



**Vermont Department of Environmental Conservation
Drinking Water and Groundwater Protection Division**

One National Life Drive - Davis 4
Montpelier, VT 05620-3521

www.vermontdrinkingwater.org

Agency of Natural Resources

February 8, 2023

Valerie Capels
Town of Bristol
P.O. Box 249
Bristol, VT 05443

RE: Indirect Discharge Permit 9-0208-1 Renewal
Town of Bristol

Dear Valerie Capels,

Enclosed is the Indirect Discharge Permit issued to the Town of Bristol for the continued discharge of treated effluent. No comments were received during the comment period. The final permit is essentially the same as the draft that was sent to you at the beginning of the public comment period.

Please read the entire permit carefully and become familiar with all its terms and conditions. Please contact me at (802) 622 - 4214 or edward.greiner@vermont.gov if you have any questions.

Sincerely,

Edward Greiner

Edward Greiner
Environmental Analyst, Indirect Discharge Program

Enclosures: Indirect Discharge Permit ID-9-0208-1

CC w/encl.: ID-9-0208-1 Permit file

**AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DRINKING WATER AND GROUNDWATER PROTECTION DIVISION
ONE NATIONAL LIFE DRIVE – DAVIS 4
MONTPELIER, VERMONT 05620-3521**

**INDIRECT
DISCHARGE PERMIT**

Permit No.: ID-9-0208-1

SECTION A – “ADMINISTRATION”

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

Town of Bristol
P.O. Box 249
Bristol, Vermont 05443

Is authorized to discharge treated domestic sewage from a subsurface disposal system serving the Bristol Core Area in Bristol, Vermont, to groundwater and indirectly into the New Haven River via the collection, treatment and disposal system approved in this permit and described in Condition B2. **This is a permit renewal.**

A1. Permit Summary:

Expiration Date	December 31, 2027
Type of Waste	Treated Domestic Sewage
Treatment System	Septic Tanks
Disposal System	Leachfield Trenches
Disposal Capacity	20,000 gallons per day
Drainage Basin	Otter Creek
Receiving Water	New Haven River
Drainage Area	Approx. 68 sq. mi.
Low Median Monthly Stream Flow (LMMF)	Est. 8,917,430 gallons per day
Dilution Ratio (at LMMF)	
Stream Flow: Design Capacity	447 : 1

A2. Compliance Schedule:

The following schedule summarizes the actions and requirements necessary for compliance with the conditions of this permit. The permittees 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	September 30, 2027
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 notification of implementation of engineer's recommendations	Annually by August 1st
D3. Notify Secretary of pumping of septic tanks and septage disposal	As specified
D7. Submit letter with listing of approved Connections during the previous Twelve months	Annually by May 15th
D8. Record Sewage Volumes	Monthly
E2. Collect and Analyze Effluent Samples	2x/year in June and September
E3. Collect and analyze groundwater Samples	2x/year in June and September
E4. Collect and analyze receiving Stream samples/perform biological monitoring	Upon written request
E2, E3, E4 Submit results of sampling	By the 15 th day of the second month following sampling

A3. Expiration Date:

This permit, unless revoked, or amended shall be valid until December 31, 2027, 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.

For the purposes of Title 3, an application for renewal of this indirect discharge permit will be considered timely if complete application is received by the expiration date. However, the permittees should apply for renewal by September 30, 2027.

A4. Revocation:

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

A5. Transfer of Permit:

This permit is not transferable without written approval of the Secretary through the issuance of this permit to a new permittee. The current permittees shall notify the Secretary in writing, before any sale, lease, or other transfer of ownership of the property from which the permitted discharge originates. To obtain this permit, the proposed transferee shall make application for this permit to be reissued in their name.

A6. Indirect Discharge Permit Renewal Criteria:

This collection, treatment and disposal system qualifies for an Indirect Discharge Permit renewal in accordance with Section 14-406(b) of the Indirect Discharge Rules for New Indirect Discharges of Sewage. No increase in sewage volume, identified in Condition D1, is allowed without the written approval of the Secretary.

A7. Compliance with Groundwater Protection Rule & Strategy:

Based on information submitted with the application for permit renewal, the Secretary concludes that this collection, treatment and disposal system is in compliance with the Groundwater Protection Rule & Strategy.

A8. Right of the Agency to Inspect:

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

- a. To enter upon permittees' 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;

A8. Right of the Agency to Inspect (continued):

- 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 system required by this permit.

A9. 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 representatives of the Secretary.

A10. Minor Modifications to System:

Minor modifications of the approved engineering plans identified in Condition C2 which do not reduce the treatment effectiveness or exceed the disposal capacity specified in Condition D1 for this collection, treatment and disposal system may be approved in writing by the Secretary without a permit amendment.

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

A11. Replacement of Failed Disposal System:

In the event the disposal system fails, the permittee shall apply for an Indirect Discharge Permit amendment for a replacement disposal system that meets the requirements of the Indirect Discharge Rules. The engineering plans for the replacement system shall be reviewed and approved by the Secretary before any construction occurs.

