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

DEPARTMENT ORDER

IN THE MATTER OF

WHOLE OCEANS, LLC	)	MAINE POLLUTANT DISCHARGE
BUCKSPORT, HANCOCK COUNTY, MAINE	)	ELIMINATION SYSTEM PERMIT
LAND BASED AQUACULTURE	)	AND
ME0037478	)	WASTE DISCHARGE LICENSE
W009190-6F-A-N **APPROVAL**	)	**NEW**

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 hereinafter), the Department has considered the application of WHOLE OCEANS, LLC (Whole Oceans/permittee hereinafter), for a new combination Maine Pollutant Discharge Elimination System (MEPDES) permit/Maine Waste Discharge License (WDL)(permit hereinafter) with its supportive data, agency review comments, public comments and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

On June 4, 2018, and as amended on September 10, 2018, Whole Oceans submitted an application to the Department for a new MEPDES permit/WDL for the monthly average discharge of 18.6 million gallons per day (MGD), subject to the attached conditions of this permit, of treated wastewater associated with a land based recirculating aquaculture system (RAS) to the Penobscot River main stem, Class SC, in Bucksport, Maine. The permittee proposes to rear Atlantic salmon from the egg life stage to market size fish weighing 10-12 pounds. The facility will be built in phases as follows:

Phase I (initial) production up to 5,000 metric tons (MT) = 11 million pounds
Phase II (intermediate) production at 5,001 MT – 10,000 MT = 22 million pounds
Phase III (full build out) production at 10,001 - 20,000 MT = 44 million pounds

The permittee has plans to construct a fish processing facility (head-on, gutted) on-site at a later date. Limitations and monitoring requirements for this facility are not factored into this permit as the permittee is undecided as whether to convey this water to the local municipal waste water treatment facility for treatment or treat the waste water on-site and discharge the treated water to the Penobscot River. A separate review and approval process would be required for both options.

PERMIT SUMMARY

This permitting action is establishing:

1. Three tiers of technology based numeric limitations for flow, biochemical oxygen demand (BOD), total suspended solids (TSS), total nitrogen and pH;

2. A requirement to seasonally (May – October) monitor the effluent for total phosphorus and total ammonia.

3. A requirement for the permittee to conduct a dye study to determine the mixing characteristics of the treated effluent discharge from the facility with the receiving water;

4. A requirement to conduct seasonal (May – October) ambient water quality monitoring of the Penobscot River;

5. A requirement for the facility to develop and maintain an Operations & Maintenance (O&M) Plan for the production facility and the wastewater treatment facility;

6. A requirement to limit the use of antibiotics, fungicides, bactericides, paraciticides and other chemical compounds;

7. A requirement for the facility to develop and maintain a Containment Management System (CMS) to prevent escape of fish from the facility; and

8. A requirement for the permittee to meet with the Department's permitting and compliance inspection staff 90 days prior to commencement of operations, to review applicability of the permit limitations, monitoring requirements and reporting requirements.

CONCLUSIONS

BASED on the findings in the attached and incorporated Fact Sheet dated September 28, 2018, 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;

   (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).

ACTION

THEREFORE, the Department APPROVES the application of WHOLE OCEANS, LLC to discharge a monthly average flow of 18.6 MGD, subject to the attached conditions of this permit, of treated wastewater associated with a land based RAS to the Penobscot River main stem, Class SC, in Bucksport, Maine, subject to the attached conditions and all applicable standards and regulations:

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) (last amended June 9, 2018)].

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

DONE AND DATED AT AUGUSTA, MAINE, THIS 21 DAY OF November 2018.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
for Melanie Loyzim, Acting Commissioner

Date of initial receipt of application June 4, 2018

Date of application acceptance June 5, 2018

Filed
NOV 21 2018
State of Maine
Board of Environmental Protection

Date filed with Board of Environmental Protection _____

This Order prepared by Gregg Wood, Bureau of Water Quality

ME0037478 2018 11/21/18

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge treated **waste water associated with a land based RAS from Outfall #001B or Outfall #003** to the Penobscot River. Such discharges are limited and must be monitored by the permittee as specified below[1]:

Phase I - ≤5,000 Metric Tons (MT)

