

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

**DRAFT INDIRECT
DISCHARGE PERMIT**

Permit No.: ID-9-0011
PIN: BR95-0216

SECTION A - "ADMINISTRATION"

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

Stowe Club Owners Association, Inc.
1885 Weeks Hill Road
Stowe, Vermont 05672

and

Paul Percy
29 Percy Hill Road
Stowe, Vermont 05672

are authorized to discharge treated domestic sewage from a subsurface disposal system serving the Stowe Club Highlands Development to groundwater and indirectly to the West Branch Waterbury River. **This is a permit renewal.**

A1. Permit Summary:

Expiration Date	December 31, 2022
Type of Waste	Domestic Sewage
Treatment System	Septic Tanks
Disposal System	Leachfields
Approved Disposal Capacity	40,000 gallons per day
Constructed Disposal Capacity	20,000 gallons per day
Drainage Basin	Winooski River
Receiving Stream	West Branch Waterbury River
Drainage Area	25 sq. mi
Low Median Monthly (LMMF) Flow	5,533,200 gallons per day (est.)
Dilution Ratio (at LMMF)	
Stream Flow: Approved Capacity	138 : 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 accord with the dates indicated.

<u>Condition # & Description</u>	<u>Schedule Date</u>
A2. Apply for renewal of indirect discharge permit	September 30, 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 Agency of pumping of septic tanks and septage disposal	As Specified
D7. Report connections	Annually, in the annual inspection report for the system
D10. Record sewage volumes	Monthly, report quarterly
E2 Collect and analyze effluent samples	Twice per year in February and September
E3 Collect and analyze groundwater samples	Twice per year in February and September
E4(A) Collect and analyze receiving stream samples	Twice per year in February and September
E5. Submit water quality evaluation	September 30, 2022

A3. Expiration Date:

This permit, unless revoked, or amended shall be valid until December 31, 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 permittees should apply for an Indirect Discharge Permit renewal by September 30, 2022 for continued authorization to discharge treated domestic 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 permittees 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 permittees 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 permittees 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 it has 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 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(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 14-406 (b) of the Indirect Discharge Rules for new indirect discharges of sewage. The water quality data from 2013 – 2017 indicates that the discharge is in compliance with the Aquatic Permitting Criteria of the Indirect Discharge Rules, effective April 30, 2003.

A9. Right of 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 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. Approved Plans and Permit Availability:

A copy of the approved plans and this permit shall remain at the office of the permittees and upon request shall be made available for inspection by the representatives of the Secretary.

A11. Modifications and Additions 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.

A11. Modifications and Additions to System (continued):

Before making modifications to the treatment and/or disposal system the permittees 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 permittees shall submit plans to the Secretary for review and approval. These plans must be approved before any reconstruction occurs. Due to the urgency 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 permittees shall submit the operating fees in accordance with procedures provided by the Secretary.

SECTION B "INDIRECT DISCHARGE"

B1. Location of Indirect Discharge:

This indirect discharge is located on the West Branch of the Waterbury River in the Town of Stowe, Vermont with a drainage area of 25 square miles at the point of compliance. The indirect discharge can be located on the USGS Stowe, Vermont 7.5' quadrangle map at Latitude N 44° 29' 28" and Longitude W 72° 42' 00" (Leachfields 3A and 3B).

B2. Nature of Indirect Discharge:

The complete wastewater disposal system has an approved disposal capacity of 40,000 gallons per day. The complete system has a design loading rate of 1.0 gallons/ft²/day (leachfields 1A and 1B have a design loading rate of 0.76 gpd/ft²).

As of the date of this permit, Fields 1A, 1B, 2A, 2B, 3A, 3B, 4A and 4B have been constructed with a total disposal capacity of 20,000 gallons per day (dual alternating leachfields).

SECTION C "SYSTEM CONSTRUCTION"

C1. Previous Approvals:

The sewage collection, treatment and disposal system shall be completed in accordance with plans and specifications approved in PB-5-0785 and EC-5-1278.

C2. Record Drawings:

The portion of the sewage collection, treatment and disposal system which has been completed was constructed in accordance with the following record drawings, prepared by Trudell Consulting Engineers, Inc.:

Sheet No. T1, entitled "Disposal Field Site Plan - Record Drawing", dated 2-12-85, last revised 12-5-01;

Sheet No. T2, entitled "Sewer Details - Record Drawing", dated 9-9-85, last revised 12-4-01;

Sheet No. T5, entitled "Pump Station #3 and Septic Tank - Record Drawing", dated 10-16-60, last revised 2-4-91;

Sheet No. B3, entitled "Record Drawings - Sewer Profile", dated August 1986, last revised 8-8-91;

Sheet No. B5, entitled "Record Drawings - Sewer and Force Main", dated Sept. 1987, last revised 8-9-91; and

Sheet No. B6, entitled "Record Drawings - Sewer Profile", dated 2-8-89, last revised 8-9-91.