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. Location of Indirect Discharge:

This collection, treatment and disposal system is located at Latitude N 44° 07' 54" and Longitude W 73° 04' 38" in the Town of Bristol, Vermont.

B2. Collection, Treatment and Disposal System:

This permit approves the continued operation of the existing sewage collection, treatment and disposal system serving Bristol Core Area in Bristol, Vermont. Sewage treatment occurs in a 30,000 gallon two-cell septic tank. The septic tank effluent flows by gravity to a flow splitter box which directs the flow to eight dosing siphons, each connected to a 5,000 gallon per day disposal field. The leachfield trench width is 4' with 24" of stone below the laterals, resulting in a total application rate of 1.1 gpd/sq. ft.

Five of the restaurants/bakeries connected to the system have a grease interceptor and a few other establishments have an interior grease trap.

SECTION C "SYSTEM CONSTRUCTION"

C1. Previous Approvals:

The collection, treatment and disposal system serving the Town of Bristol was constructed to the plans and specifications prepared by Brent Whitney, P.E. of Green Mountain Engineering

Sheet	Description	Date	Revised
2 of 13	Legend, General Construction Notes and Fence Details	05/22/1992	07/01/1992
3 of 13	Disposal Site Grading Plan and Trench Construction Details	05/26/1992	07/01/1992
4 of 13	Hydraulic Profile Dosing Siphon And Splitter Box Details	05/22/1992	07/01/1992
5 of 13	Disposal Bed Cross Sections And Yard Piping Plan	05/22/1992	07/01/1992
6 of 13	Septic Tank Mechanical Details	05/26/1992	07/01/1992
7 of 13	Septic Tank Structural	07/10/1992	07/10/1992

C1. Previous Approvals (continued):

Sheet	Description	Date	Revised
8 of 13	Septic Tank Structural Notes And Details	03/31/1992	07/01/1992
9 of 13	Access Road and Site Construction Details	05/26/1992	07/01/1992
10 of 13	Main St. Sewer North Sta. 2+70 To 7+72 Main St. Sewer Spur Sta. 0+00 to 1+23	07/13/1992	07/10/1992
11 of 13	Main St. Sewer South Sta. 0+00 To 2+70 West and Sta. 0+00 to 2+70 East	05/27/1992	07/01/1992
12 of 13	Miscellaneous Details	05/22/1992	07/01/1992
13 of 13	Miscellaneous Sewer Details	05/22/1992	NA

SECTION D "SYSTEM OPERATION"

D1. General Operating Requirements:

The sewage collection, 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 Water Quality Standards; and (5) not exceed a disposal rate of 20,000 gallons per day.

D2. Annual Inspection, Report and Implementation:

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, at a minimum, 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.

D2. Annual Inspection, Report and Implementation:

A. Annual Inspection (continued):

2. verifying the proper operation of all system components including but not limited to pump station pumps, alarms, controls, and dosing siphons;
3. evaluating the accumulation of solids and scum in all septic tanks and grease interceptors and verifying the pumping of these structures if necessary;
4. verifying the alternation of the disposal fields;
5. walking the disposal fields, noting the general condition of the ground surface and checking for any signs of surfacing effluent; 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; and
2. measured depths of sludge and scum in each septic tank;
3. an evaluation of metered sewage and groundwater levels in the vicinity of the disposal fields; and
4. a discussion of the recommended repairs and maintenance required.

C. Implementation:

By August 1st each year, the permittee shall notify the Secretary in writing stating how the engineer's recommendations were or 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 collection, treatment and disposal 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) 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 is or will be disposed.

D4. System Operation and Maintenance:

The sewage collection, treatment and disposal system shall be operated and maintained at all times in compliance with this permit and in a manner that will not pose a risk to 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. A failed system is a system that is functioning in a manner (1) that allows wastewater to be exposed to the open air after being discharged, pool on the surface of the ground, discharge directly to surface water, or back up into a building or structure; (2) that results in a potable water supply being contaminated and rendered not potable; or (3) that presents a threat to human health. 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 sewage to this collection, treatment and disposal system.

D7. Calculation of Uncommitted Reserve Capacity:

By May 15th each year, the permittee shall submit a letter to the Secretary listing those facilities which were approved for connection to the sewage collection, treatment and disposal system during the previous twelve months and the approximate date of the connection of those facilities.