Effluent Characteristic					Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow *[50050]*	4.65 MGD *[03]*	---	---	---	Continuous *[99/99]*	Meter *[MR]*
Biochemical Oxygen Demand[6] (BOD_5) *[00310]*	1,163 lbs./day *[26]*	1,939 lbs./day *[26]*	30 mg/L *[19]*	50 mg/L *[19]*	3/Week *[03/07]*	Composite[2] *[24]*
Total Suspended Solids(TSS) [6] *[00530]*	1,163 lbs./day *[26]*	1,939 lbs./day *[26]*	30 mg/L *[19]*	50 mg/L *[19]*	3/Week *[03/07]*	Composite[2] *[24]*
Total Kjeldahl Nitrogen (as N) *[00625]* ***(May – Oct)***	Report lbs/day *[26]*	Report lbs/day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	1/Week *[01/07]*	Composite[2] *[24]*
Nitrate + Nitrite Nitrogen (as N) *[00630]* ***(May – Oct)***	Report lbs/day *[26]*	Report lbs/day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	1/Week *[01/07]*	Composite[2] *[24]*
Total Nitrogen (as N) [3,6] *[00600]* ***(May – Oct)***	1,865 lbs/day *[26]*	Report lbs/day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	1/Week *[01/07]*	Composite[2] *[24]*
Fish on Hand *[45604]*	---	Report Metric Tons *[41]*	---	---	1/Month *[01/30]*	Calculated *[CA]*
Total Phosphorus[5] *[00665]* ***(May – Oct)***	Report lbs/day *[26]*	Report lbs/day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	1/Week *[01/07]*	Composite[2] *[24]*
Total Ammonia *[00610]* ***(May – Oct)***	Report lbs/day *[26]*	Report lbs/day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	1/Week *[01/07]*	Grab *[GR]*
pH (Std. Units) *[00400]*	---	---	---	6.0-9.0 *[12]*	3/Week *[03/07]*	Grab *[GR]*

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. The permittee is authorized to discharge treated **waste water associated with a land based RAS from Outfall #001B or Outfall #003** to the Penobscot River. Such discharges are limited and must be monitored by the permittee as specified below[1]:

Phase II - 5,001 MT – 10,000 MT (The permittee must file an application with the Department and receive a formal modification of this permit prior to discharging under the Phase II discharge limitations).

Effluent Characteristic					Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow *[50050]*	9.3 MGD *[03]*	---	---	---	Continuous *[99/99]*	Meter *[MR]*
Biochemical Oxygen Demand [6] (BOD_5) *[00310]*	2,327 lbs./day *[26]*	3,878 lbs./day *[26]*	30 mg/L *[19]*	50 mg/L *[19]*	3/Week *[03/07]*	Composite[2] *[24]*
Total Suspended Solids(TSS) [6] *[00530]*	2,327 lbs./day *[26]*	3,878 lbs./day *[26]*	30 mg/L *[19]*	50 mg/L *[19]*	3/Week *[03/07]*	Composite[2] *[24]*
Total Kjeldahl Nitrogen (as N) *[00625]* ***(May – Oct)***	Report lbs/day *[26]*	Report lbs/day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	1/Week *[01/07]*	Composite[2] *[24]*
Nitrate + Nitrite Nitrogen (as N) *[00630]* ***(May – Oct)***	Report lbs/day *[26]*	Report lbs/day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	1/Week *[01/07]*	Composite[2] *[24]*
Total Nitrogen (as N) [3,6] *[00600]* ***(May – Oct)***	*Reserved* lbs/day *[26]*	Report lbs/day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	1/Week *[01/07]*	Composite[2] *[24]*
Fish on Hand *[45604]*	---	Report Metric Tons *[41]*	---	---	1/Month *[01/30]*	Calculated *[CA]*
Total Phosphorus[5] *[00665]* ***(May – Oct)***	Report lbs/day *[26]*	Report lbs/day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	1/Week *[01/07]*	Composite[2] *[24]*
Total Ammonia *[00610]* ***(May – Oct)***	Report lbs/day *[26]*	Report lbs/day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	1/Week *[01/07]*	Grab *[GR]*
pH (Std. Units) *[00400]*	---	---	---	6.0-9.0 *[12]*	3/Week *[03/07]*	Grab *[GR]*

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

3. The permittee is authorized to discharge treated **waste water associated with a land based RAS from Outfall #001B or Outfall #003** to the Penobscot River. Such discharges are limited and must be monitored by the permittee as specified below[1]:

Phase III - 10,001 MT – 20,000 MT (The permittee must file an application with the Department and receive a formal modification of this permit prior to discharging under the Phase III discharge limitations).

