

**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-9-0231  
PIN: NS92-0027

**SECTION A - "ADMINISTRATION"**

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

The Putney School, Inc.  
Elm Lea Farm  
418 Houghton Brook Road  
Putney, Vermont 05346

is authorized to discharge treated domestic sewage from an existing subsurface disposal system serving a portion of the campus of The Putney School to groundwater and indirectly to two tributaries of Mill Brook. This is a permit renewal.

A1. Permit Summary:

Expiration Date	June 30, 2022
Type of Waste	Treated Domestic Sewage
Treatment System	Septic Tanks/Sand Filter
Disposal System	Mound Leachfields
Town	Putney
Drainage Basin	Lower Connecticut River
Receiving Water	Tributaries of Mill Brook
Design Capacity	15,275 gallons per day
Drainage Area	
East Tributary	0.19 sq. mi.
West Tributary	0.25 sq. mi.
Low Median Monthly Stream Flow (LMMF)	
East Tributary	19,000 gpd (est.)
West Tributary	25,300 gpd (est.)
Dilution Ratio (LMMF : Effluent)	
East Tributary	2.5 : 1
West Tributary	3.3 : 1

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 # &amp; Description</u>	<u>Schedule Date</u>
A3. Apply for renewal of Indirect Discharge Permit	March 31, 2022
D2(A). Have a Vermont Registered Professional engineer complete an inspection of sewage collection, treatment and disposal system	Annually in April
D2(B). Submit Annual Inspection Report	Annually by July 1st
D2(C). Submit Schedule for Implementing engineer's recommendations	Annually by August 1st
D3. Notify Secretary of pumping of tanks and septage disposal	As Specified
E2. Sample sewage effluent for BOD <sub>5</sub> and TSS	February and September
E3. Check observation wells for evidence of ponding	As Specified
E4. Record depth to groundwater below ground surface	Weekly, during March, April and May
E5. Measure sewage flow	Daily
E6. Submit monthly report	By the 15th of the following month

A3. Expiration Date:

This permit, unless revoked, or amended shall be valid until June 30, 2022 despite any intervening change in Water Quality Standards or the classification of receiving waters. Renewal of this Indirect Discharge permit will be subject to all rules applicable at the time of renewal, including biological standards to determine significant alteration of aquatic biota.

The permittee should apply for an Indirect Discharge Permit renewal by March 31, 2022 for continued authorization to discharge treated sewage. 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 the date of signature.

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.

A6. Transfer of Permit (continued):

- b. If the transferee is a corporation or an association of unit owners or other legal entity, it shall be demonstrated that such legal entity has 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(s) 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 to increase the monitoring frequency in accordance with Condition E(6) of this permit.

A8. Indirect Discharge Rules:

This permit authorizes an existing indirect discharge.

This indirect discharge was reviewed and qualified for an Indirect Discharge Permit in accordance with Section 14-403(A) of the Indirect Discharge Rules for existing indirect discharges of sewage. No increase in sewage volume is allowed without the written approval of the Secretary.

A9. Right of Secretary to Inspect:

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 facilities 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. Minor Modifications to System:

Minor modifications of the engineering design which do not reduce the treatment effectiveness or increase the capacity of the system may be approved in writing by the Secretary without permit amendment.

Before making modifications to the treatment and/or disposal system the permittee shall submit plans to the Secretary for review and approval. These plans must be approved before any of the modifications or additions are made.

A12. Correction of Failed Systems:

The Secretary may, upon discretion, issue an Amendment to the Indirect Discharge Permit for the design and reconstruction of a failed sewage disposal system where the replacement system design was not previously approved.

Before reconstruction of the failed system the permittee shall submit plans to the Secretary for review and approval. These plans must be approved before any reconstruction occurs. Due to the urgency of the need to correct failed disposal systems, the Secretary will process these Amendments as soon as possible.

A13. 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. Location of Indirect Discharge:

This existing indirect discharge is located in the Lower Connecticut River drainage basin in the Town of Putney, Vermont. The indirect discharge can be located on the USGS Brattleboro, VT-NH 15' quadrangle map at Latitude N 42° 58' 58.8" and Longitude W 72° 33' 16.7".

**B2. Nature of Indirect Discharge:**

The sewage is treated in a 10,000 gallon septic tank and a 5,000 gallon septic tank; then flows to a dosing siphon which discharges to a recirculating sand filter which was installed in 2000. Final effluent from the filter is collected and pumped to the disposal area.

