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

INDIRECT DISCHARGE PERMIT

Permit No.: ID-9-0244
PIN: EJ98-0002

SECTION A - "ADMINISTRATION"

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

Town of Charlotte
P.O. Box 119
Charlotte, Vermont 05445

is authorized to discharge treated domestic sewage from a subsurface disposal system serving summer residences located on Thompson's Point in Charlotte, Vermont to groundwater and indirectly into Lake Champlain. The authorization to discharge treated sewage is valid from April 1st to October 31st each year. **This is a permit renewal.**

A1. Permit Summary:

Expiration Date	June 30, 2023
Type of Waste	Domestic Sewage
Treatment System	Septic Tank
Disposal System	Leachfield Mounds
Town	Charlotte
Drainage Basin	Lower Lake Champlain
Design Capacity	20,000 gallons per day (gpd)
Receiving Water	Lake Champlain

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.

	Condition # & Description	Schedule Date
A3.	Apply for renewal of Indirect Discharge Permit	March 31, 2023
D2(A).	Have a Vermont Registered Professional engineer complete an inspection of sewage collection, treatment and disposal system.	Annually in July of each year
D2(B).	Submit Annual Inspection Report	Annually by August 15th
D2(C).	Submit schedule for implementing engineer's recommendations	Annually by September 1st
D2(D).	Submit Year-End Report	Annually by November 15th
D3.	Septage disposal	As specified
E1.	Sample and analyze septic tank effluent and recirculating sand filter effluent	Twice annually in July and September
E1.	Record meter readings	Weekly during the period April 1 - October 31
E2.	Measure depth to groundwater below the disposal fields	Weekly, April - June Every two weeks, July - October
E3.	Inspect surface of recirculating sand filter	Weekly, during the period April 1 - October 31

A3. Expiration Date:

This permit, unless revoked, or amended shall be valid until June 30, 2023 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, 2023 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 July 1, 2018.

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 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(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 increase the monitoring frequency in accordance with Condition E(4) 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 14-406 (a) and (c) 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 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 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, require the permittee to submit an application for an Indirect Discharge Permit Amendment for a replacement wastewater disposal system to replace a failed system if a replacement system was not previously approved in accordance with the design standards of the current Indirect Discharge Rules.

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 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 Lake Champlain drainage basin in the Town of Charlotte, Vermont. The indirect discharge can be located on the USGS Willsboro, NY - VT 15' quadrangle map at Latitude N 44° 16' 17" and Longitude W 73° 17' 15".

B2. Nature of Indirect Discharge:

The design flow for the Thompson's Point sewage treatment and disposal system is 20,000 gallons per day based on an estimate water usage for the summer residences approved to be connected to the system and the expected occupancy of those residences. The discharge to the system is only authorized for the period April 1st - October 31st each year.

Sewage treatment occurs in septic tanks which discharge to a septic tank effluent pump (STEP) collection system. The discharge enters a surge tank which, in turn, discharges to a 5,000-gallon septic tank. Following the septic tank, the effluent is pumped to dosing siphons which discharge to a four-cell recirculating sand filter. The effluent passes through the sand filter an average of 4-5 times prior to being pumped to one of four 5,000 gpd mound disposal fields.

The trenches in the mound disposal fields are 4' wide with 12" of stone below the laterals, resulting in a total application rate of 1.2 gpd/sq.ft. The basal application rate for the mound is 0.15 gpd/ft. The disposal system is not dual alternating.

B3. Connections to System:

The following list summarizes the connections to the treatment and disposal system serving the summer residences on Thompson's Point:

Collection Line Designation	Number of Approved Connections
Line A	38
Line Aa	3
Line B	30
Line C	12
Line D	12
Line G	17
Line H	26
TOTAL	138

The approved connections are the same as those listed in Appendix A of the original indirect discharge permit, effective July 1, 1998. By permit amendment, the Secretary may approve additional connections to this system for camps at Thompson's Point which were in existence as of May 17, 1986.