Effluent Characteristic					Minimum Monitoring Requirements	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow *[50050]*	18.6 MGD *[03]*	---	---	---	Continuous *[99/99]*	Meter *[MR]*
Biochemical Oxygen Demand[6] (BOD_5) *[00310]*	4,654 lbs./day *[26]*	7,756 lbs./day *[26]*	30 mg/L *[19]*	50 mg/L *[19]*	3/Week *[03/07]*	Composite[2] *[24]*
Total Suspended Solids(TSS) [6] *[00530]*	4,654 lbs./day *[26]*	7,756 lbs./day *[26]*	30 mg/L *[19]*	50 mg/L *[19]*	3/Week *[03/07]*	Composite[2] *[24]*
Total Kjeldahl Nitrogen (as N) *[00625]* ***(May – Oct)***	Report lbs/day *[26]*	Report lbs/day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	1/Week *[01/07]*	Composite[2] *[24]*
Nitrate + Nitrite Nitrogen (as N) *[00630]* ***(May – Oct)***	Report lbs/day *[26]*	Report lbs/day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	1/Week *[01/07]*	Composite[2] *[24]*
Total Nitrogen (as N) [3,6] *[00600]* ***(May – Oct)***	*Reserved* lbs/day *[26]*	Report lbs/day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	1/Week *[01/07]*	Composite[2] *[24]*
Fish on Hand *[45604]*	---	Report Metric Tons *[41]*	---	---	1/Month *[01/30]*	Calculated *[CA]*
Total Phosphorus[5] *[00665]* ***(May – Oct)***	Report lbs/day *[26]*	Report lbs/day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	1/Week *[01/07]*	Composite[2] *[24]*
Total Ammonia *[00610]* ***(May – Oct)***	Report lbs/day *[26]*	Report lbs/day *[26]*	Report mg/L *[19]*	Report mg/L *[19]*	1/Week *[01/07]*	Grab *[GR]*
pH (Std. Units) *[00400]*	---	---	---	6.0-9.0 *[12]*	3/Week *[03/07]*	Grab *[GR]*

SPECIAL CONDITIONS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

4. The permittee is authorized to discharge untreated **backwash wash waters via Outfall #001A to the Penobscot River. Waters discharged are associated with the cleaning of the facility intake screens.** No limitations or monitoring requirements are being established for this outfall given the nature of the discharge.

SPECIAL CONDITIONS

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

Footnotes

1. **Sampling** – All effluent monitoring must be conducted following the last treatment unit prior to discharging to the receiving water. All monitoring must be conducted so 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 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.

3. **Total nitrogen (as N) – Monthly** – The permittee is required to report the monthly average, and daily maximum mass and concentrations for each month (May – October) of each year by adding the total kjeldahl nitrogen values to the nitrate + nitrite nitrogen values for each sampling event. See **Attachment A** of this permit for *Protocol for Nitrogen Sample Collection and Analysis for Waste Water Effluent.*

4. **Total Nitrogen** – Numeric mass limitations for Phase II and Phase III are not being established upon issuance of this permit. The Department will utilize effluent data from Phase I, the dye study required by Special Condition F of this permit and ambient water quality monitoring data required by Special Condition G of this permit as the basis for future limits.

5. **Total phosphorus** – See **Attachment B** of this permit for *Protocol for Total Phosphorus Sample Collection and Analysis for Waste Water and Receiving Water Monitoring Required by Permits.*

SPECIAL CONDITIONS

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

Footnotes:

6. **BOD, TSS and Total nitrogen** - The monthly average and daily maximum limitations for biochemical oxygen demand, total suspended solids and total nitrogen will be subject to a statistical evaluation at the end of the term of this permit to assist the Department in establishing best practicable treatment standards for the RAS industry.

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 discharge must not impart visible discoloration, taste, turbidity, toxicity, radioactivity or other properties in the receiving waters which would impair the usages 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.

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 June 5, 2018, and amended on September 10, 2018; 2) the terms and conditions of this permit; and 3) only from Outfalls #001A, Outfall #001B and Outfall #003. Discharges of wastewater from any other point source are not authorized under this permit, and must be reported in accordance with Standard Condition D(1)(f), *Twenty-four-hour reporting*, of this permit.