The present disposal system consists of four mound (trench) leachfields, each with 5,560 ft<sup>2</sup> of leaching area. The disposal system was installed as a replacement for a failed system.

There is another sewage treatment and disposal system at the school known as the North Campus system. Based on information submitted by the Putney School and their engineer, the North Campus system receives only sewage discharged from the KDU dining hall. The design capacity of the North Campus system is believed to be approximately 4,500 gallons per day. The system is not covered by this permit.

**SECTION C - "SYSTEM CONSTRUCTION"****C1. Previous Approvals:**

The sewage treatment and disposal system for The Putney School, Inc., was reportedly completed in accordance with the following plans and specifications stamped and signed by Peter R. Boemig, P.E. of Southern Vermont Engineering:

<u>Sheet</u>	<u>Title</u>	<u>Date</u>	<u>Last Revision</u>
1 of 10	Sewage Disposal Site Plan	8/3/95	8/22/95
2 of 10	Pump Station Site Plan	8/3/95	8/22/95
3 of 10	Leachfield Site Plan	8/3/95	9/12/95
4 of 10	Leachfield Forcemain Profile	8/3/95	---
5 of 10	Sand Filter Bypass Profile	8/3/95	---
6 of 10	Recirculation Force Main Profile	8/3/95	8/22/95
7 of 10	Leachfield Cross Sections	8/3/95	8/22/95
8 of 10	Sewer Details	8/3/95	8/22/95
9 of 10	Notes	8/3/95	8/22/95
10 of 10	Pump Station Details & Notes	8/3/95	9/27/95

The Recirculating Sand Filter was constructed in accordance with the following plan prepared by Dean A. Grover, P.E., of Heindel & Noyes, Inc.:

The Putney School - Recirculating Sand Filter As-Built, dated August 9, 2001.

## **SECTION D - "SYSTEM OPERATION"**

### **D1. General Operating Requirements:**

The sewage treatment and disposal system shall be operated at all times in a manner that will: (1) not permit the discharge of sewage onto the surface of the ground; (2) not result in the surfacing of sewage; (3) not result in the direct discharge of sewage into the waters of the State; and (4) not result in a violation of the Vermont Water Quality Standards.

In accordance with accepted design practices, the effluent disposal rate to the disposal fields shall not exceed 15,275 gallons per day except as may occur on an occasional basis during normal operation.

### **D2. Annual Inspection, Report and Implementation Schedule:**

#### **A. Annual Inspection:**

Annually, during the month of April, the permittee shall engage a Vermont Registered Professional engineer to make a thorough inspection of the complete sewage collection, treatment and disposal system. The engineer's inspection shall include, but not be limited to the following:

1. inspecting the entire collection system, removing manhole covers to observe the condition of the sewers and manholes, and noting any signs of inflow or excess infiltration;
2. evaluating the accumulation of solids and scum in the septic tanks and determining whether or not the septic tanks should be pumped that year;
3. verifying the proper operation of the recirculating pump station and sand filter;
4. verifying the proper operation of the pump station pumps, alarms and controls;
5. verifying the alternation of the disposal fields;
6. walking the disposal fields noting the general condition of the fields and checking for any signs of surfacing effluent; and
7. noting any necessary repairs or maintenance that needs to be performed on the sewage collection, treatment, and disposal system.

D2. Annual Inspection, Report and Implementation Schedule (continued):

B. Annual Inspection Report:

By July 1st each year, the permittee shall have a professional engineer submit an annual report including the following items:

1. a complete list of the items inspected and the results of the inspection;
2. tabulation of the depth of monthly measurements of ponding for the previous year; and tabulation of the weekly groundwater level measurements for March, April and May;
3. a review and summary of the discharge volumes collected during the previous year, including a list of all exceedences of the available disposal capacity, reasons for those exceedences, and steps taken to prevent future occurrences of such exceedences;
4. a review of the effluent monitoring data with an evaluation of effluent strength and recirculating sand filter treatment efficiency; and
5. a discussion of the recommended repairs and maintenance required.

C. Implementation Schedule:

By August 1st each year, the permittee shall notify the Secretary in writing stating how the engineer's recommendations are to be implemented, including submittal of a schedule for the required repair and maintenance items which have not yet been completed.