C3. Construction Inspection:

The construction of all components of the sewage collection, treatment and disposal system shall be completed in accordance with the approved plans and under the inspection of a Vermont Registered Professional Engineer. Upon completion of construction and prior to the occupancy of any of the lots and/or buildings approved in PB-5-0785 and EC-5-1278-1, the inspecting engineer shall make written certification to the Agency of Natural Resources that the work was completed in accordance with the approved plans and specifications and under his inspection. The numerical results of the leakage tests in the collection sewers, sewer manholes, building sewers, sewer forcemain and the wastewater disposal system pressure distribution test results shall be submitted as part of the inspecting engineer's certification of construction. The engineer's certification of

C3. Construction Inspection (continued):

construction shall be subject to the review and acceptance of the Secretary. The permittees shall have a Vermont Registered Professional Engineer to provide inspection of the approved construction for the Agency of Natural Resources. The engineer shall provide the following items:

- a. The names and qualifications of personnel providing inspection.
- b. The engineer or his inspector shall be present for the installation of all major system components.
- c. The engineer or his inspector shall be present for the installation of all leakage testing of the collection sewers, building sewers, sewer manholes and sewer force mains.
- d. The engineer or his inspector shall, prior to backfilling the distribution piping in each disposal field, supervise the testing of each network with clean water to assure that there is complete and even distribution. The difference in discharge rate between any two orifices shall not exceed 15%. Variations greater than 15% will require corrective action.
- e. The engineer or his inspector shall inspect the preparation of the infiltration surface of the disposal fields before the crushed stone and distribution piping is installed.
- f. The engineer or his inspector shall provide general inspection of the work at reasonable intervals to assure that construction is in accord with the contract documents.
- g. The engineer or his inspector shall maintain written reports of all inspections performed including dates, items inspected and comments. Copies of all inspection reports shall be submitted to the Agency of Natural Resources a minimum of once every two weeks.
- h. When the system construction is completed and before the inspecting engineer has issued his certification, the permittee shall arrange an inspection of the system with the engineer and the Agency of Natural Resources personnel.
- i. Within 10 days following completion of construction the inspecting professional engineer shall certify in writing to the Agency of Natural Resources, that the construction is complete and in accordance with approved plans and specifications and submit as-built plans for the system.

C4. Groundwater Monitoring Well Installation Schedule:

The following monitoring wells have been installed as of the effective date of this permit: MW-1, MW-6, MW-7, AW-2, and AW-4. Additional monitoring wells, as shown in the QA/QC Plan for monitoring shall be installed upon written request from the Secretary.

SECTION D "SYSTEM OPERATION"

D1. General Operating Requirements:

The wastewater 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 Standard; and (5) not cause a significant alteration of the aquatic biota in the receiving stream.

D2. Annual Inspection, Report and Implementation Schedule:

(A) Annual Inspection:

Annually during the month of April, the permittees shall retain a professional engineer registered in the State of Vermont 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. evaluating the accumulation of solids and scum in the septic tank and verifying the pumping of the tank, if necessary;
2. verifying the proper operation of the lift station pumps and alarms inspecting the entire collection system, removing manhole covers to observe the condition of the sewers and manholes, and noting any sign of in flow or excess infiltration, verification of proper operation of dosing siphons;
3. inspecting the collection system by removing the majority of manhole covers to observe the condition of the manholes, and noting any signs of infiltration or solid accumulation. Any signs of infiltration observed in the sewer system shall be investigated and traced to their sources. In no case shall a sewer manhole not observed at least once in two years with the exception that manholes in roadways not be observed in the third year.

D2. Annual Inspection, Report and Implementation Schedule:

(A) Annual Inspection (continued):

4. verifying of the use of alternate disposal fields; and
5. noting any necessary repairs, or maintenance that needs to be performed.

(B) Annual Inspection Report:

By July 1st each year, the permittees 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. the measured depths of sludge and scum in each septic tank;
3. a discussion of the recommended repairs and maintenance required;
4. an evaluation of metered sewage and groundwater levels in the vicinity of the disposal fields; and
5. a listing of all connections to the sewage collection, treatment and disposal system at the time of the inspection.

(C) Implementation Schedule:

By August 1st each year, the permittees shall notify the Secretary in writing stating how the engineer's recommendations were or are to be implemented, including 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. As part of the annual inspection report, the permittee's engineer shall supply the Secretary with 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 permittees 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. Flow Meter Readings:

If the primary flow meter for the sewage collection, treatment and disposal system fails or otherwise requires replacement, the permittees shall utilize elapsed pump time readings to estimate the volume of sewage flow until such time as the sewage flow meter can be replaced.

