursuant to this section, the Department determines that significant adverse effects are likely to occur, it may deny, restrict or limit use of the drug.
- 4. Investigational New Animal Drug (INAD).** The discharge of drugs authorized by the FDA for use during studies conducted under the INAD program is not authorized by this permit, unless in accordance with specific prior consent given in writing by the Department.
- a. Initial report. The permittee must provide a written report to the Department for the proposed use of an INAD ***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, dosage, and disease or condition the INAD is intended to treat.

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**SPECIAL CONDITIONS**

**G. USE OF DRUGS FOR DISEASE CONTROL (cont'd)**

- b. Evaluation and monitoring. *At least ninety (90) days prior to initial use* of an INAD at a facility, the permittee must submit for Department review and approval a study plan for the use of the drug that:
  - 1. Indicates the date the facility agreed or signed up to participate in the INAD study.
  - 2. Demonstrates that the minimum amount of drug necessary to evaluate its safety, efficacy, and possible environmental impacts will be used.
  - 3. Includes an environmental monitoring and evaluation program that at a minimum describes sampling strategies, analytical procedures, evaluation techniques and a timetable for completion of the program. Currently available data or literature that adequately characterizes the environmental fate of the INAD and its metabolite(s) may be proposed for consideration in determinations of environmental monitoring and evaluation programs required by the Department pursuant to this section.
- c. Notification. The permittee must notify the Department orally or by electronic mail *no more than forty-eight (48) hours after* beginning the first use of the INAD under the approved plan.
- d. The following INAD was identified by the permittee and is authorized to be used in accordance with the INAD program:

| <u>Name</u> | <u>Freq. of Use</u> | <u>Concentration</u> | <u>Qty.Used/Year</u> |
|-------------|---------------------|----------------------|----------------------|
| Aqui-S 20E  | As needed           | <36 mg/L             | <200 ml              |

**H. PESTICIDES AND OTHER COMPOUNDS**

- 1. **General requirements.** All pesticides used at the facility must be applied in compliance with federal labeling restrictions and in compliance with applicable statute, Board of Pesticides Control rules and best management practices (BMPs). Chemicals or compounds not registered as pesticides and proposed for use at the facility must be identified in the permittee's application and may only be discharged to waters of the State with express approval in this permitting action. In accordance with Special Condition D of this permit, the permittee must notify the Department of any substantial change in the volume or character of pollutants being introduced into the wastewater collection and treatment system.

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**SPECIAL CONDITIONS**

**G. PESTICIDES AND OTHER COMPOUNDS (cont'd)**

- a. Pesticides identified in the permittee's application. The following pesticides were identified in the permittee's application as currently being or potentially being in use:

| <u>Name</u>     | <u>Freq. of Use</u> | <u>Concentration</u>        | <u>Qty. Used/Year</u> |
|-----------------|---------------------|-----------------------------|-----------------------|
| Sodium Chloride | As needed           | 300 mg/L                    | 1500 lbs. (as needed) |
| Virkon Aquatic  | As needed           | 1.3 oz/gal H <sub>2</sub> O | ~10 lbs.              |

- b. Other compounds identified in the permittee's application. The following compounds were identified in the permittee's application as currently being or potentially being in use. The permittee is authorized to discharge the following compounds. It is the Department's Best Professional Judgment (BPJ) that the incidental discharge of these chemicals will not cause or contribute to non-attainment of applicable water quality standards.

| <u>Name</u>    | <u>Freq. of Use</u> | <u>Concentration</u> | <u>Qty. Used/Year</u> |
|----------------|---------------------|----------------------|-----------------------|
| Ovadine Iodine | As needed           | 100 ppm              | ~2 gallons            |

**I. SPILLS**

In the event of a spill of drugs, pesticides, feed, petroleum and/or hazardous waste products that results in a discharge to waters of the State, the permittee must provide an oral report of the spill to the Department within 24 hours of its occurrence and a written report within 5 days to the Department. The report must include the identity and quantity of the material spilled.

**J. REOPENING OF PERMIT FOR MODIFICATION**

In accordance with 38 M.R.S. § 414-A(5) and upon evaluation of the tests results in the Special Conditions of this permitting action, new site specific information, or any other pertinent test results or information obtained during the term of this permit, the Department may, at any time and with notice to the permittee, modify this permit to: (1) include effluent limits necessary to control specific pollutants or whole effluent toxicity where there is a reasonable potential that the effluent may cause water quality criteria to be exceeded; (2) require additional monitoring if results on file are inconclusive; or (3) change monitoring requirements or limitations based on new information.

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**SPECIAL CONDITIONS**

**K. SEVERABILITY**

In the event that any provision or part thereof, of this permit is declared to be unlawful by a reviewing court, the remainder of the permit must remain in full force and effect, and must be construed and enforced in all aspects as if such unlawful provision, or part thereof, had been omitted, unless otherwise ordered by the court.

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# **ATTACHMENT A**

## **Protocol for Total Phosphorus Sample Collection and Analysis for Waste Water and Receiving Water Monitoring Required by Permits**

Approved Analytical Methods: EPA 200.7 (Rev. 44), 365.1 (Rev. 2.0), (Lachat), 365.3, 365.4; SM 3120 B, 4500-P B.5, 4500-P E, 4500-P F, 4500-P G, 4500-P H; ASTM D515-88(A), D515-88(B); USGS I-4471-97, I-4600-85, I-4610-91; OMAAOAC 973.55, 973.56

**Sample Collection:** The Maine DEP is requesting that total phosphorus analysis be conducted on composite effluent samples, unless a facility's Permit specifically designates grab sampling for this parameter. Facilities can use individual collection bottles or a single jug made out of glass or polyethylene. Bottles and/or jugs should be cleaned prior to each use with dilute HCL. This cleaning should be followed by several rinses with distilled water. Commercially purchased, pre-cleaned sample containers are an acceptable alternative. The sampler hoses should be cleaned, as needed.

**Sample Preservation:** During compositing the sample must be at 0-6 degrees C (without freezing). If the sample is being sent to a commercial laboratory or analysis cannot be performed the day of collection then the sample must be preserved using H<sub>2</sub>SO<sub>4</sub> to obtain a sample pH of <2 su and refrigerated at 0-6 degrees C (without freezing). The holding time for a preserved sample is 28 days.

**Note:** Ideally, Total P samples are preserved as described above. However, if a facility is using a commercial laboratory then that laboratory may choose to add acid to the sample once it arrives at the laboratory. The Maine DEP will accept results that use either of these preservation methods.

**Laboratory QA/QC:** Laboratories must follow the appropriate QA/QC procedures that are described in each of the approved methods.

**Sampling QA/QC:** If a composite sample is being collected using an automated sampler, then once per month run a blank on the composite sampler. Automatically, draw distilled water into the sample jug using the sample collection line. Let this water set in the jug for 24 hours and then analyze for total phosphorus. Preserve this sample as described above.