For calculation of uncommitted reserve capacity, the Secretary will review the long-term data for concentrations of BOD₅ and TSS in the septic tank effluent and long-term average daily flow (ADF) for the system. The following formula will be utilized for calculation of the pounds of BOD₅ and TSS discharged to the leachfields where ADF is expressed in million gallons/day:

$$\begin{aligned} \text{BOD}_5 \text{ (lbs/day) discharged} &= \text{ADF} \times [\text{BOD}_5 \text{ (mg/L)}] \times 8.34 \\ \text{TSS (lbs/day) discharged} &= \text{ADF} \times [\text{TSS (mg/L)}] \times 8.34 \end{aligned}$$

The leachfields at the design capacity of 20,000 gallons per day, having a loading capacity of

$$\begin{aligned} \text{BOD}_5 \text{ capacity} &= 33.4 \text{ lbs/day} \\ \text{TSS capacity} &= 25.0 \text{ lbs/day} \end{aligned}$$

The reserve capacity in terms of gallons per day is equal to:

$$\frac{([\text{BOD}_5 \text{ (lbs/day) capacity}] - [\text{BOD}_5 \text{ (lbs/day) discharged}] \times 1,000,000) / 8.34 \times \text{BOD}_5 \text{ ave}}{([\text{TSS (lbs/day) capacity}] - [\text{TSS (lbs/day) discharged}] \times 1,000,000) / 8.34 \times \text{TSS ave}}$$

Where: BOD₅ ave is the long-term average concentration for septic tank effluent
TSS ave is the long-term average concentration for septic tank effluent

The uncommitted reserve capacity shall be equal to 80% of the reserve capacity for any given year, after subtracting those approved connections to the system which have not actually connected to the system, or which have been connected less than six (6) months.

D8. Sewage Volume:

On a monthly basis, the permittee shall record the meter readings for the sewage collection, treatment and disposal system to determine the total volume of sewage discharged from the system each month. The sewage meter readings and gallons of sewage discharged each month shall be submitted to the Secretary by the 15th of the month following the recording period.

SECTION E "MONITORING"

E1. Quality Assurance/Quality Control Plan:

The permittee shall perform monitoring in accordance with the requirements of this permit and an approved Quality Assurance/Quality Control Plan.

E2. Effluent Monitoring:

A. Chemical:

The septic tank effluent shall be sampled and analyzed as follows:

<u>Parameter</u>	<u>Units</u>	<u>Sample Type</u>	<u>Sample Frequency</u>
Biochemical Oxygen Demand (5-Day)	mg/L	Grab	2x/year ¹
Total Suspended Solids	mg/L	Grab	2x/year ¹
Oil and Grease	mg/L	Grab	2x/year ¹
pH	S.U.	Grab	2x/year ¹
Total Kjeldahl Nitrogen (TKN)	mg/L	Grab	2x/year ¹
Nitrate Nitrogen	mg/L	Grab	2x/year ¹
Total Phosphorus	mg/L	Grab	2x/year ¹
Chloride	mg/L	Grab	2x/year ¹

Notes:

1. 2x/year means June and September
2. Samples shall be taken from the flow splitter box.
3. 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:

The groundwater in monitoring wells #3 and #4 shall be sampled and analyzed for the following parameters:

Parameter	Units	Sample Type	Sample Frequency
Nitrate Nitrogen	mg/L	Grab	2x/year ¹
Total Dissolved Phosphorus	mg/L	Grab	2x/year ¹
Chloride	mg/L	Grab	2x/year ¹
pH	S.U.	Grab	2x/year ¹
Depth to Groundwater (below ground surface)	Feet and tenths of Feet	-----	At time of Sampling ²

Notes:

1. 2x/year means June and September.
2. If a monitoring well has water in it at any time during the required period of sampling, then a sample shall be collected and analyzed as per the requirements of this permit.
3. The results of these analyses shall be submitted to the Secretary by the 15th day of the second month following the date of sampling.

E4. Receiving Stream Monitoring:

Upon written request from the Secretary, the permittees shall conduct chemical and/or biological sampling New Haven River upstream and downstream of the indirect discharge in accordance with procedures approved by the Secretary.

E5. Sampling and Testing Procedure:

All wastewater, groundwater and surface water sampling, preservation, handling, and test procedures used to comply with the monitoring requirements herein shall conform to procedures specified in the most current edition of Standard Methods for the Examination of Water and Wastewater APHA – AWWA – WPCF, and the Vermont Water Quality Standards unless written approval of an alternate method is received from the Agency.

E5. Sampling and Testing Procedure (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.

E6. Other Monitoring Requirements:

No additional water quality monitoring of this collection, treatment and disposal system is required under this permit. However, the Secretary reserves the right to require increased monitoring of the system should operation of the system fail to meet the requirements of Conditions D1 and D4.

SECTION F "COMPLIANCE REVIEW"

If the results of any inspection or monitoring indicate that an exceedance of the disposal limits identified in Condition D1, or a violation of the Vermont Water Quality Standards is occurring, or is likely to occur, the Secretary may require the permittees to take appropriate corrective actions to eliminate a violation or reduce the possibility of a violation.

The issuance of this permit, ID-9-0208-1, relies upon the data, designs, judgement 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 permit, ID-9-0208-1, is effective upon date of signature.

SECTION H "APPEAL RIGHTS"

This permit may be appealed to the Environmental Division of the Vermont Superior Court within 30 days of the date of this permit.

Julia S. Moore, Secretary
Vermont Agency of Natural Resources

By:  Date: January 31, 2023

Bryan Harrington, Indirect Discharge and UIC Program Supervisor
Drinking Water and Groundwater Protection Division