The permittee must receive a formal modification of this permit from the Department prior to discharging under the Phase II or Phase III discharge limitations.

SPECIAL CONDITIONS

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.

Electronic Discharge Monitoring Reports (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 15th 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. Documentation submitted electronically to the Department in support of the electronic DMR must be submitted no later than midnight on the 15th day of the month following the completed reporting period.

SPECIAL CONDITIONS

F. DYE STUDY

Within 6 months of the effective date of this permit, the permittee must submit a plan to the Department for review and approval, that includes a scope of work and schedule to conduct a dye study to more accurately determine the mixing characteristics of the effluent being discharged with the receiving water.

Within 6 months of commencing operations and achieving ≥85% (4,250 metric tons) of Phase I full production of 5,000 MT (eggs, smolts, fry, and market size fish), the permittee must conduct a dye study to determine the mixing characteristics of the treated effluent and the receiving water. The dye study must be conducted in July or August and at multiple tidal stages during low flow conditions.

Within 6 months of completion of the dye study, the permittee must submit a report to the Department that characterizes the mixing conditions in the receiving water (both the east and west channels around Verona Island) and provide information on the dilution factors associated with the discharge at 2,500-foot increments beginning at the outfall and continuing downstream to a point 0.5 mile below the southern tip of Verona Island or until the dye concentration is below the instrument detection level.

G. AMBIENT WATER QUALITY MONITORING

On or before February 1, 2019, the permittee must submit an ambient water quality monitoring plan to the Department for review and approval, to monitor five (5) existing sampling stations established by the Department. The stations to be monitored are P1, P4, P6, P7 and O3. See **Attachment D** of the Fact Sheet of this permit for a map depicting the locations of the monitoring sites. The proposed monitoring plan must conform with a Department approved Quality Assurance Project Plan (QAPP). All sampling and analysis must be conducted by 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.

Beginning May 1, 2019, the permittee must commence ambient monitoring at five designated sites established by the Department at a frequency of 2/Month between May 1st and October 31st of each year. Each monitoring event must be conducted during a three-hour sampling window on the second half of an ebb tide. Minimum parameters to be monitored via a sonde are temperature, salinity, pH, dissolved oxygen, chlorophyll *a,* and turbidity while total phosphorus, total kjeldahl nitrogen, nitrate + nitrite nitrogen are to be monitored via grab samples.

On or before December 31st of each year, the permittee must submit a report to the Department summarizing the data collected and report any trends or anomalies with the data.

SPECIAL CONDITIONS

H. OPERATION & MAINTENANCE PLAN

Within 6 months after commencement of operations, the permittee must submit a written Operation & Maintenance (O&M) Plan for the facility to the Department for review. 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 solids processing system and production systems, identify and implement procedures for routine cleaning of rearing units and any 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.

2. Materials Storage

    a. Ensure proper storage of drugs[1], pesticides[2], feed, chemicals 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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[1] **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].

[2] **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

H. OPERATION & MAINTENANCE 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 United States Environmental Protection Agency (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.

SPECIAL CONDITIONS

I. DISEASE CONTROL

The permittee must comply with Maine Department of Inland Fisheries and Wildlife (MDIFW) (freshwater facilities) and Maine Department of Marine Resources (MEDMR) (salmon & marine facilities) fish health laws (12 MRS, §6071; 12 MRS, §100051, 10105, 12507 and 12509, or revised laws). The cited laws include requirements for notification to the appropriate agency within 24-hours of pathogen detection. In addition to the requirements of the MDIFW and MEDMR rules, **the permittee shall notify the Department in writing within 24 hours following pathogen detection**, with information on the disease/pathogen, necessary control measures, and the veterinarian involved.

1. **General requirements.** All chemicals 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). 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.

2. **FDA-approved drugs.** 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 and shall only be administered in accordance with label instructions.

   a. Drugs identified in the permittee's application: A list of drugs, chemicals and other compounds proposed for use at the permittee's facility during the term of the permit, were provided by the permittee in its June 4, 2018, General Application for Waste Discharge Permit. See **Attachment C** of this permit.

   b. 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. FDA approved drugs in the permittee's June 4, 2018 application are:

      1. Formalin (Parasite-S)
      2. Terramycine® 200 (oxytetracyline dehydrate)
      3. Aquaflor® (florfenicol)
      4. Romet ®30/Romet®TC (sulfadimethoxine/ormetoprim)
      5. Chloramine-T
      6. Hydrogen peroxide

SPECIAL CONDITIONS

I. DISEASE CONTROL (cont'd)

Effluent monitoring – The permittee must monitor the final effluent at a frequency of 1/Day anytime one or more of the following compounds are utilized in the facility.