# **ATTACHMENT B**

Facility Name: Embden "Ela" Rearing Station

NPDES #: ME 0001139

DISINFECTANTS:

| PRODUCT NAME         | INGREDIENTS  | FREQ. OF USE  | CONCENTRATION                  | TOTAL USED/YR |
|----------------------|--|---|--------------------------------|---------------|
| Virkon Aquatic       | Potassium peroxymonosulfate—21.41%<br>Sodium chloride—1.50%<br>Other ingredients—77.09%  | As needed for disinfection of nets, utensils, boots, stocking trucks, etc.) | 1% solution (1.3 oz/gal H2O)   | +/- 10 lbs    |
| Argentyne or Ovadine | Polymeric or Povidone Iodine Complex—10%<br>Inert Ingredients—90%<br>Available iodine—1% | As needed for disinfection of nets, utensils, boots, stocking trucks, etc.) | 100 ppm ;<br>(37.8 ml/gal H2O) | +/- 2 gals.   |

DRUGS/THERAPEUTIC AGENTS:

| PRODUCT NAME          | INGREDIENTS  | FREQ. OF USE  | CONCENTRATION                                      | TOTAL USED/YR  |
|-----------------------|--|---|--|----------------|
| Tricaine-S (MS 222)   | Tricaine methanesulfonate                                  | As needed for anesthetizing fish during sampling, fish health/quality exams, fish marking, etc. | 15 to 330 mg/l                                     | < 20 grams     |
| Parasite-S (Formalin) | Formaldehyde—37%<br>Methanol—6-14%<br>Water & Inert—49-57% | As needed for fish external parasitic control;  | 1:4000<br>1 hr duration                            | +/- 55 gals    |
| White Salt Block      | NaCl   | As needed for fish external parasitic control   | 300 mg/l<br>100 lbs @ 110 gpm<br>for 6 hr duration | +/- 15000 lbs. |

**MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT  
AND  
WASTE DISCHARGE LICENSE**

**FACT SHEET**

Date: **March 27, 2017**

MEPDES PERMIT: **ME0001139**  
WASTE DISCHARGE LICENSE: **W002029-6F-F-R**

NAME AND ADDRESS OF APPLICANT:

**MAINE DEPARTMENT OF INLAND FISHERIES AND WILDLIFE  
284 STATE STREET, 41 STATE HOUSE STATION  
AUGUSTA, MAINE 04333**

COUNTY: **SOMERSET**

NAME AND ADDRESS WHERE DISCHARGE OCCURS:

**ELA REARING STATION  
809 CROSS TOWN ROAD  
EMBDEN, MAINE 04958**

RECEIVING WATER / CLASSIFICATION: **MILL STREAM / CLASS B**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **TODD LANGEVIN**  
**[todd.langevin@maine.gov](mailto:todd.langevin@maine.gov)**  
**(207) 287-5262**

## 1. APPLICATION SUMMARY

On March 15, 2016, the Department of Environmental Protection accepted as complete for processing an application from the Maine Department of Inland Fisheries and Wildlife (MDIFW, permitte) for the renewal of combination Waste Discharge License (WDL) W-002029-6F-E-R/ Maine Pollutant Discharge Elimination System (MEPDES) permit ME0001139, which was issued on July 6, 2011, for a five year term. The July 6, 2011, permit authorized the discharge of a monthly average of 5.0 million gallons per day (MGD) of fish hatchery wastewater to Mill Stream, Class B from a state brook trout, brown trout, splake, and landlocked Atlantic salmon rearing facility in Embden, Maine.

## 2. PERMIT SUMMARY

- a. This permitting action is carrying forward the terms and conditions of the July 6, 2011 permit, except that it is:
  1. Eliminates the Biological Oxygen Demand (BOD<sub>5</sub>) limitations and monitoring requirements;
  2. Eliminates Special Condition L. *Ambient Macroinvertebrate Biomonitoring*, from the previous permit, as the Department will conduct biomonitoring testing;
  3. Eliminates Special Condition G. *Settling Basin Cleaning* from the previous permit;
  4. Amends language in the Footnotes section of Special Condition A. *Effluent Limitations And Monitoring Requirements* and deletes Special Condition J. *Disinfecting/Sanitizing Agents* from the previous permits;
  5. Eliminates Special Condition K. *Minimum Treatment Technology Requirement* from the previous permit;
  7. Establishes additional requirements to be included in the facility Operations and Maintenance Plan;
  8. Establishes Special Condition G. *Use of Drugs for Disease Control*;
  9. Establishes Condition H. *Pesticides and Other Compounds* to replace Special Conditions H. *Diseases, Pathogens, and Therapeutic Agents* and Special Condition I. *Biosecurity and Disease Contingency Plan* from the 2011 permit;
  10. Establishing Special Condition I. *Spills*; and
  11. Amends the 1-Hour Treatment Maximum and 24-Hour Treatment Maximums for formalin from 49 mg/L and 27 mg/L to 45mg/L and 25 mg/L, respectively.



## 2. PERMIT SUMMARY (cont'd)

- b. History: This section provides a summary of recent, relevant licensing/permitting actions that have been completed for the ELA Rearing Station by the Maine Department of Inland Fisheries and Wildlife (MDIFW) wastewater facility.

February 20, 1975 – The United States Environmental Protection Agency (USEPA) issued National Pollutant Discharge Elimination System (NPDES) Permit #ME0001139 to the Maine Department of Inland Fisheries and Game for the discharge of an unspecified volume of wastewater from the Ela Rearing Station to Mill Stream. The Permit was valid through February 15, 1980.

May 11, 1983 – The Maine Board of Environmental Protection issued WDL #2029 for the discharge of a daily maximum of 5.0 MGD of fish hatchery wastewater from the MDIFW Ela Rearing Station to Mill Stream, Class B-1. The WDL was a renewal of a previously issued license #2029. The WDL was issued for a five-year term.

July 21, 2000 – The Department issued # W-002029-5Q-A-R to MDIFW Ela Rearing Station for the discharge of a daily maximum of 4.75 MGD of treated fish hatchery wastewater. The WDL was issued for a five-year term.

September 10, 2001 – The Department suspended monitoring requirements established in WDL # W-002029-5Q-A-R for Outfall #001A, designated for effluent discharges from the settling basin when not cleaning raceways. The Department required monitoring for Outfalls #001B and #002A, designated for effluent discharges from the settling basin when cleaning raceways and from non-cleaning flow-through water bypassing the settling basin, to be conducted by autocomposer. The Department made no mention of Outfall #003A, previously designated for a summary of the flow, mass of fish on hand, and total phosphorus values from Outfalls #001B and #002A. MDIFW continued to monitor all outfalls.

February 2002 – On behalf of MDIFW, Fishpro Inc. submitted an Alternative Discharge Study report for all nine MDIFW hatcheries and rearing stations. The study evaluated eliminating effluent discharges through: piping the discharges to larger receiving waters, connecting to municipal wastewater treatment facilities, wastewater storage collection, & land application of wastewater, and discharging to existing wetland areas. The study determined that none of the alternatives evaluated were viable options for the MDIFW facilities.

September 12, 2002 – The Department submitted a report entitled *Maine Department of Environmental Protection Water Quality Concerns and Effects from State Fish Hatchery Discharges* to the Maine Legislature's Inland Fisheries and Wildlife Subcommittee's Commission to Study the Needs and Opportunities Associated with the Production of Salmonid Sport Fish in Maine and MDIFW.

## 2. PERMIT SUMMARY (cont'd)

November 2002 – FishPro Inc. submitted to MDIFW its *Comprehensive Statewide Fish Hatchery System Engineering Study* addressing recommended upgrades to all MDIFW fish hatcheries and rearing facilities.

July 11, 2003 – The Department administratively modified WDL # W-002029-5Q-A-R to extend the 3-year schedule of compliance for BOD, TSS, and phosphorus effluent limits established in the WDL through the life of the WDL.

