

**AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
1 NATIONAL LIFE DRIVE, MAIN 2
MONTPELIER, VT 05620-3521**

**DRAFT INDIRECT
DISCHARGE PERMIT**

Permit No.: ID-9-0277
PIN: EJ95-0106

SECTION A - "ADMINISTRATION"

In compliance with provisions of 10 V.S.A. §1263, and in accordance with the following conditions, the permittee:

Vermont Department of Fish and Wildlife
Ed Weed Fish Culture Station
14 Bell Hill Road
Grand Isle, VT 05458

is authorized to discharge non-sewage fish waste from the Ed Weed Fish Culture Station located in Grand Isle, Vermont to a manure pit located in South Hero, Vermont. The fish waste/manure mixture is expected to be managed in accordance with Required Agricultural Practices. This is a permit renewal.

A1. Permit Summary:

Expiration Date	March 31, 2022
Type of Waste	Fish Waste
Disposal System	Discharge of fish waste into a manure pit followed by land application of the fish waste/manure mixture on agricultural fields
Disposal Limit	70,000 gallons per year
Town	South Hero
Manure Pit Capacity Available for Fish Waste	86,668 gallons

A2. Compliance Schedule:

The following schedule summarizes the actions and requirements necessary for compliance with the conditions of this permit. The permittee shall complete the requirements in accordance with the dates indicated. See the designated section for specific details.

<u>Condition # & Description</u>	<u>Schedule Date</u>
A3. Apply for renewal of Indirect Discharge Permit	December 31, 2021
D1. Fish waste disposal monitoring and reporting	As Specified
D2. Submit report to the Secretary	Annually, by December 31st
D3. Maintain journal	As specified

A3. Expiration Date:

This permit, unless revoked or amended shall be valid until March 31, 2022, despite any intervening change in Water Quality Standards. Renewal of this Indirect Discharge Permit will be subject to all rules applicable at the time of application for renewal, including biological standards to determine significant alteration of aquatic biota.

The permittee shall apply for an Indirect Discharge Permit renewal by December 31, 2021. For the purposes of Title 3, an application for renewal of this indirect discharge permit will be considered timely if a complete application is received by the expiration date.

A4. Effective Date:

This permit becomes effective on April 1, 2017.

A5. Revocation:

The Secretary may revoke this permit in accordance with 10 V.S.A. §1267.

A6. Transfer of Permit:

This permit is not transferable without prior written approval of the Secretary. The permittee shall notify the Secretary immediately, in writing, before any sale, lease or other transfer of ownership of the property from which the permitted discharge originates. The proposed transferee shall make application for a permit to be reissued in their name. Failure to apply shall be considered a violation of this permit. Responsibility for compliance with the conditions of this permit shall be the burden of the permittee until such time as transfer of the permit to the transferee is complete. All application and operating fees must be paid in full prior to transfer of this permit. This permit shall be transferred only upon showing by the permittee or proposed transferee of compliance with the following conditions:

- a. The transferee shall be a legal entity, financially and technically competent to operate, inspect, maintain and replace the system.
- b. The transferee shall demonstrate that they have the legal authority to raise revenues for the proper operation, inspection, and maintenance of the system.
- c. The transferee shall provide a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittee to the Secretary.

A7. Minor Modifications of Permit:

The Secretary may modify this permit without requiring a permit application, a public notice, or a public hearing to correct typographical errors or increase the frequency of monitoring or reporting in accordance with Condition D(4) of this permit.

A8. Indirect Discharge Rules and Other Applicable Standards:

This indirect discharge was originally reviewed and qualified for an Indirect Discharge Permit in accordance with Section 14-C-1000(D) of the Indirect Discharge Rules as a non-sewage wastewater.

For the purpose of this permit renewal, the permittee applied under Section 14-406(d) of the Indirect Discharge Rules, effective April 30, 2003. This indirect discharge is presumed to be in compliance with the Groundwater Protection Rule and Strategy, effective February 14, 2005, and therefore in compliance with the Vermont Water Quality Standards, effective October 30, 2014.

A9. Right of the Agency to Inspect:

The permittee shall make arrangements to insure that the Secretary or the Secretary's authorized representative upon the presentation of their credentials may enter upon any field or inspect any manure pit being used as disposal sites.