No other connections to this system are authorized without the written approval of the Secretary. An amendment of this indirect discharge permit may be required prior to any expansion of the individual residences for the purpose of increasing occupancy. Expansion also includes increases in plumbing connections which would result in increased sewage flows from any residence served by the sewage collection, treatment and disposal system.

SECTION C "SYSTEM APPROVALS"

C1. Previous Approvals:

The Town of Charlotte Wastewater Facilities - Thompson's Point, Charlotte, Vermont was reported to have been completed in accordance with the following plans and specifications prepared by Richard Trudell, P.E. of Trudell Consulting Engineers, Inc.:

Sheet #	Description	Date
SP2	Center Area Site Plan	7/27/93
SP3	Disposal Area Fields 1 and 2	7/27/93
SP4	Disposal Area Field 3	7/27/93
SP5	Treatment Area Site Plan	7/27/93
SP6	Disposal Area Field 4	7/27/93
SP7	Treatment Area Layout	7/27/93

C1. Previous Approvals (continued):

Sheet #	Description	Date
A1	Line A Station 10+00 to 25+00	7/27/93
A1a	Line A Station 10+00 to 25+00	7/27/93
A2	Line A Station 25+00 to 33+65	7/27/93
A3	Line A Station 33+65 to 44+14	7/27/93
A4	Line Aa Station 10+00 to 14+50	7/27/93
B1	Line B Station 2+00 to 12+50	7/27/93
B2	Line B Station 12+50 to 25+00	7/27/93
B3	Line B Station 25+00 to 35+76	7/27/93
C1	Line C Station 7+00 to 21+65	7/27/93
D1	Line D Station 10+29 to 21+43	7/27/93
E1	Line E Station 10+00 to 18+00	7/27/93
E2	Line E Station 18+00 to 26+18	7/27/93
F1	Line F Station 10+00 to 21+06	7/27/93
G1	Line G Station 10+00 to 21+00	7/27/93
G2	Line G Station 20+00 to 30+68 & Line H Station 41+50 to 42+80	7/27/93
H1	Line H Station 10+00 to 20+50	7/27/93
H2	Line H Station 20+50 to 31+00	7/27/93
H3	Line H Station 31+00 to 41+50	7/27/93
FM1	Force Main Profiles	7/27/93
CS1	Disposal Field Cross Sections	7/27/93
DS1	Individual S.T.E.P. Details	7/27/93
DS2	Low Pressure Sewer Details	7/27/93
DS3	Storm Drainage and Force Main Details	7/27/93
DS4	Recirculating Sand Filter and Tank Details	7/27/93
DS4a	Recirculating Sand Filter and Process Control Building Details	7/27/93
DS5a	Process Control Building Details	7/27/93
DS5b	Process Control Building Details	7/27/93
DS6	Disposal Field Details	7/27/93
DS8	Miscellaneous Details	7/27/93;

and the document entitled "RF1-014 Contract Documents, Town of Charlotte, Wastewater Collection, Treatment and Disposal Facilities, Thompson's Point, Charlotte, Vermont" dated August 1, 1993; which were stamped "APPROVED" by the Department of Environmental Conservation.

No changes shall be made to the plans without prior written approval from the Secretary.

C2. Flow Reduction:

As part of the construction of this system, residences connected to the sewage collection, treatment and disposal system approved herein shall have existing toilets replaced by low flow toilets (1.5 gallons/flush). Any new connections to the system approved by the Secretary shall also be required to install low flow toilet fixtures.

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 Water Quality Standards.

In accordance with accepted design practices, the effluent disposal rate to the disposal fields shall not exceed 20,000 gallons per day except as may occur on an occasional basis during normal operation.

This system is not approved for cold weather operation. Therefore, the system may operate only during the period April 1 - October 31 each year and no discharges to the system may occur outside this period without written approval from the Secretary.