January 30, 2006 – The Department issued MEPDES Permit #ME0001139 / Maine WDL #W-002029-5Q-B-R to Ela Fish Rearing Station for the discharge of a monthly average of 4.75 MGD of fish rearing facility wastewater to Mill Stream, Class B, in Embden. The Permit/WDL was issued for a five-year term.

October 6, 2008 – The Department issued Minor Revision #W-002029-5Q-C-M / MEPDES Permit #ME0001139 to revise effluent formalin limitations based on newly obtained toxicity data and a revision of the Department's best professional judgement (BPJ) of ambient water quality criteria.

April 23, 2009 – The Department issued Minor Revision #W-002029-5Q-D-M / MEPDES Permit #ME0001139 to revise effluent BOD<sub>5</sub> and TSS minimum monitoring frequency requirements from once / 2 weeks to once / month. The Minor Revision also provided guidance for reporting analytical results below detection and/or reporting limits.

July 6, 2011 – The Department issued WDL / MEPDES Permit W-002029-6F-E-R / ME0001139 for a five year term.

March 14, 2016 – MDIFW submitted a timely application for renewal of its MEPDES Permit/Maine WDL. The application was accepted as complete for processing on March 15, 2016, and was assigned MEPDES Permit #ME0001139 / Maine WDL #W-002029-6F-F-R.

- c. Source Description: The Ela Rearing Station facility is a fish rearing station, raising brook trout, brown trout, and splake fry and landlocked Atlantic salmon fingerlings obtained from other MDIFW hatchery facilities to appropriate sizes for stocking in Maine waters as part of MDIFW's responsibilities in managing fisheries in Maine. A map showing the location of the treatment facility is included as Fact Sheet **Attachment A**. The facility was originally constructed in 1957 as a state aquaculture facility and underwent significant upgrades in 2005. The Embden facility is a gravity-fed flow-through facility that contains a dissolved oxygen management system with bulk liquid oxygen and low head oxygen contact chambers, and ultraviolet (UV) disinfection of influent water with one UV unit dedicated to each of three lines of rearing tanks.

**2. PERMIT SUMMARY (cont'd)**

- d. Influent Water: The Ela Rearing Station facility receives its source water from Embden Pond (1,568-acres) through two intake pipes, a deep water (64-foot deep) 24-inch diameter iron pipe and a shallow water (15-foot deep) 24-inch diameter iron pipe. The Embden facility blends influent water in a head box at the headworks of the facility. The deep and shallow source waters are blended as needed to meet specific temperature requirements of (35-62 degrees F) for its fish. Influent pipes are screened and the headbox is strained to prevent fish and debris from entering the station.
- e. Rearing Operations: Ela Rearing Station's rearing facilities consist of thirty, 20-foot diameter by 3.0-foot deep (7,050-gallon) stainless steel circular fish tanks, arranged in three lines of 10 tanks. Influent water is provided to the head of the three lines of tanks, then independently to each tank. Tank effluent water is independently discharged, but combined for treatment. Feeding is conducted with demand and belt feeders as well as manually.

Ela Rearing Station houses a maximum of 300,000 first-year fish (combined weight 75,000 pounds) at any time. In the months of September and October, Ela Rearing Station stocks fall fingerlings (< 12 mos old), 6 to 8-inch long brook trout, brown trout, and splake. Also in the fall, yearlings (approx. 20 mos old), 12 to 14-inch brook trout, brown trout, splake and landlocked Atlantic salmon are stocked. In the months of May and June, Ela Rearing Station stocks spring yearlings (>12 mos old), 6 to 8-inch long landlocked Atlantic salmon and spring yearling (>12 mos old), 10 to 12-inch long brook trout, brown trout, and splake. New trout fry and salmon fingerlings are brought on station for rearing as outlined above to replace stocked fish.

- f. Wastewater Treatment: Ela Rearing Station facility's rearing tanks contain a screened pit on the bottom for settling and collection of fish solid waste materials. Based on daily inspections, MDIFW removes standpipes from individual rearing tanks in order to divert fish solid waste material from the pits to the facility's wastewater treatment infrastructure for filtration, settling, and removal of solids. Rearing tanks are also inspected a minimum of twice per year and cleaned by power washing as needed when empty.

All of the facility's cleaning and flow-through wastewater is carried by a common wastewater pipe to two 60 micron drum filters. These drum filters are designed to be operated simultaneously under normal conditions, or individually if needed for maintenance purposes. Filter backwash and captured solids are routed to a 24,217 gallon settling basin that measures 25-feet by 37-feet that contains a sloped bottom. The depth of the tank ranges from few inches to 3.5 feet. In 2005, MDIFW upgraded the facility to include a 47,685 gallon sludge storage/dewatering tank designed to provide a minimum of 6-months of storage capacity. The structure measures 25-feet by 50-feet and had a depth of 5-feet deep. The facility discharges effluent through Outfall #005A, which consists of a 24-inch diameter high-density polyethylene (HDPE) pipe that daylights approximately one-foot above stream level onto a riprap apron. Ela Rearing Station discharges to Mill Stream (Class B), which in turn flows to the Carrabassett River (Class B).

### 3. CONDITIONS OF PERMIT

*Conditions of licenses*, 38 M.R.S. § 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require the application of best practicable treatment (BPT), be consistent with the U.S. Clean Water Act, and ensure that the receiving waters attain the State water quality standards as described in Maine's Surface Water Classification System. In addition, *Certain deposits and discharges prohibited*, 38 M.R.S. § 420 and Department rule *Surface Water Toxics Control Program*, 06-096 CMR 530 (effective March 21, 2012), require the regulation of toxic substances not to exceed levels set forth in *Surface Water Quality Criteria for Toxic Pollutants*, 06-096 CMR 584 (effective July 29, 2012), and that ensure safe levels for the discharge of toxic pollutants such that existing and designated uses of surface waters are maintained and protected.

### 4. RECEIVING WATER QUALITY STANDARDS

*Classifications of Major River Basins*, 38 M.R.S. § 467(4)(2)(b) classifies Mill Stream (AU ID ME0103000304\_313R01) at the point of discharge as a Class B waterway. 38 M.R.S. § 465(3) describes the standards for Class B waters.

### 5. RECEIVING WATER QUALITY CONDITIONS

*The State of Maine 2014 Integrated Water Quality Monitoring and Assessment Report*, prepared by the Department pursuant to Sections 303(d) and 305(b) of the Federal Water Pollution Control Act, lists Mill Stream (AU ID ME0103000304\_313R01) as, “Category 4-B, Rivers and Streams Impaired by Pollutants – Pollution Control Requirements Reasonably Expected to Result in Attainment.” The listing identifies the impairment cause as *Benthic-Macroinvertebrate Bioassessments (Streams)* for a 2.57 mile segment of Class B water.

The Report lists all of Maine’s fresh waters as, “Category 4-A: Waters Impaired by Atmospheric Deposition of Mercury.” Impairment in this context refers to a statewide fish consumption advisory due to elevated levels of mercury in some fish tissues. The Report states, “All freshwaters are listed in Category 4A (TMDL Completed) due to United States Environmental Protection Agency (USEPA) approval of a Regional Mercury TMDL. Maine has a fish consumption advisory for fish taken from all freshwaters due to mercury. Many waters and many fish from any given water do not exceed the action level for mercury.

