

**AGENCY OF NATURAL RESOURCES  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
1 National Life Drive, Main 2  
Montpelier, VT 05620-3521**

**INDIRECT  
DISCHARGE PERMIT**

Permit No.: ID-9-0263  
PIN: BR96-0121

**SECTION A - "ADMINISTRATION"**

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

Waterbury-Duxbury School District  
Crossett Brook Middle School  
5672 Vermont Route 100  
Duxbury, Vermont 05676

is authorized to discharge treated domestic sewage from a subsurface disposal system serving the Crossett Brook Middle School in Duxbury, Vermont, to groundwater and indirectly into Crossett Brook.

A1. Permit Summary:

Expiration Date	June 30, 2021
Type of Waste	Domestic Sewage
Treatment System	Septic Tanks
Disposal System	Leachfields
Town	Duxbury
Drainage Basin	Winooski River
Receiving Water	Crossett Brook
Drainage Area	Approx. 8.7 sq. mi.
Stream Flow:	
Low Median Monthly Flow (LMMF)	Est. 2,420,000 gpd
Design Capacity	9,325 gpd
Dilution Ratio (at LMMF)	
Stream Flow : Effluent	260 : 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, 2021
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 July 1st
D3. Notify Secretary of pumping of tanks and septage disposal	As specified
E1. Submit revised QA/QC Plan	By August 1, 2016
E2. Sample septic tank effluent	May and September
E3. Sample groundwater in groundwater monitoring wells	May and September
E4. Sample receiving stream	May and September
E5. Record water meter readings	Daily while school is in session
E6. Submit Summary Water Quality Evaluation	By March 31, 2021

A3. Expiration Date:

This permit, unless revoked, or amended shall be valid until June 30, 2021 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 shall apply for an Indirect Discharge Permit renewal by March 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 July 1, 2016.

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. 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(s) to the Secretary.

A7. Minor Modifications of Permits:

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(7) of this permit.

A8. Indirect Discharge Rules:

This indirect discharge was originally reviewed and qualified for an Indirect Discharge Permit in accordance with Section 14-403 (C) of the February 29, 1996 Indirect Discharge Rules for new indirect discharges of sewage. The application utilized the Treatment Index Method to demonstrate compliance with the Aquatic Permitting Criteria of the Rules and the Vermont Water Quality Standards.

Water quality data collected from 1997 - 2015 indicates that this discharge is in compliance with the Aquatic Permitting Criteria of the current Indirect Discharge Rules, effective April 30, 2003, and the Vermont Water Quality Standards. No increase in sewage volume is allowed without the written approval of the Secretary.

A9. Right of the Agency 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 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. 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 wastewater 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.

## **SECTION B "INDIRECT DISCHARGE"**

B1. Location of Indirect Discharge:

This indirect discharge is located in the Winooski River drainage basin in the Town of Duxbury, Vermont. The indirect discharge can be located on the Waterbury, Vermont 7.5' USGS quadrangle map at Latitude N 44° 19' 16" and Longitude W 72° 45' 00".

B2. Nature of Indirect Discharge:

The sewage from the Crossett Brook Middle School is treated in two septic tanks. The septic tank effluent is pumped to five leachfields, each of which consists of six trenches four feet wide and 87 feet long. Each leachfield is loaded at a rate of 0.9 gpd/ft<sup>2</sup> with a disposal capacity of 1,865 gpd. The system is 100% dual alternating.

The total student and staff population served by the treatment and disposal system is authorized under a Water Supply and Wastewater Disposal Permit.

**SECTION C "SYSTEM APPROVALS"**

C1. Previous Approvals:

The improvements to the sewage collection, treatment, and disposal system were completed in accordance with the following plans and specifications entitled "New Middle School VT 100, Duxbury, Vermont" prepared by Gregory Hetzler, P.E. of Dubois & King, Inc.:

<u>Sheet</u>	<u>Title</u>	<u>Date</u>	<u>Last Revision</u>
1 of 3	Existing Site Conditions	1/8/96	1/25/96
2 of 3	Existing Site Conditions	1/8/96	1/25/96
3 of 3	Existing Site Conditions	1/8/96	1/25/96
W1	Disposal System Layout Plan	April, 1996	
W2	Leach Field Layout Plan	April, 1996	5/96
W3	Pump Station/Septic Tank Details	April, 1996	5/96
W4	Miscellaneous Details	April, 1996	5/96
Document	Technical Specifications	April, 1996	

which were stamped "APPROVED" by the Secretary. No changes shall be made to the plans without prior written approval from the Secretary.

**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; (4) not result in a violation of the Vermont Water Quality Standards; and (5) not cause a significant alteration of the aquatic biota in the receiving stream.

In accordance with accepted design practices, the effluent disposal rate to the disposal fields shall not exceed 9,325 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 retain a Vermont Registered Professional engineer to make a thorough inspection, evaluation and report 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 grease trap and septic tanks;
3. verifying the proper operation of the lift station pumps, alarms, controls and valves;
4. checking the depth of ponding in the observation wells for those fields in use during the inspection;
5. walking the disposal fields and checking for evidence of surfacing sewage and verifying the alternation of the fields; and
6. noting any necessary repairs or maintenance that needs to be performed on the sewage collection, treatment, and disposal system.