The permittee shall allow the Secretary or the Secretary's authorized representative upon the presentation of their credentials and at reasonable times:

- a. To enter upon permittee's premises in which any effluent source, treatment or disposal system is located or in which any records are required to be kept under the conditions of the permit;
- b. To have access to and copy any records required to be kept under conditions of this permit;
- c. To inspect any monitoring equipment or method required in this permit;
- d. To sample any discharge of waste, groundwater or surface water; and
- e. To inspect any collection, treatment, pollution management and disposal facility required by this permit.

A10. Permit Availability:

A copy of this permit shall remain at the office of the permittee and, upon request, shall be made available for inspection by the Secretary.

A11. Modifications and Additions to System:

The permittee may propose to add manure pit(s) to be utilized for disposal by the following procedure:

- a. The permittee shall submit an application for an administrative amendment of the permit to propose additional manure pit(s).
- b. Manure pit(s) may be added to the program upon submittal of a written agreement executed between the permittee and the farmer. The agreement must indicate the location and volume of the farmer's manure pit, state that the farmer agrees to manage the fish waste/manure mixture in accordance with Required Agricultural Practices, and be signed and dated by the parties.

A12. Operating Fees:

This indirect discharge is subject to operating fees. The permittee shall submit the operating fees in accordance with procedures provided by the Secretary.

SECTION B - "INDIRECT DISCHARGE"

B1. Nature of Indirect Discharge:

The fish waste authorized for disposal by this permit results from fish aquaculture at the Ed Weed Fish Culture Station located on Bell Hill Road in Grand Isle, Vermont.

The fish waste consists of fish fecal material, waste fish feed, dead fish and aluminum phosphate sludge from the Ed Weed Fish Culture Station. Small amounts of salts (sodium chloride and potassium chloride) and antibiotics such as Romet, Florfenicol and Terramycin may also be present in the fish waste. Formaldehyde solution, Chloramine-T, hydrogen peroxide, and HTH dry/wet granular or solution are chemicals used in the treatment of fish and/or for disinfection but are not expected to be present in the discharge in detectable concentrations.

The Ed Weed Fish Culture Station uses alum (aluminum sulfate) to precipitate phosphorus from the process water at the facility. At pH values between 6 and 8, aluminum is not very soluble in water. Therefore, it is assumed that the aluminum phosphate sludge will not cause an exceedance of the Groundwater Protection Rule & Strategy standards for aluminum.

Based on analytical data for fish waste samples from 2002 - 2016, the fish waste is expected to have the following approximate concentrations:

<u>Parameter</u>	<u>Range (mg/l)</u>
Biochemical Oxygen Demand	318 - 7,400
Ammonia	3 - 612
Total Kjeldahl Nitrogen (TKN)	434 - 1,800
Nitrite/Nitrate	0.1 - 244
Total Phosphorus	340 - 2,300
Total Dissolved Phosphorus	0.34 - 68.5
Chloride	19 - 94.8
Sodium	7 - 70
Total Aluminum	58.8 - 2,800

These are not permit limits and exceedences of these values may occur.

B1. Nature of Indirect Discharge (continued):

The fish waste is transported to the manure pit identified in Attachment A by a manure hauler or with equipment owned by the Vermont Department of Fish and Wildlife.

The fish waste/manure mixture is expected to be managed in accordance with the Vermont Agency of Agriculture's Required Agricultural Practices.

B2. Chemicals Utilized:

The permittee has submitted a list of chemicals utilized at the facility in fish aquaculture. Prior to making any changes in the chemicals used, the permittee shall submit a request for evaluation of the new chemicals to the Secretary. If the Secretary determines that the change in chemicals is a significant change, the permittee shall be required to apply for a permit amendment. Minor changes in chemicals used, as determined by the Secretary, will not require permit amendment. For those chemicals which are obtained from a different supplier or source and are identical to the chemicals listed in the application, the permittee shall notify the Secretary of the change; no evaluation will be necessary.

SECTION C - "SYSTEM OPERATION"

C1. General Operating Requirements:

The fish waste shall be handled at all times in a manner that will (1) not permit the surface runoff of fish waste to waters of the State and (2) not result in a violation of the Water Quality Standards.

C2. Limits on Disposal:

This permit authorizes only the discharge of fish waste as described herein to the manure pit identified in Attachment A at a maximum disposal limit of 70,000 gallons per year. Prior to use of other manure pits or disposal methods, the permittee shall submit information, including an application for permit amendment, to the Secretary for review and approval.