D3. Septage Disposal:

During the system's annual inspection, the depth of sludge and scum shall be measured in all septic tanks. The septic tanks shall be pumped if: 1) the sludge is closer than twelve (12) inches to the outlet baffle or; 2) the scum layer is closer than three (3) inches to the septic tank outlet baffle or; 3) if otherwise recommended by the inspecting engineer. The permittee shall notify the Secretary in writing of the name and address of the pumper and the municipal sewage treatment facility or other facility approved by the Secretary where the septage was or is to be disposed.



D4. System Operation and Maintenance:

The sewage collection, treatment and disposal system shall be operated and maintained at all times in a manner satisfactory to the Secretary and in a manner that will not pose a risk to the public health and safety, or cause contamination of drinking water supplies, groundwater and/or surface water.

D5. Reporting of Failures:

The permittee shall immediately report any failure of the sewage collection, treatment or disposal system to the Secretary, first by telephone within 24 hours of the failure and then in writing within 5 days of the failure. The written notice shall include a discussion of the actions taken or to be taken to correct the failure.

D6. Discharge Restrictions:

The permittee shall not allow any person to discharge or cause to be discharged anything other than sanitary wastewater to this collection, treatment and disposal facility.

D7. System Operator:

The permittee is required at all times to employ a wastewater treatment facility operator with a minimum Grade I operator certificate in accordance with the September 25, 2014 Wastewater Treatment Facility Operator Certification Rule. The permittee shall notify the Secretary in writing of any change in operators.

**SECTION E - "MONITORING"**

E1. Quality Assurance/Quality Control Plan:

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.

E2. Effluent Monitoring:

Biannually, the permittee shall sample and have analyzed the effluent discharged to the disposal fields, as follows:

Parameter	Units	Sample Type	Sample Frequency
Biochemical Oxygen Demand (5-day)	mg/L	Composite	February and September
Total Suspended Solids	mg/L	Composite	February and September
Composite samples shall be 8-hour composites taken between the hours of 6 a.m. and 6 p.m.			
Samples shall be taken at two locations: (1) at the inlet to the siphon chamber preceding the sand filter and (2) at the effluent pump station prior to discharge to the disposal fields. If a composite sample cannot be obtained at the latter location, a grab sample will be acceptable.			
The results of the effluent analysis shall be submitted to the Secretary by the 15th day of the second month following the date of sampling.			

E3. Shallow In-Field Observation Wells:

On a monthly basis, the permittee shall measure the depth of ponding in at least three observation wells in each disposal field that is in use. The date of measurement and the depth of ponding (in inches) observed in the observation wells shall be reported to the Secretary by the 15th of the following month.

The frequency of monitoring these wells may be reduced upon satisfactory demonstration that ponding for an extended period is not occurring. The reduction in frequency would be in the form of a letter from the Secretary.

E4. Groundwater Level Monitoring:

Weekly, during the months of March, April and May, the permittee shall measure the depth to groundwater in feet and tenths of feet (below ground surface) in the groundwater monitoring wells around the new disposal fields. These measurements shall be reported to the Secretary by the 15th of the following month.

E5. Sewage Volume:

The permittee shall record sewage volume discharged to the disposal fields on a daily basis. The meter readings, along with the volume of sewage discharged, shall be reported to the Secretary by the 15th of the following month.

E6. Monthly Report:

On a monthly basis, the permittee shall submit a disposal report to the Secretary summarizing all information required for the previous month. The report shall be submitted to the Secretary by the 15th of each month for all recordings and measurements taken during the previous month. The report shall be signed by an official of the permittee, under the following statement:

"I certify under penalty of law that I have personally examined, and am familiar with, the information submitted herein. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment."

E7. Other Monitoring Requirements:

No additional 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 D(1) and D(4).

## **SECTION F - "COMPLIANCE REVIEW"**

If the results of any inspection or monitoring indicate that a violation of the effluent disposal rate, or a violation of the Vermont Water Quality Standards, 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.

The issuance of this permit, ID-9-0231, to The Putney School, Inc. 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 G - "EFFECTIVE DATE"**

This Indirect Discharge Permit, ID-9-0231, issued to The Putney School, Inc. for the discharge of treated domestic sewage from The Putney School located in Putney, Vermont is effective this \_\_\_\_\_ day of October, 2017.

Emily Boedecker, Commissioner  
Department of Environmental Conservation

By: \_\_\_\_\_ **DRAFT** \_\_\_\_\_  
Bryan Redmond, Director  
Drinking Water and Groundwater Protection Division