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. an evaluation of the water meter records for the previous year;
3. an evaluation of the ponding observed in the observation wells;
4. the measured depths of sludge and scum in the grease trap and each septic tank; and
5. a discussion of the recommended repairs and maintenance required.

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

C. Implementation Schedule:

By July 1st each year, the permittee shall notify the Secretary in writing stating how the engineer's recommendations are to be implemented, including a schedule for the required repairs and maintenance that have not 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 approved facility 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 sewage to this collection, treatment and disposal system.



**SECTION E "MONITORING"**

E1. Quality Assurance/Quality Control Plan:

By August 1, 2016, the permittee shall submit a revised Quality Assurance/Quality Control Plan (QA/QC Plan) to the Secretary for approval for the sampling and analyses of effluent, groundwater and surface water quality at the school. The revised QA/QC Plan shall address the adequacy of the current groundwater and surface water monitoring stations and propose changes in sampling locations if deemed necessary.

The laboratory identified in the revised QA/QC Plan shall demonstrate successful performance for U.S. EPA check samples for all parameters and shall analyze any check samples provided by the Department. Failure to obtain an acceptable result for either the Department or EPA check samples may be a basis for requiring an alternate analytical laboratory.

E2. Septic Tank Effluent Monitoring:

Beginning on the effective date of this permit, the septic tank effluent shall be sampled and analyzed as follows:

<u>Parameter</u>	<u>Units</u>	<u>Type</u>	<u>Frequency</u>
Biochemical Oxygen Demand (BOD5)	mg/L	8-hour composite	May and September
Total Suspended Solids (TSS)	mg/L	8-hour composite	May and September
Chloride (Cl-)	mg/L	grab	May and September
Total Phosphorus (TP)	mg/L	grab	May and September
Total Dissolved Phosphorus (TDP)	mg/L	grab	May and September
pH	S.U.	grab	May and September
Total Kjeldahl Nitrogen (TKN) as N	mg/L	grab	May and September
Nitrate Nitrogen (NO3) as N	mg/L	grab	May and September

E2. Septic Tank Effluent Monitoring (continued):

Notes:

1. Sampling shall be conducted while school is in session.
2. Samples should be taken from the influent to the pump station.

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. Groundwater Monitoring:

Beginning on the effective date of this permit, the groundwater in all monitoring wells shall be sampled and analyzed for the following parameters:

Parameter	Units	Type	Frequency
Chloride (Cl-)	mg/L	grab	May and September
Total Dissolved Phosphorus (TDP)	mg/L	grab	May and September
pH	S.U.	grab	May and September
Nitrate Nitrogen (NO3) as N	mg/L	grab	May and September
Escherichia coli Bacteria	Colonies/ 100 ml	grab	May and September
Depth to groundwater (below ground surface)	inches		At time of sampling

Note:

1. Sampling shall be conducted while school is in session.

E4. Receiving Stream Monitoring:

A. Chemical:

Beginning on the effective date of this permit, water quality samples from Crossett Brook shall be collected upstream and downstream of the indirect discharge and analyzed as follows:

<u>Parameter</u>	<u>Units</u>	<u>Type</u>	<u>Frequency</u>
Chloride (Cl-)	mg/L	grab	May and September
pH	S.U.	grab	May and September
Nitrate Nitrogen (NO3) as N	mg/L	grab	May and September
Total Phosphorus (TP)	mg/L	grab	May and September <b>(see Note #1)</b>
Total Dissolved Phosphorus (TDP)	mg/L	grab	May and September <b>(see Note #1)</b>

Notes:

- #1. Two independent samples shall be taken and analyzed on each sampling date.
- #2. The permittee shall not sample the receiving stream within 24 hours of any storm event affecting the watershed of that stream.
- #3. Sampling shall be conducted while school is in session.

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

B. Biological:

Upon written notification from the Secretary, the permittee shall submit sampling procedures for biological sampling of the receiving waters within 90 days of receiving such notice. The requirement for biological sampling and the frequency of such sampling will be specified in the written notice from the Secretary.

E5. Water Meter Readings:

The permittee shall record the water meter readings at the school daily while school is in session and submit the monthly tabulated results of the gallons of water used each day to the Secretary by the 15th day of the month following the date of the meter readings. The report shall be signed by the permittee under the following certification language: "I certify under penalty of law that I have personally examined, and am familiar with, the information submitted herein. 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."

E6. Summary Water Quality Evaluation:

By March 31, 2021, the permittee shall have a qualified water quality specialist submit to the Secretary an evaluation of all past groundwater and surface water quality data, and determine what, if any, short or long term impacts there have been on groundwater or surface water quality. The results of the biological stream monitoring in Condition E4(B) shall be included, if required.

E7. 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 additional 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, a violation of the Vermont Water Quality Standards, or a significant alteration of the aquatic biota in the receiving stream 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-9-0263, to the Waterbury-Duxbury School District 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-9-0263, issued to the Waterbury-Duxbury School District for the discharge of treated domestic wastewater from the Crossett Brook Middle School located in Duxbury, Vermont is effective on July 1, 2016.

Alyssa B. Schuren, Commissioner  
Department of Environmental Conservation



By:  
Ellen E Parr Doering, for  
Bryan Redmond, Director  
Drinking Water and Groundwater Protection Division

Date: June 6, 2016