D2. Annual Inspection, Report and Implementation Schedule:

(A) Annual Inspection:

Annually during the month of July, the permittee shall engage 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, including septic tanks, effluent pump basins and surge tank;

2. verifying of the proper operation of the dosing siphons;

3. verifying of the proper operation of system components within process control building including the mixing chamber pumps and main chamber pumps, alarms and controls, and proper distribution of flow through the flow splitting chamber;

D2. Annual Inspection, Report and Implementation Schedule:

(A) Annual Inspection (continued):

4. checking the depth of ponding in all shallow in-field observation wells and in the recirculating sand filter cells;

5. tabulating the groundwater level measurements recorded during the previous April - June; 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 August 15th 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 degree of ponding observed in the shallow in-field observation wells and/or recirculating sand filter;

3. an evaluation of the groundwater levels around the disposal fields; and

4. a discussion of the recommended repairs and maintenance required.

(C) Implementation Schedule:

By September 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.

(D) Year-End Report:

By November 15th each year, the permittee shall submit a report to the Secretary addressing the following:

1. evaluating and reporting the accumulation of solids and scum in the septic tanks and pump basins and verifying the pumping of these structures, if necessary. The system operator may check and report the sludge and scum levels in each STEP tank for inclusion in the report; and

2. evaluating effluent flows for the previous season.

D3. Septage Disposal:

By the end of each season, the depth of sludge and scum shall be measured in all septic tanks and pump basins. 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 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 wastewater 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.

This disposal system is authorized to operate only from April 1 - October 31 each year. No discharges to the system may occur outside this period without written approval from the Secretary. An amendment of this indirect discharge permit may be required prior to any expansion of the individual residences for the purpose of increasing occupancy. Expansion also includes increases in plumbing connections which would result in increased sewage flows from any residence served by the sewage collection, treatment and disposal system.

D7. Operator Certification:

The permittee is required at all times to employ a wastewater treatment facility operator with a minimum Grade I operator certificate from the Office of Professional Regulation through the Vermont Secretary of State's Office.

The permittee shall notify the Secretary in writing if there is a change in operators.

SECTION E "MONITORING"

E1. Effluent Monitoring:

Septic tank effluent and recirculating sand filter effluent shall be sampled and analyzed as follows:

Parameter	Units	Sample Type	Sample Frequency
Flow	gpd	readings	Weekly
Biochemical Oxygen Demand (5-day)	mg/L	grab	July and September
Total Suspended Solids	mg/L	grab	July and September
pH	S.U.	grab	July and September
Total Kjeldahl Nitrogen	mg/L	grab	July and September
Ammonia (as N)	mg/L	grab	July and September
Nitrate (as N)	mg/L	grab	July and September
Total Dissolved Phosphorus	mg/L	grab	July and September
Chloride	mg/L	grab	July and September

Septic tank effluent samples shall be taken at the influent to the flow splitter chamber.

Recirculating sand filter effluent samples shall be taken at the influent to the flow splitter chamber. The Secretary may request that a sample be taken from each collection pipe from the cells in operation based on the results of the above sampling.

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.

E2. Groundwater Level Monitoring:

The depth to groundwater (below ground surface) in all monitoring wells shall be measured weekly during the months of April, May and June of each year and every two weeks during the period July - October.

The tabulated results of these measurements shall be submitted to the Secretary by the 15th day of the second month following the date of measurement.

E3. Recirculating Sand Filter - Visual Inspection:

The surface of the recirculating sand filter shall be inspected weekly during April - October. The monthly monitoring report shall include a description of the media surface and the depth of ponding in each cell. If ponding exceeds six (6) inches the media surface shall be rehabilitated by raking and removing clogging substances as necessary. Complete removal of the media may be necessary if the effluent quality has deteriorated.

E4. 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.

E5. Other 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 should operation of the system fail to meet the requirements of Conditions 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-9-0244, to the Town of Charlotte by the Secretary 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 Indirect Discharge Permit, ID-9-0244, issued to the Town of Charlotte for the discharge of treated domestic sewage from the municipally owned treatment and disposal system located on Thompson's Point in the Town of Charlotte is effective on July 1, 2018.

Emily Boedecker, Commissioner
Department of Environmental Conservation

By: Mary K Clark Date: June 6, 2018
Mary Clark, Program Manager
Indirect Discharge Program