1. Formalin (Parasite-S)
2. Terramycine® 200 (oxytetracyline dehydrate)
3. Aquaflor® (florfenicol)
4. Romet ®230/Romet®TC (sulfadimethoxine/ormetoprim)
5. Chloramine-T

Monitoring must commence the day of use of a compound(s) and continue until at least three days after the compound(s) is no longer being administered.

On or before six months following the effective date of this permit ***[ICIS code 53799]*** the permittee must submit a list of approved test methods for the compounds listed in this section. The individual tests results for each must be submitted as an attachment to monthly Discharge Monitoring Reports.

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 (see **Attachment C** of this 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 I.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.

4. If, upon review of information regarding the use of a drug pursuant to this section, the Department determines that significant adverse effects are likely to occur, it may restrict or limit use of the drug.

SPECIAL CONDITIONS

I. DISEASE CONTROL (cont'd)

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 I.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.

   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.

SPECIAL CONDITIONS

I. DISEASE CONTROL (cont'd)

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.

J. SPILLS

In the event of a spill of drugs, chemicals, 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 on a form provided by the Department, within five (5) days to the Department. The report must include the identity and quantity of the material spilled.

K. PROTECTION OF ATLANTIC SALMON

The permittee is required to employ a fully functional Containment Management System (CMS) designed, constructed, operated, and audited so as to prevent the accidental or consequential escape of fish from the facility.

Each CMS plan must include:

1. a site plan or schematic;
2. site plan description;
3. procedures for inventory control, escape response; and unusual event management;
4. provisions for employee training, auditing methods, and record keeping requirements; and
5. the CMS must identify critical control points where escapes could potentially occur, specific control mechanisms for each of these points, and monitoring procedures to verify the effectiveness of controls.

The CMS site specific plan must also describe the use of effective containment barriers appropriate to the life history of the fish. The facility must have in place both a three-barrier system for fish up to 5 grams in size and a two-barrier system for fish 5 grams in size or larger.

SPECIAL CONDITIONS

K. PROTECTION OF ATLANTIC SALMON (cont'd)

The three-barrier system must include one barrier at the incubation/rearing unit, one barrier at the effluent from the hatch house/fry rearing area and a third barrier placed in line with the entire effluent from the facility. Each barrier must be appropriate to the size of fish being contained. The two-barrier system must include one barrier at the individual rearing unit drain and one barrier in line with the total effluent from the facility. Each barrier must be appropriate to the size of fish being contained. Barriers installed in the system may be of the screen type or some other similarly effective device used to contain fish of a specific size in a designated area. Barriers installed in the system for compliance with these requirements must be monitored daily.

Facility personnel responsible for routine operation must be properly trained and qualified to implement the CMS. Prior to any containment system assessment associated with this permit, the permittee must provide to the Department documentation of the employee's or contractor's demonstrated capabilities to conduct such work ***[ICIS code 21599]***.

On or before six months following the effective date of this permit ***[ICIS code 53799]*** the permittee must submit the CMS plan to the Department, NOAA, USFWS and DMR for review and approval and must maintain a current copy of the plan at the facility. Final approval of the plan will be determined by the Department. **The permittee may not bring eggs or any size fish into the facility until the final CMS plan is approved by the Department.**

The CMS must be audited at least once per year and within 30 days of a reportable escape by a third party qualified to conduct CMS audits and approved by the Department ***[ICIS code 63899]***. A written report of these audits must be provided to the facility and the Department for review and approval within 30 days of the audit being conducted ***[ICIS code 43699]***. Any time that a CMS audit identifies deficiencies, the written report must contain a corrective action plan including a timetable for implementation and provisions for re-auditing, unless waived by the Department, to verify completion of all corrective actions.

Additional third party audits to verify correction of deficiencies must be conducted in accordance with the corrective action plan or upon request of the Department. The facility must notify the Department upon completion of corrective actions.

SPECIAL CONDITIONS

K. PROTECTION OF ATLANTIC SALMON (cont'd)

The permittee must maintain for a period of at least five (5) years complete records, logs, reports of internal and third party audits and documents related to the CMS for each facility.