D7. Connection Reporting:

The permittees shall report all connections to the sewage collection, treatment and disposal system in the annual inspection report submitted by a Vermont registered professional engineer as per Condition D2(B).

D8. Discharge Restrictions:

The permittees shall not allow any person to discharge or cause to be discharged anything other than sanitary sewage to this collection, treatment and disposal system.

D9. Disposal Field Area - Agricultural Use:

Any agricultural use of the so-called "Meadow Lot" where the disposal fields are located shall be in conformance with the Stowe Club Highlands, Map #3, submitted on behalf of the permittees by Trudell Consulting Engineers, Inc. (correspondence dated October 14, 1999). There shall be no vehicular traffic over any of the existing and proposed leachfields and all groundwater monitoring wells shall be easily accessible. Prior to any use of the Meadow Lot for growing hay or corn, the limits of the disposal field area, as shown on Map #3, shall be staked out and the monitoring wells isolated by erecting a fence around each well.

D10. Sewage Volume:

The permittees shall record the total monthly sewage volume discharged from the Stowe Club Highlands Development. Readings of the sewage flow meter shall be made at least once per month, separated by at least 20 days, and the permittee shall report the reading, total gallons, days since last reading, and the average number of gallons of sewage discharged per day. These reports shall be submitted on a quarterly basis by the 15th of January, April, July and October each year.

SECTION E "MONITORING"

E1. Quality Control/Quality Assurance Plan:

The permittee shall perform compliance monitoring in accordance with an approved Quality Assurance/Quality Control Plan (QA/QC Plan) and the conditions of this indirect discharge permit.

E2. Effluent Monitoring:

The permittee shall sample, analyze and report on the operation of the sewage treatment and disposal system in accordance with the following:

Parameter	Units	Sample Type	Sample Frequency
Biochemical Oxygen Demand (5-day)	mg/L	Grab	February and September
Total Suspended Solids	mg/L	Grab	February and September
Chloride	mg/L	Grab	February and September
Samples shall be taken at Pump Station #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 MW-1, MW-6 and MW-7 shall be sampled and analyzed for the following parameters:

Parameter	Units	Sample Type	Sample Frequency
Nitrate Nitrogen	mg/L	Grab	February and September
Total Dissolved Phosphorus	mg/L	Grab	February and September
Chloride	mg/L	Grab	February and September
pH	S.U.	Grab	February and September
Escherichia coli	Colonies/100 ml	Grab	February and September
Depth to Groundwater (below ground surface)	Feet and tenths of feet	----	At time of sampling
<p>Because of changing water table conditions, the samples from the groundwater monitoring wells may not be able to be collected on the same day or in the same week. If a monitoring well has water in it at any time during the month, then a sample is required to be collected and analyzed.</p>			
<p>The results of these analyses shall be submitted to the Secretary by the 15th day of the second month following the date of sampling.</p>			

E4. Receiving Stream Monitoring:

A. Chemical:

The receiving stream shall be sampled at locations upstream and downstream of the indirect discharge as per the QA/QC Plan and analyzed for the following:

Parameter	Units	Sample Type	Sample Frequency
Nitrate Nitrogen	mg/L	Grab	February and September
Total Phosphorus	mg/L	Grab	February and September (see Note #1)
Total Dissolved Phosphorus	mg/L	Grab	February and September (see Note #1)
Chloride	mg/L	Grab	February and September
pH	S.U.	Grab	February and September
Escherichia coli	Colonies/100 ml	Grab	February and September
#1: <u>Two</u> independent samples shall be taken and analyzed on each sampling date.			
The permittees shall not sample the receiving stream within 24 hours of any storm event affecting the watershed of that stream.			
The results of these analyses shall be submitted to the Secretary by the 15th day of the second month following the date of sampling.			

B. Biological:

Upon written request from the Secretary, the permittees shall conduct biological sampling in the receiving stream upstream and downstream of the indirect discharge in accordance with procedures approved by the Secretary.

E5. Summary Water Quality Evaluation:

By September 30, 2022, the permittees shall have a qualified water quality specialist submit an evaluation to the Secretary of all the 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 in-stream biological monitoring data shall also be included if biological monitoring was conducted.

E6. Sampling and Testing Procedures:

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.

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.

E7. 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, 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 permittees to take appropriate corrective actions to eliminate or reduce the possibility of a violation.

The issuance of this permit, ID-9-0011, to the Stowe Club Owners Association, Inc., and Paul Percy by the Secretary to the relies upon the data, designs, judgement and other information supplied by the applicant, their 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-9-0011, issued to the Stowe Club Owners Association, Inc., and Paul Percy for the discharge of treated domestic sewage from the Stowe Club Highlands Development located in Stowe, Vermont is effective on this ____ day of January 2018.

Emily Boedecker, Commissioner
Department of Environmental Conservation

By: _____ DRAFT _____
Mary Clark, Program Manager
Indirect Discharge Program