However, because it is impossible for someone consuming a fish to know whether the mercury level exceeds the action level, the Maine Department of Health and Human Services decided to establish a statewide advisory for all freshwater fish that recommends limits on consumption. Maine has already instituted statewide programs for removal and reduction of mercury sources.” Pursuant to 38 M.R.S. § 420(1-B)(B), “a facility is not in violation of the ambient criteria for mercury if the facility is in compliance with an interim discharge limit established by the Department pursuant to section 413 subsection 11.” However, pursuant to *Interim Effluent Limitations and Controls for the Discharge of Mercury*, 06-096 CMR 519(2), the Department has made a best professional judgment determination to exempt fish hatcheries from applicability of the mercury rule.

**5. RECEIVING WATER QUALITY CONDITIONS (cont'd)**

The Department has made a best professional judgment determination based on information gathered to date, that as permitted, the discharge will not cause or contribute to the failure of the receiving water to meet the standards of its ascribed classification and the designated uses of the waterbody will continue to be maintained and protected. The Department is scheduled to perform a comprehensive evaluation of data collected during the summer of 2016. If future monitoring determines that at full permitted discharge limits, the discharge is causing or contributing to the non-attainment, this permit will be re-opened per Special Condition J, *Reopening of The License For Modifications*, to impose more stringent limitations to meet water quality standards.

**6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS**

- a. Applicability of National Effluent Guidelines: The USEPA has promulgated national effluent guidelines for the *Concentrated Aquatic Animal Production Point Source Category* at 40 CFR 451 Subpart A, *Flow-Through and Recirculating Systems Subcategory*. This subpart is applicable to discharges from a concentrated aquatic animal production facility that produces 100,000 lbs. or more per year of aquatic animals in a flow-through or recirculating system. For the Ela Rearing Station facility the maximum number of fish on station as reported for the period of July 6, 2011, through March 29, 2016, at any time consisted of a maximum of 75,903 lbs. The facility daily maximum of 75,903 lbs. is less than the 100,000 lbs. per year applicable threshold, and is therefore not categorically subject to regulation under this subpart.
- b. Flow: The previous permitting action established, and this permitting action is carrying forward, a monthly average flow limitation of 5.0 MGD for Outfall #005A, which is considered representative of effluent flows for the facility. This permitting action is carrying forward a monthly average discharge flow reporting requirement to assist in compliance evaluations.

A summary of the discharge flow data as reported on the monthly Discharge Monitoring Reports (DMRs) for the period of August 1, 2011, through March 29, 2016, is as follows:

Flow in conduit (DMR=54)

| <b>Discharge Flow</b> | <b>Minimum</b> | <b>Maximum</b> | <b>Arithmetic Mean</b> |
|-----------------------|----------------|----------------|------------------------|
| Monthly Average       | 3.77 MGD       | 4.97 MGD       | 4.72 MGD               |

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## 6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

- c. Dilution Factors: Dilution factors associated with wastewater discharges are derived in accordance with *Surface Water Toxics Control Program* 06-096 CMR 530 (effective date March 21, 2012), and methods for low flow calculation contained in *Estimating Monthly, Annual, and Low 7-day, 10-year Streamflows for Ungauged Rivers in Maine*, Scientific Investigations Report 2004-5026, US Department of Interior, US Geological Survey. The Department utilizes the receiving water's available dilution during low flow conditions. The Ela Rearing Station facility discharges its treated effluent via a discharge pipe into the side of Mill Stream. These types of discharges do not achieve rapid and complete mixing with the receiving water since initial dilution is based on mixing resulting from the momentum of a discharge as it exits a discharge pipe. 06-096 CMR 530(4)(B)(1) states that analyses using numeric acute criteria for aquatic life must be based on  $\frac{1}{4}$  of the 1Q10 stream design flow to prevent substantial acute toxicity within any mixing zone. If it can be demonstrated that the discharge achieves rapid and complete mixing within the receiving waterbody by way of diffuser or other effective method, the analyses may use a greater proportion of the stream flow.

Ela Rearing Station reports that the area of Embden Pond around the dam and the upper portion of Mill Stream are significantly or completely dewatered on occasion. At those times, the Ela Rearing Station discharge constitutes the only flow in that portion of Mill Stream. In 2013 a new spillway dam was constructed at the outlet of Embden Pond. MDIFW reports obtaining rough water level measurements of 8.25 inches on September 13, 2016. The Department's Division of Environmental Assessment took this new information into consideration and the increase in flow was minimal and still resulted in a 1.03:1 dilution ratio.

The Department must assume a seasonal low flow of 0 cubic feet per second in Mill Stream and acute (1Q10), chronic (7Q10) and harmonic mean dilution factors of 1:1, which is representative of the MDIFW ELA discharge at times being the only river flow. If MDIFW wishes to establish a guaranteed minimum flow from the Mill Stream dam in the future, this determination may be revisited.

- d. BOD<sub>5</sub> and TSS: The previous permitting action established monthly average and daily maximum concentration limits of 6 mg/L and 10 mg/L respectively for BOD and TSS based on Department BPJ of BPT. These limits were based on recommendations included in USEPA's 2002 proposed draft National Effluent Guidelines for TSS from fish hatchery wastewater receiving a secondary level of treatment, the Department's long-standing view of the relationship with and significance of BOD, and consideration of effluent quality from facilities utilizing the Department's BPJ of minimum treatment technology. Mass limits were calculated based on the monthly average flow limit, the appropriate concentration limits, and a standard conversion factor.

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**6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)**

The previous permitting action revised the BOD and TSS concentration limits to a monthly average of 250 lbs./day and a daily maximum of 417 lbs./day based on the revised flow limit of 5.0 MGD. Calculations are as follows:

$$(5.0 \text{ MGD})(8.34)(6 \text{ mg/L}) = 250 \text{ lbs./day}$$

$$(5.0 \text{ MGD})(8.38)(10 \text{ mg/L}) = 417 \text{ lbs./day}$$

A summary of the BOD<sub>5</sub> and TSS data as reported on the monthly DMRs for the period of for the period of August 1, 2011, through March 29, 2016, is as follows:

**BOD<sub>5</sub> Mass (DMRs = 51)**

| Value           | Limit (lbs./day) | Range (lbs./day) | Mean (lbs./day) |
|-----------------|------------------|------------------|-----------------|
| Monthly Average | 238              | 0.00 – 181.00    | 39              |
| Daily Maximum   | 417              | 63.00 – 181.00   | 90              |

**BOD<sub>5</sub> Concentration (DMRs = 51)**

| Value           | Limit (mg/l) | Range (mg/L) | Mean (mg/L) |
|-----------------|--------------|--------------|-------------|
| Monthly Average | 6 mg/L       | 2.00 – 4.80  | 2.28        |
| Daily Maximum   | 10 mg/L      | 2.00 – 4.80  | 2.29        |

**TSS Mass (DMRs = 52)**

| Value           | Limit (lbs./day) | Range (lbs./day) | Mean (lbs./day) |
|-----------------|------------------|------------------|-----------------|
| Monthly Average | 250              | 0.00 – 202.00    | 40              |
| Daily Maximum   | 417              | 63.00 – 202.00   | 92              |

**TSS concentration (DMRs = 52)**

| Value           | Limit (mg/L) | Range (mg/L) | Mean (mg/L) |
|-----------------|--------------|--------------|-------------|
| Monthly Average | 6            | 2.00 – 5.00  | 2.32        |
| Daily Maximum   | 10           | 2.00 – 5.00  | 2.33        |

The Department's Division of Environmental Assessment (DEA) reviewed hatchery information in consideration of using TSS as a surrogate for BOD. TSS is more closely related to problems most commonly encountered at aquatic animal facilities such as phosphorus enrichment and solids control. After reviewing approximately 6 years of TSS and BOD data, the Department concluded that the results of the two parameters showed a strong correlation. Therefore, the Department concluded that TSS could be relied upon to reflect BOD conditions.