Compromised containment/Escape reporting. The permittee must notify by electronic mail (e-mail) the Escape Reporting Contact List (provided in this subsection) of any known system failures that compromise fish containment or suspected escape of any fish within 24 hours of becoming aware of the known or suspected loss to the following persons listed under "Escape Reporting Contact List."

The permittee must include in its e-mail notification the following information: 1) site location (town and waterbody); 2) date of event (or window of possible dates if exact date is unknown); 3) time of event (if known or specify "unknown"); 4) species (including strain); 5) estimated average weight; 6) age of escaped fish; 7) number of escaped fish (or if exact number is not possible, an estimate); 8) medication profile; 9) details of the escape; 10) corrective action(s) taken or planned; 11) and a contact person (including phone number) for the facility which is subject of the known or suspected escape.

Escape Reporting Contact List:

The agency contacts on this list may be revised by the state and/or federal agencies by provision of written notification to the permittee and the other agencies. Upon notice of any such change the permittee must notify all persons on the revised list in the same manner as provided in this protocol.

Army Corps of Engineers
Maine Project Office; Jay Clement; Jay.L.Clement@usace.army.mil

Maine Department of Environmental Protection
Regional Compliance Inspector, Clarissa Trasko, Clarissa.Trasko@maine.gov

Maine Department Marine Resources
Secretary to the Commissioner; Amy Sinclair; Amy.Sinclair@maine.gov
Marine Scientist, Division of Aquaculture, Marcy Nelson, Marcy.Nelson@maine.gov
Director, Division of Sea-Run Fisheries, Sean Ledwin, Sean.M.Ledwin@maine.gov

Maine Department of Inland Fisheries and Wildlife
Commissioner, Chandler Woodcock, Chandler.Woodcock@maine.gov, or current Commissioner

SPECIAL CONDITIONS

K. PROTECTION OF ATLANTIC SALMON (cont'd)

National Marine Fisheries Service
Maine Field Station; David Bean, David.Bean@noaa.gov

United States Fish & Wildlife Service
Maine Field Office; Wende Mahaney; Wende_Mahaney@fws.gov

L. FISH FEED

On or before 90 days prior to stocking the site with fish feed, the permittee must submit a detailed list of ingredients in the feed. If the list contains ingredients of concern, the Department reserves the right to reopen the permit pursuant to Special Condition O, *Reopening of Permit for Modifications*, to establish additional limitations and or monitoring requirements of the ingredients of concern.

M. 06-096 CMR 530(2)(D)(4) STATEMENT FOR REDUCED/WAIVED TOXICS TESTING

By December 31 of each calendar year, the permittee must provide the Department with a certification describing any of the following that have occurred since the effective date of this permit ***[ICIS Code 96299]***. See **Attachment E** of the Fact Sheet of this permit for an acceptable certification form to satisfy this Special Condition.

a. Changes in the number or types of non-domestic wastes contributed directly or indirectly to the wastewater treatment works that may increase the toxicity of the discharge;

b. Changes in the operation of the treatment works that may increase the toxicity of the discharge; and

c. Changes in industrial manufacturing processes contributing wastewater to the treatment works that may increase the toxicity of the discharge.

In addition, in the comments section of the certification form, the permittee shall provide the Department with statements describing;

d. Changes in storm water collection or inflow/infiltration affecting the facility that may increase the toxicity of the discharge.

e. Increases in the type or volume of hauled wastes accepted by the facility.

SPECIAL CONDITIONS

M. 06-096 CMR 530(2)(D)(4) STATEMENT FOR REDUCED/WAIVED TOXICS TESTING (cont'd)

The Department reserves the right to reinstate routine surveillance level testing or other toxicity testing if new information becomes available that indicates the discharge may cause or have a reasonable potential to cause exceedances of ambient water quality criteria/thresholds.

N. COMMENCEMENT OF OPERATIONS

At a minimum of ninety (90) days prior to commencing production/operations, the permittee must meet with the Department's permitting and compliance inspection staff to review applicability of the permit limitations, monitoring requirements and reporting requirements. Should the Department determine the proposed production/operations are significantly different than what has been presented in the June 5, 2018, application materials, and as amended on September 10, 2018, the Department may require the permittee to submit a revised application to the Department.

O. 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.

P. 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.