SECTION D - "MONITORING"

D1. Monitoring Requirements:

Upon the effective date of this permit, the permittee shall sample and analyze the fish waste as follows:

<u>Parameter</u>	<u>Units</u>	<u>Sample Type</u>	<u>Sample Frequency</u>
Biochemical Oxygen Demand (5-day)	mg/l	grab	Annually
Sodium (Na)	mg/l	grab	Annually
Chloride (Cl-)	mg/l	grab	Annually
Total Phosphorus (TP)	mg/l	grab	Annually
Total Aluminum	mg/l	grab	Annually
Total Kjeldahl Nitrogen (TKN)	mg/l	grab	Annually
Ammonia Nitrogen (NH3)	mg/l	grab	Annually
Nitrate-Nitrogen (NO3)	mg/l	grab	Annually
pH	S.U.	grab	Annually

If any disposal of fish waste occurs in a calendar year, a sample is required to be collected and analyzed.

Samples shall be taken from the line which is used to fill the transport vehicles and shall be representative of the fish waste transported for disposal.

The results of the analysis shall be submitted to the Secretary by the 15th day of the second month following the date of sampling.

D1. Monitoring Requirements (continued):

The laboratory utilized for analyzing the samples shall demonstrate successful participation in third party proficiency testing recognized by ISO or NELAP for all parameters and shall analyze any check sample provided by the Secretary. Failure to obtain an acceptable result for either the Secretary's check sample or successful third party proficiency testing may be a basis for requiring an alternate analytical laboratory.

D2. Annual Disposal Report:

The permittee shall submit a written report to the Secretary listing the manure pit(s) utilized for disposal, the daily volume in gallons of fish waste discharged to each manure pit and the date the disposal occurred. The report shall be certified and signed by an official of Vermont Department of Fish and Wildlife. Disposal reports are due by December 31st of each year.

D3. Disposal Journal:

The permittee shall maintain a bound journal at the Ed Weed Fish Culture Station documenting the disposal of fish waste transported to the manure pit. The journal shall have printed pre-numbered pages. For each load transported to a manure pit, facility personnel shall enter in ink their name (signature), the date, the manure pit utilized for disposal, the time at which the disposal occurred, the volume disposed of and how the waste was transported to the manure pit. The facility personnel shall also record any accidental spillage or other incidents that may adversely affect the landowner, adjacent landowners, or other members of the public.

The journal shall be made available for inspection by the Secretary. Upon request of the Secretary, the permittee shall photocopy daily entries for submission to the Secretary.

D4. Other Water Quality Monitoring:

No other water quality monitoring of the system is required under this permit. However, the Secretary reserves the right to require monitoring of the system in accordance with Condition A(7) should operation of the system fail to meet the requirements of Sections C(1) and C(2).

SECTION E - "COMPLIANCE REVIEW"

If the results of any monitoring or reporting indicate that there is a possibility that the Groundwater Protection Rule and Strategy or the Vermont Water Quality Standards may be violated, the Secretary may require monitoring of groundwater and/or surface water. If continued monitoring and analysis indicates that a violation of the fish waste disposal volume, or a violation of the Groundwater Protection Rule and Strategy or the Vermont Water Quality Standards has occurred, is occurring, or is likely to occur, the Secretary may require the permittee to take appropriate corrective actions to eliminate or reduce the possibility of a violation. Such corrective actions may include elimination of farm manure pits from the program.

The issuance of this Indirect Discharge Permit, ID-9-0277, to the Vermont Department of Fish and Wildlife, by the Secretary relies upon the data, designs, judgment and other information supplied by the applicant, the applicant's consultants and other experts who have participated in the preparation of the application. The Secretary makes no assurance that this system will meet the performance objectives of the applicant and no warranties or guarantees are given or implied.

SECTION F - "EFFECTIVE DATE"

This Indirect Discharge Permit, ID-9-0277, issued to the Vermont Department of Fish and Wildlife for the discharge of non-sewage fish waste from the Ed Weed Fish Culture Station in Grand Isle to the manure pit listed in Attachment A, is effective on April 1, 2017.

Joanna Pallito, Commissioner
Department of Environmental Conservation

By _____ **DRAFT** _____
Bryan Redmond, Director
Drinking Water and Groundwater Protection Division

ATTACHMENT A

Ed Weed Fish Culture Station Manure Pit Listing

Farm/Owner	Location	Town	10% Manure Pit Volume
Lakeside Jerseys Farm (John Roy)	Junction of Tracy and Station Roads	South Hero	86,668 gallons