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**6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)**

The previous permitting action established and this permitting action is carrying forward mass and concentration limits for TSS with a monitoring frequency of 1/Month for TSS. BOD can cause depressed Dissolved Oxygen (DO) in the receiving waters and increased carbon levels may create a favorable environment for nuisance bacterial/fungal growth such as *Sphaerotilus natans* that may result in non-attainment of narrative water quality standards.

The Department concludes that Mill Stream does not exhibit BOD-related impacts given that 1) the hatchery operations and processes are not likely to change; 2) that the Department has a statistically significant BOD data set from this and multiple similar hatcheries; 3) that neither the USEPA nor Department have promulgated numeric effluent guidelines for BOD for Concentrated Aquatic Animal Production (CAAPs) facilities (including fish hatcheries); 4) that this permitting action contains effluent monitoring for dissolved oxygen; and 5) that in the best professional judgment of the Department's Division of Environmental Assessment that effluent limitations for BOD are not necessary to ensure compliance with water quality standards, this permitting action is eliminating the effluent limitations and monitoring requirements for BOD based on this new information that was not available at the time the previous permit was issued.

Section 402(o)(2)(B)(i) of the Clean Water Act contains an exception to anti-backsliding for information which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance. Therefore, this permitting action is eliminating the limitations for BODs. [It is noted that anti-backsliding prohibitions and exceptions are mirrored in Chapter 523 of the Department's rules at 40 CFR 122.44(1)(2)(i)(B)(1).]

- e. Dissolved Oxygen: The 7/6/11 permit established, and this permitting action is carrying forward the daily minimum limit, monthly average and daily maximum monitoring requirements for dissolved oxygen. The 7/6/2011 permit revised the minimum monitoring frequency to twice per month based on the discharge monitoring data. This permitting action is carrying forward the requirement that the MDIFW must maintain copies of all data from effluent dissolved oxygen monitoring at the facility for a period of five years and must make available copies of data to the Department upon request.

The Department reviewed 18 DMRs that were submitted for the period of June 2011 – September 2016. The data indicates the following:

Dissolved Oxygen Outfall 005A (DMR)

| Parameter       | Minimum | Maximum | Mean  |
|-----------------|---------|---------|-------|
| Monthly Average | 9.30    | 12.00   | 10.16 |
| Daily Max       | 9.60    | 12.90   | 10.52 |
| Daily Minimum   | 8.80    | 11.20   | 9.78  |



**6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)**

- f. Total Phosphorus: The decomposition of excess plant material further reduces the amount of available oxygen in the water through biochemical oxygen demand. Lowering oxygen levels in the receiving water impacts the aquatic life in that water, making it unfit for some forms of aquatic life. Enrichment from excess nutrients such as phosphorus can result in reductions in aquatic macro-invertebrate species diversity, which is an indicator of the overall health of the receiving waterbody.

Excess phosphorus can also result in undesirable aesthetic conditions in the waterbody, impacting the ability to meet standards for recreational use, a designated use by law. Therefore, any increase in the phosphorus content in the receiving water has the potential to cause or contribute to non-attainment of classification standards. Pursuant to Conditions of license 38 MRS § 414-A(1), the Department shall only authorize discharges to Maine waters when those discharges, either by themselves or in combination with other discharges, “*will not lower the quality of any classified body of water below such classification*”.

The previous permitting action established and this permitting action is carrying forward a monthly average mass limit is being revised to 1.5 lbs./day based on the revised flow limit of 5.0 MGD. Monitoring and reporting requirements were also established for the daily maximum phosphorus mass and concentration discharged. As phosphorus is typically a summer time concern for water quality in free flowing rivers and streams, the effluent limits and monitoring requirements were in effect from June 1 through September 30 each year. A required minimum monitoring frequency of once per two-weeks was established based on the Department’s BPJ of monitoring frequencies necessary to more accurately characterize facility effluent conditions, which is being revised to twice per month, also based on BPJ.

A review of the DMR data for the MDIFW Embden facility for the period of July 6, 2011 through March 29, 2016 indicates the following:

Phosphorus Mass (DMR=18)

| <b>Value</b> | <b>Limit (lbs./day)</b> | <b>Range (lbs./day)</b> | <b>Mean (lbs./day)</b> |
|--------------|-------------------------|-------------------------|------------------------|
| Monthly Avg. | 1.5                     | 1.00-4.60               | 2.70                   |
| Daily Max.   | Report                  | 1.20-5.20               | 3.01                   |

Phosphorus Concentration (DMR=18)

| <b>Value</b> | <b>Limit (mg/L)</b> | <b>Range (mg/L)</b> | <b>Mean (mg/L)</b> |
|--------------|---------------------|---------------------|--------------------|
| Monthly Avg. | 0.035               | 0.03-0.12           | 0.07               |
| Daily Max.   | report              | 0.03-0.13           | 0.07               |

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**6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)**

For the reporting period of July 6, 2011, through March 29, 2016, the DMRs indicate that there were 16 excursion from the establish limitations for mass and concentration. For the purpose of this permitting action the Department is continuing to utilize the BPJ AWQ threshold for phosphorus described above. The Department is currently undergoing rulemaking to establish new nutrient criteria. The adoption of Department Rule 06-096 CMR 583, Use Attainment Evaluation Using Nutrient Criteria for Surface Waters, may, or may not, affect future limits for phosphorus.

- g. Fish on Hand: This permitting action is carrying forward the reporting requirement for monthly average and daily maximum mass of fish on hand. This parameter is intended to enable both the Department and the permittee in evaluating management practices at the facility and trends in effluent quality and receiving water impacts. This permitting action is revising the required minimum monitoring frequency of once per two weeks to twice per month, based on the Department's BPJ of monitoring frequencies necessary to more accurately characterize facility effluent conditions. A review of the DMR data for the IFW Embden facility for the period of 2006 through January 2011 indicates the following.

Fish on Hand (DMR=40)

| Value           | Limit lbs./day | Range lbs./day | Mean lbs./day |
|-----------------|----------------|----------------|---------------|
| Monthly Average | report         | 22,097–65,664  | 40,413        |
| Daily Maximum   | report         | 23,271–71,948  | 45,954        |

- h. Formalin: Formalin is a drug used to treat fungal infections and external parasites of finfish and finfish eggs. The previous permitting action established daily maximum concentration and mass effluent limitations of 45 mg/L and 150 lbs./day, for 1-hour formalin treatments and 25 mg/L and 150 lbs./day, respectively, for 24-hour formalin treatments. This permit eliminates the concentration limits for formalin.

Neither the Department nor USEPA have promulgated ambient water quality criteria for formalin. Using best professional judgment, the Department has established water quality based thresholds for formalin based on Whole Effluent Toxicity (WET) testing on the water flea (*Ceriodaphnia dubia*) for 48-hour acute toxicity. For one-hour treatments, which are typical of most hatchery and rearing facility operations, the Department has established an ambient water quality threshold of 45 mg/L. Rarely, certain circumstances require use of formalin to control disease on additional rearing structures which results in the discharge of formalin for periods longer than the typical one-hour period for normal disease treatment. To ensure water quality standards are met and that formalin is not discharged at levels that would be toxic to aquatic life in the receiving water, the Department has established an ambient water quality threshold of 25 mg/L based on best professional judgment for a maximum 24-hour treatment period.

