



RIPDES PERMIT GUIDANCE DOCUMENT FOR AQUACULTURE PROJECT

Program Overview In 1972 the U.S. Congress enacted the Clean Water Act (the Act). The objective of the Clean Water Act is to maintain the chemical, physical, and biological integrity of the Nation's waters, and, where attainable, to achieve a level of quality that provides for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water. Discharges authorized by the Permits Program must ensure continued compliance with water quality standards which Rhode Island has adopted.

The Office will review each project for the potential to cause adverse effects on existing and designated uses and to cause impacts to existing water quality of high quality waters.

Authorizing Statutes Section 46-12-5(b) of the Rhode Island General Laws of 1956, Title 46, Chapter 12 Entitled Water Pollution

Regulations *Rhode Island Pollutant Discharge Elimination System Regulation* (Point source discharges)

Rhode Island Water Quality Regulations for Water Pollution Control (General standards and criteria for all waters of the State)

Policy on implementation of the Antidegradation Provisions of the Water Quality Regulations (manages impacts to waters of superior quality by requiring justification for projects which result in significant degradation)

Who Must Apply The following aquaculture projects are required to obtain a RIPDES permit:

- 1) All in-water facilities which add food, antibiotics, etc.. and
- 2) All land based facilities which discharge into waters of the State and meet the following criteria:
 - A. **Cold water aquatic organisms that:**
Produce greater than 20,000 lbs/yr (harvestable weight), feed greater than 5,000 lbs of food during the month of maximum feeding and discharge wastewater at least thirty (30) days per year.
 - B. **Warm water aquatic organisms that:**
Produce greater than 100,000 lbs/yr (harvestable weight), and discharge wastewater at least thirty (30) days per year.

Note: Land-based aquaculture facilities whose production is below the levels stated above may be required to obtain a RIPDES permit if the Director determines that a project will be a significant contributor of pollution to waters of the State. In order to make this determination prior to a formal application, you are advised to submit the following information to the Office of Water Resources (OWR):

Applicant Information - Name, Address, Facility Name, Contact Person, Phone

Number, location of the project, location of the discharge.

Project Information - Type and quantity of fish produced, type of treatment system, and anticipated future production of the facility and an estimate of effluent quality and the basis for the estimate.

For example, shellfishing aquaculture projects which do not add food, antibiotics, etc., do not require a RIPDES permit. However, a land-based operation producing less than the quantities stated above and discharges to a shallow cove may need a RIPDES permit. A permit pre-application conference with this Office can save time and expense and is highly recommended.

How to Apply

EPA Forms 1 and 2B and the information in Attachment A must be submitted at least 180 days prior to the commencement of the discharge. The permit fee for the RIPDES permit is \$462 and is due at the time the application is submitted to this office.

Application Review Process

A detailed technical review is conducted to determine the extent of any adverse impacts on the waters of the state. This review will include consideration of any treatment systems or other control technology proposed to counteract or mitigate any adverse impacts. Upon completion of a technical review, more information may be required especially if impacts to the receiving water are expected to be significant.

The Office of Water Resources will, at a minimum, review the potential water quality impacts from: 1) excessive nutrient loadings to the receiving water; 2) local dissolved oxygen impacts due to discharge and decay of ammonia, and organic matter; and 3) the introduction of chemicals and antibiotics into the receiving water. Upon receipt of all necessary information, the Office will complete its review and the application will be denied or a permit will be drafted for review by the public (Attached is a flowchart which illustrates the permit process).

Application Consideration

It is to your advantage to develop an application package which minimizes the potential environmental degradation associated with siting, production and waste disposal through the use of sound planning, facility design and management.

Locate the project in a well flushed Class B, C, SB or SC area. Projects located in poorly flushed (e.g. shallow coves) areas have a greater potential to cause adverse impacts.

Reduce the level of pollutants present in the discharge by segregating high strength waste to the sewer system. High strength wastes such as filter backwash water, sanitary waste have a greater potential to cause adverse impacts.

Consider no discharge systems such as agricultural irrigation or alternative treatment technologies such as hydroponics.

Public Notice

The law requires a thirty (30) day public notice to be given of the preparation of a draft permit to allow opportunity for public comments and, if necessary, a public hearing. Following the close of the public comment period, a final permit will be issued providing no new substantial questions are raised. If new questions develop during the comment period, it may be necessary to revise or draft a new permit and/or reopen the public comment period.

Contacts

Rhode Island Department of Environmental Management
Office of Water Resources - Permitting Section
235 Promenade Street
Providence, RI 02908
(401) 222-4700

Attachment A

1. **Discharge Outfall Description** - provide a description of the wastewater outfall pipe and diffuser system including the: diameter, discharge velocity and depth of the outfall relative to mean low water.
2. **General Description of the Aquaculture Operation** - provide such information as, the species cultured, the production activities of the treatment (food, disease treatment, stocking densities) and any other relevant information.
3. **Ambient Water Conditions** - submit ambient water quality data (collected as close to 7Q10 flow conditions freshwater or estuaries only) as is possible for temperature, pH, flow, dissolved oxygen, ammonia, nitrate, phosphorus (freshwater only), turbidity, TSS, SS and BOD. This Office has ambient data for most waterbodies within the State. Please contact OWR at 222-6820 to obtain any available information.
4. **Estimates of Pollutant Concentrations** - provide estimates and the basis for the estimates of the discharge concentration for the same parameters listed above. Also provide the types and quantities of chemicals used for disease treatment.
5. **Engineering Designs of Passive and Active Pollutant Removal Facilities** - provide design plans and specifications for the facility and a line-flow diagram. Be sure to note specific pollutant removal designs such as settling basins, quiescent zones, ozone, carbon, secondary treatment, lagoons, etc.
6. **Best Management Practices** - provide a plan which will include the management practices which will reduce pollutant contributions (pollution prevention) and optimize the treatment effectiveness. For example, hand feeding is much more efficient than mechanical feeding and would therefore result in less pollution. Other best management practices address: disposal of any chemically altered waters due to medication or cleaning to a sanitary sewer, removal of solids (i.e., vacuum cleaning), treatment of disease born specimens (i.e., separate bath rather than treatment of entire harvest) etc.

RIPDES Permitting Process for Aquaculture