## 6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Effective parasite treatment of hatchery trout using formalin may require formalin concentrations up to 250 µl/l (= 270.6 mg/l) when water temperatures are less than 10°C (50°F). To achieve this concentration, 151.8 pounds of formalin will need to be added to a ten-tank line having a total volume of 66,500 gallons.

### Formalin mass:

$$(270.6 \text{ mg/l}) \times (66,500 \text{ gal.}) \times (3.78541 \text{ l/gal}) \times (1 \text{ lb. /453,592 mg}) = 150.2 \text{ lbs.}$$

Inland Fisheries & Wildlife has developed a mixing model to determine the hatchery's discharge concentrations of formalin to Mill Stream once treatment commences. The department's Division of Environmental Assessment has reviewed this model, revised it to optimize mass conservation, and found it acceptable for determining the hatchery's discharge concentrations of formalin. The model incorporates the following conservative assumptions and reasonably achievable dilution flows:

- The mass of formalin is assumed to be conserved through the treatment process (i.e., the formalin added for treatment = formalin discharged to Mill Stream);
- Water in each 6,650-gallon tank of the dosed, ten-tank line mixes with 80 gallons per minute (gpm) of freshwater to dilute the formalin concentration in the tank by a *compounding* dilution ratio of 1.012:1 *every minute*; and
- The 800 gpm of effluent from the ten, dosed tanks mixes with 2,672 gpm of effluent from the twenty, un-dosed tanks to dilute the formalin concentration by a *constant* dilution ratio of 4.34:1 prior to discharge to Mill Stream.

As a result of these assumptions and these dilution ratios, the hatchery's discharge concentration of formalin decreases from 62.3 mg/l at the start of discharge to less than 0.01 mg/l after 13 hours. The peak hourly average discharge concentration of 44.4 mg/l occurs the first hour of discharge (less than the acute toxicity threshold of 45 mg/l). The formalin discharge concentration falls below the chronic toxicity threshold of 25 mg/l approximately 76 minutes after discharge starts.

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## 6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)

Mass limits for 24 hour treatments were derived from the updated concentration limits, and taking into consideration the settling basins and are calculated as such:

Settling basin dimensions:

$$\begin{aligned} 25\text{ft (Width)} \times 37\text{ft (Length)} \times 3.5\text{ft (Depth)} &= 3,238\text{ft}^3 \\ \text{Settling Basin } 25\text{ft (W)} \times 51\text{ft (L)} \times 5\text{ft (D)} &= 6,375\text{ft}^3 \\ \text{Total Volume } 6,375\text{ft}^3 + 3,238\text{ft}^3 &= 9613\text{ft}^3 \\ 9,613\text{ft}^3 \times 7.48 \text{ gal/ft}^3 &= \text{gallons } 71,905 \text{ (0.072 MG)} \end{aligned}$$

For 24 hour treatments:

$$5.0 \text{ MGD} + 0.072 \text{ MG}$$

$$5.072 \text{ MGD} \times 9.03 \text{ lbs./gallon} \times 25 \text{ mg/L} = 1,145 \text{ lbs./day}$$

Mass limits are based on the following language from the 2008 revision:

"Effluent mass limits were previously calculated based on the permittee's projected maximum amount of formalin used per day (5.0-gallons) times the weight of formalin (9.13 lbs./gal), resulting in a value of 150 lbs./day."

The above mass calculations, for the 24-hour and 1-hour treatment yield very conservative limitations of 1,145 lbs./day and 150 lbs./hour, respectively. Therefore, based on the Departments BPJ of AWQC, the mass limit established in the 2008 minor revision (and carried forward since that time) is being carried forward in this permitting action.

The Department is identifying in this permitting action that the concentration limit is not necessary to ensure water quality standards are achieved and that the limitation was established in error. Section 402(0) of the Clean Water Act contains prohibitions for anti-backsliding.

Generally, anti-backsliding prohibits the issuance of a renewed permit with less stringent limitations than were established in the previous permit. The Clean Water Act contains certain exceptions to anti-backsliding at Section 402(o)(2). In the case of MIFW's Embden facility and the concentration limitation for formalin, the Department has determined that establishing a concentration limitation for formalin constitutes a technical mistake in issuing the permit. Section 402(o)(2)(B)(ii) of the Clean Water Act contains an exception to anti-backsliding for this reason. Therefore, this permitting action is eliminating the concentration limitation for formalin. (It is noted that anti-backsliding prohibitions and exceptions are mirrored in Chapter 523 of the Department's rules).

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**6. EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS (cont'd)**

This permitting action is carrying forward the minimum monitoring frequency requirement of once per occurrence for formalin. A review of the DMR data for the IFW Palermo facility for the period of January 2011 through June 2016 indicates the following.

Formalin Mass (DMR=17)

| Value           | Limit lbs./day | Range lbs./day |
|-----------------|----------------|----------------|
| Monthly Average | report         | 0.00-41.00     |
| Daily Maximum   | 150            | 0.00-75.00     |

Formalin concentration (DMR=17)

| Value           | Limit (mg/L) | Range (mg/L) |
|-----------------|--------------|--------------|
| Monthly Average | Report       | 0.00 – 22.90 |
| 1-Hour Maximum  | 45           | 0.00 – 50.00 |
| 24-Hour Maximum | 25           | 0.00 – 22.90 |

It is noted that for the reporting period of January 2011 through June 2016 there was one excursion from the 1-Hour Maximum limit.

**7. DISCHARGE IMPACT ON RECEIVING WATER QUALITY**

As permitted, the Department has determined the existing water uses will be maintained and protected and the discharge will not cause or contribute to the failure of the waterbody to meet standards for Class B classification.

**8. PUBLIC COMMENTS**

Public notice of this application was made in the *Kennebec Journal* newspaper on or about March 15, 2016. The Department receives public comments on an application until the date a final agency action is taken on the application. Those persons receiving copies of draft permits must have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to *Application Processing Procedures for Waste Discharge Licenses*, 06-096 CMR 522 (effective January 12, 2001).

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## **9. DEPARTMENT CONTACTS**

Additional information concerning this permitting action may be obtained from, and written comments sent to:

Aaron Dumont  
Division of Water Quality Management  
Bureau of Water Quality  
Department of Environmental Protection  
17 State House Station  
Augusta, Maine 04333-0017 Telephone: (207) 592-7161  
e-mail: [Aaron.A.Dumont@maine.gov](mailto:Aaron.A.Dumont@maine.gov)

## **10. RESPONSE TO COMMENTS**

*Reserved until the end of the comment period.*

# **ATTACHMENT A**

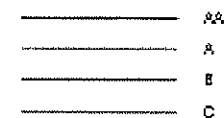


**Legend**

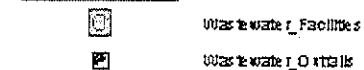
**Rivers**



**Streams**

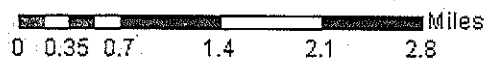
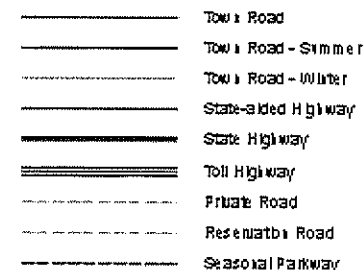


**Ponds and Lakes**



**Roads**

**JURISDICTION**



**MDIFW ELA Rearing Station  
Embden, Maine**

Map created by:  
Bob Stratton  
Division of Water Quality Management  
Maine Department of Environmental Protection





MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

STANDARD CONDITIONS APPLICABLE TO ALL PERMITS

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**A. GENERAL PROVISIONS**

**1. General compliance.** All discharges shall be consistent with the terms and conditions of this permit; any changes in production capacity or process modifications which result in changes in the quantity or the characteristics of the discharge must be authorized by an additional license or by modifications of this permit; it shall be a violation of the terms and conditions of this permit to discharge any pollutant not identified and authorized herein or to discharge in excess of the rates or quantities authorized herein or to violate any other conditions of this permit.

**2. Other materials.** Other materials ordinarily produced or used in the operation of this facility, which have been specifically identified in the application, may be discharged at the maximum frequency and maximum level identified in the application, provided:

- (a) They are not
  - (i) Designated as toxic or hazardous under the provisions of Sections 307 and 311, respectively, of the Federal Water Pollution Control Act; Title 38, Section 420, Maine Revised Statutes; or other applicable State Law; or
  - (ii) Known to be hazardous or toxic by the licensee.
- (b) The discharge of such materials will not violate applicable water quality standards.

**3. Duty to comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of State law and the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

- (a) The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act, and 38 MRSA, §420 or Chapter 530.5 for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
- (b) Any person who violates any provision of the laws administered by the Department, including without limitation, a violation of the terms of any order, rule license, permit, approval or decision of the Board or Commissioner is subject to the penalties set forth in 38 MRSA, §349.

**4. Duty to provide information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

**5. Permit actions.** This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

**6. Reopener clause.** The Department reserves the right to make appropriate revisions to this permit in order to establish any appropriate effluent limitations, schedule of compliance or other provisions which may be authorized under 38 MRSA, §414-A(5).

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**7. Oil and hazardous substances.** Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under section 311 of the Federal Clean Water Act; section 106 of the Federal Comprehensive Environmental Response, Compensation and Liability Act of 1980; or 38 MRSA §§ 1301, et. seq.

**8. Property rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.

**9. Confidentiality of records.** 38 MRSA §414(6) reads as follows. "Any records, reports or information obtained under this subchapter is available to the public, except that upon a showing satisfactory to the department by any person that any records, reports or information, or particular part or any record, report or information, other than the names and addresses of applicants, license applications, licenses, and effluent data, to which the department has access under this subchapter would, if made public, divulge methods or processes that are entitled to protection as trade secrets, these records, reports or information must be confidential and not available for public inspection or examination. Any records, reports or information may be disclosed to employees or authorized representatives of the State or the United States concerned with carrying out this subchapter or any applicable federal law, and to any party to a hearing held under this section on terms the commissioner may prescribe in order to protect these confidential records, reports and information, as long as this disclosure is material and relevant to any issue under consideration by the department."

**10. Duty to reapply.** If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

**11. Other laws.** The issuance of this permit does not authorize any injury to persons or property or invasion of other property rights, nor does it relieve the permittee of its obligation to comply with other applicable Federal, State or local laws and regulations.

**12. Inspection and entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the EPA Administrator), upon presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- (d) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

**B. OPERATION AND MAINTENANCE OF FACILITIES**

**1. General facility requirements.**

- (a) The permittee shall collect all waste flows designated by the Department as requiring treatment and discharge them into an approved waste treatment facility in such a manner as to

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- maximize removal of pollutants unless authorization to the contrary is obtained from the Department.
- (b) The permittee shall at all times maintain in good working order and operate at maximum efficiency all waste water collection, treatment and/or control facilities.
  - (c) All necessary waste treatment facilities will be installed and operational prior to the discharge of any wastewaters.
  - (d) Final plans and specifications must be submitted to the Department for review prior to the construction or modification of any treatment facilities.
  - (e) The permittee shall install flow measuring facilities of a design approved by the Department.
  - (f) The permittee must provide an outfall of a design approved by the Department which is placed in the receiving waters in such a manner that the maximum mixing and dispersion of the wastewaters will be achieved as rapidly as possible.

**2. Proper operation and maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

**3. Need to halt or reduce activity not a defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

**4. Duty to mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

**5. Bypasses.**

- (a) Definitions.
  - (i) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.
  - (ii) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
- (b) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (c) and (d) of this section.
- (c) Notice.
  - (i) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

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- (ii) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph D(1)(f), below. (24-hour notice).
- (d) Prohibition of bypass.
  - (i) Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
    - (A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
    - (B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
    - (C) The permittee submitted notices as required under paragraph (c) of this section.
  - (ii) The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three conditions listed above in paragraph (d)(i) of this section.

**6. Upsets.**

- (a) Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- (b) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (c) of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- (c) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - (i) An upset occurred and that the permittee can identify the cause(s) of the upset;
  - (ii) The permitted facility was at the time being properly operated; and
  - (iii) The permittee submitted notice of the upset as required in paragraph D(1)(f) , below. (24 hour notice).
  - (iv) The permittee complied with any remedial measures required under paragraph B(4).
- (d) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

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**C. MONITORING AND RECORDS**

**1. General Requirements.** This permit shall be subject to such monitoring requirements as may be reasonably required by the Department including the installation, use and maintenance of monitoring equipment or methods (including, where appropriate, biological monitoring methods). The permittee shall provide the Department with periodic reports on the proper Department reporting form of monitoring results obtained pursuant to the monitoring requirements contained herein.

**2. Representative sampling.** Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. If effluent limitations are based wholly or partially on quantities of a product processed, the permittee shall ensure samples are representative of times when production is taking place. Where discharge monitoring is required when production is less than 50%, the resulting data shall be reported as a daily measurement but not included in computation of averages, unless specifically authorized by the Department.

**3. Monitoring and records.**

- (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- (b) Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.
- (c) Records of monitoring information shall include:
  - (i) The date, exact place, and time of sampling or measurements;
  - (ii) The individual(s) who performed the sampling or measurements;
  - (iii) The date(s) analyses were performed;
  - (iv) The individual(s) who performed the analyses;
  - (v) The analytical techniques or methods used; and
  - (vi) The results of such analyses.
- (d) Monitoring results must be conducted according to test procedures approved under 40 CFR part 136, unless other test procedures have been specified in the permit.
- (e) State law provides that any person who tampers with or renders inaccurate any monitoring devices or method required by any provision of law, or any order, rule license, permit approval or decision is subject to the penalties set forth in 38 MRSA, §349.

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

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**D. REPORTING REQUIREMENTS**

**1. Reporting requirements.**

- (a) Planned changes. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
  - (i) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
  - (ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under Section D(4).
  - (iii) 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;
- (b) Anticipated noncompliance. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- (c) Transfers. This permit is not transferable to any person except upon application to and approval of the Department pursuant to 38 MRSA, § 344 and Chapters 2 and 522.
- (d) Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.
  - (i) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Department for reporting results of monitoring of sludge use or disposal practices.
  - (ii) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR part 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Department.
  - (iii) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Department in the permit.
- (e) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
- (f) Twenty-four hour reporting.
  - (i) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance

MAINE POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

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has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(ii) The following shall be included as information which must be reported within 24 hours under this paragraph.

(A) Any unanticipated bypass which exceeds any effluent limitation in the permit.

(B) Any upset which exceeds any effluent limitation in the permit.

(C) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit to be reported within 24 hours.

(iii) The Department may waive the written report on a case-by-case basis for reports under paragraph (f)(ii) of this section if the oral report has been received within 24 hours.

(g) Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs (d), (e), and (f) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (f) of this section.

(h) Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

**2. Signatory requirement.** All applications, reports, or information submitted to the Department shall be signed and certified as required by Chapter 521, Section 5 of the Department's rules. State law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan or other document filed or required to be maintained by any order, rule, permit, approval or decision of the Board or Commissioner is subject to the penalties set forth in 38 MRSA, §349.

**3. Availability of reports.** Except for data determined to be confidential under A(9), above, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. As required by State law, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal sanctions as provided by law.

**4. Existing manufacturing, commercial, mining, and silvicultural dischargers.** In addition to the reporting requirements under this Section, all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Department 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":

(i) One hundred micrograms per liter (100 ug/l);

(ii) 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-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;

(iii) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with Chapter 521 Section 4(g)(7); or

(iv) The level established by the Department in accordance with Chapter 523 Section 5(f).



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- (b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
  - (i) Five hundred micrograms per liter (500 ug/l);
  - (ii) One milligram per liter (1 mg/l) for antimony;
  - (iii) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with Chapter 521 Section 4(g)(7); or
  - (iv) The level established by the Department in accordance with Chapter 523 Section 5(f).

### 5. Publicly owned treatment works.

- (a) All POTWs must provide adequate notice to the Department of the following:
  - (i) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA or Chapter 528 if it were directly discharging those pollutants.
  - (ii) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
  - (iii) For purposes of this paragraph, adequate notice shall include information on (A) the quality and quantity of effluent introduced into the POTW, and (B) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.
- (b) When the effluent discharged by a POTW for a period of three consecutive months exceeds 80 percent of the permitted flow, the permittee shall submit to the Department a projection of loadings up to the time when the design capacity of the treatment facility will be reached, and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans.

## E. OTHER REQUIREMENTS

**1. Emergency action - power failure.** Within thirty days after the effective date of this permit, the permittee shall notify the Department of facilities and plans to be used in the event the primary source of power to its wastewater pumping and treatment facilities fails as follows.

- (a) For municipal sources. During power failure, all wastewaters which are normally treated shall receive a minimum of primary treatment and disinfection. Unless otherwise approved, alternate power supplies shall be provided for pumping stations and treatment facilities. Alternate power supplies shall be on-site generating units or an outside power source which is separate and independent from sources used for normal operation of the wastewater facilities.
- (b) For industrial and commercial sources. The permittee shall either maintain an alternative power source sufficient to operate the wastewater pumping and treatment facilities or halt, reduce or otherwise control production and or all discharges upon reduction or loss of power to the wastewater pumping or treatment facilities.

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**2. Spill prevention.** (applicable only to industrial sources) Within six months of the effective date of this permit, the permittee shall submit to the Department for review and approval, with or without conditions, a spill prevention plan. The plan shall delineate methods and measures to be taken to prevent and or contain any spills of pulp, chemicals, oils or other contaminants and shall specify means of disposal and or treatment to be used.

**3. Removed substances.** Solids, sludges trash rack cleanings, filter backwash, or other pollutants removed from or resulting from the treatment or control of waste waters shall be disposed of in a manner approved by the Department.

**4. Connection to municipal sewer.** (applicable only to industrial and commercial sources) All wastewaters designated by the Department as treatable in a municipal treatment system will be cosigned to that system when it is available. This permit will expire 90 days after the municipal treatment facility becomes available, unless this time is extended by the Department in writing.

**F. DEFINITIONS.** For the purposes of this permit, the following definitions shall apply. Other definitions applicable to this permit may be found in Chapters 520 through 529 of the Department's rules

**Average** means the arithmetic mean of values taken at the frequency required for each parameter over the specified period. For bacteria, the average shall be the geometric mean.

**Average monthly discharge limitation** means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. Except, however, bacteriological tests may be calculated as a geometric mean.

**Average weekly discharge limitation** means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

**Best management practices ("BMPs")** means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

**Composite sample** means a sample consisting of a minimum of eight grab samples collected at equal intervals during a 24 hour period (or a lesser period as specified in the section on monitoring and reporting) and combined proportional to the flow over that same time period.

**Continuous discharge** means a discharge which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities.

**Daily discharge** means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations 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.

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**Discharge Monitoring Report ("DMR")** means the EPA uniform national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by approved States as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA's.

**Flow weighted composite sample** means a composite sample consisting of a mixture of aliquots collected at a constant time interval, where the volume of each aliquot is proportional to the flow rate of the discharge.

**Grab sample** means an individual sample collected in a period of less than 15 minutes.

**Interference** means a Discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

- (1) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
- (2) Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

**Maximum daily discharge limitation** means the highest allowable daily discharge.

**New source** means any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

- (a) After promulgation of standards of performance under section 306 of CWA which are applicable to such source, or
- (b) After proposal of standards of performance in accordance with section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal.

**Pass through** means a discharge which exits the POTW into waters of the State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

**Permit** means an authorization, license, or equivalent control document issued by EPA or an approved State to implement the requirements of 40 CFR parts 122, 123 and 124. Permit includes an NPDES general permit (Chapter 529). Permit does not include any permit which has not yet been the subject of final agency action, such as a draft permit or a proposed permit.

**Person** means an individual, firm, corporation, municipality, quasi-municipal corporation, state agency, federal agency or other legal entity.

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**Point source** means any discernible, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation or vessel or other floating craft, from which pollutants are or may be discharged.

**Pollutant** means dredged spoil, solid waste, junk, incinerator residue, sewage, refuse, effluent, garbage, sewage sludge, munitions, chemicals, biological or radiological materials, oil, petroleum products or byproducts, heat, wrecked or discarded equipment, rock, sand, dirt and industrial, municipal, domestic, commercial or agricultural wastes of any kind.

**Process wastewater** means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

**Publicly owned treatment works ("POTW")** means any facility for the treatment of pollutants owned by the State or any political subdivision thereof, any municipality, district, quasi-municipal corporation or other public entity.

**Septage** means, for the purposes of this permit, any waste, refuse, effluent sludge or other material removed from a septic tank, cesspool, vault privy or similar source which concentrates wastes or to which chemicals have been added. Septage does not include wastes from a holding tank.

**Time weighted composite** means a composite sample consisting of a mixture of equal volume aliquots collected over a constant time interval.

**Toxic pollutant** includes any pollutant listed as toxic under section 307(a)(1) or, in the case of sludge use or disposal practices, any pollutant identified in regulations implementing section 405(d) of the CWA. Toxic pollutant also includes those substances or combination of substances, including disease causing agents, which after discharge or upon exposure, ingestion, inhalation or assimilation into any organism, including humans either directly through the environment or indirectly through ingestion through food chains, will, on the basis of information available to the board either alone or in combination with other substances already in the receiving waters or the discharge, cause death, disease, abnormalities, cancer, genetic mutations, physiological malfunctions, including malfunctions in reproduction, or physical deformations in such organism or their offspring.

**Wetlands** means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

**Whole effluent toxicity** means the aggregate toxic effect of an effluent measured directly by a toxicity test.