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

INDIRECT DISCHARGE PERMIT

Permit No.: ID-9-0289
PIN: EJ05-0165

SECTION A - "ADMINISTRATION"

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

Eastfield Condominium Association, Inc.
c/o BAM Property Management
P.O. Box 1023
Milton, VT 05468

is authorized to indirectly discharge treated domestic sewage from a subsurface disposal system serving the Eastfield Condominiums in Fairfax, Vermont to groundwater and indirectly into the Lamoille River. **This is a permit renewal.**

A1. Permit Summary:

Expiration Date	June 30, 2021
Type of Waste	Domestic Sewage
Treatment System	Septic Tanks
Disposal System	Absorption Trenches
Town	Fairfax
Drainage Basin	Lamoille River
Receiving Stream	Lamoille River
Drainage Area	604 mi^2
Disposal Capacity	11,102 gallons per day
Low Median Monthly Stream Flow (LMMF)	211,299,700 gallons per day
Dilution Ratio at LMMF (Stream Flow to Effluent)	19,032 : 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.

Condition # & Description		Schedule Date
A3.	Apply for renewal of Indirect Discharge Permit	March 31, 2021
C2.	Submit a copy of a contract with a Vermont Registered P.E. to provide inspection of system construction	Before start of any construction on the collection, treatment, and disposal system
C3.	Submit inspecting Engineer's Certification of Construction	Within 30 days following completion of construction
D2(A).	Have a Vermont Registered P.E. 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
D7.	Construct Leachfields E & F	As specified
E2(A)	Collect and analyze effluent samples	Twice per year in February and September
E2(B)	Record sewage flow	Monthly
E3(A)	Collect and analyze groundwater samples	Twice per year in February and September

A2. Compliance Schedule (continued):

Condition # & Description	Schedule Date
E3(B) Measure and record the depths to groundwater in monitoring wells	Weekly during the period March 1st to May 31st
E3(B) Measure and record the depth of ponding in the observation wells	Once per month in March, April and May
E2(A), E3(A) Submit sampling results	By the 15th of the second month following the date of sampling
E2(B), E3(B) Submit readings or measurements	As specified
E4. Submit evaluation by a water quality specialist of all required effluent and groundwater monitoring data	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 the date of signing.

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.

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 permittees 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(8) of this permit.

A8. Indirect Discharge Rules:

This indirect discharge originally qualified for an Indirect Discharge Permit in accordance with the Dilution Method (Section 14-902) as a “New Indirect Discharge of Sewage” as per the Indirect Discharge Rules, effective April 30, 2003. No increase in sewage volume is allowed without the written approval of the Secretary.

A Wastewater System and Potable Water Supply Permit is required for all future buildings to be connected to the system.

A9. Right of 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, 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.

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:

The indirect discharge is located near the Lamoille River in the Town of Fairfax, Vermont with a drainage area of 604 square miles at the point of compliance. The indirect discharge may be located on the USGS Vermont 7.5' Gibson Mountain quadrangle map at Latitude N 44° 39' 21.23" and Longitude W 72° 59' 52.50".

B2. Nature of Indirect Discharge:

The wastewater system as designed has an approved disposal capacity of 11,102 gallons per day.

The system as approved has a collection system which conveys raw sewage to two septic tanks in series. Following the second septic tank, the septic tank effluent enters a pump station and is pumped to the disposal fields. Fields A & D are utilized together and are alternated annually with Fields B & C. Leachfields E & F have not been constructed yet.. An electric distribution valve structure equipped with three motorized valves is designed to distribute the effluent sequentially to Fields A, D or E in Year “1” and Fields B, C and F in Year “2”.

Effluent discharged to the leachfields enters groundwater which flows towards the Lamoille River located approximately 1,600 feet to the north.

SECTION C "SYSTEM CONSTRUCTION"

C1. Approved Plans:

The sewage collection, treatment, and disposal system shall be constructed in accordance with the following plans and specifications stamped by John Stuart, P.E. of JH Stuart Civil/Environmental Engineers:

SHEET #	TITLE	DATE	REVISION DATE
1 of 12	Planned Residential Development	3/05	6/2/06
3 of 12	Wastewater System Details (Fields A-D)	3/05	4/25/06
4 of 12	Wastewater System Details (Fields A-D)	3/06	4/06
5 of 12	Wastewater System Details (Fields E, F)	8/05	4/06
6 of 12	Wastewater System Details (Fields E, F)	3/06	4/06
7 of 12	Wastewater System Sections	8/05	6/06
8 of 12	Wastewater System Sections	3/05	4/25/06
8A of 12	Wastewater System Sections (Lift Station)	4/7/06	4/26/06
9 of 12	Sewer and Forcemain Profile	3/05	4/25/06
10 of 12	Water and Wastewater System Details	3/05	3/06

which have been stamped “APPROVED” by the Department of Environmental Conservation. No changes shall be made to the approved plans listed here without written authorization from the Secretary.

C2. Construction Inspection:

Before the start of any construction on any portion of the sewage collection, treatment and disposal system, the permittee shall submit a copy of a signed contract with a Vermont Registered Professional Engineer to provide inspection of the approved construction to the Secretary. The contract, at a minimum, shall provide for the following items:

a. The names and qualifications of personnel providing inspection.

b. The location of the septic tanks and gravity sewers shall be staked out by a Vermont Registered Professional Engineer or surveyor in accordance with the approved plans.

c. The engineer or designated representative shall be present for the leakage and pressure testing of all sewer force mains and leakage testing of all tankage (including septic tanks, the pump station and all manholes).

d. The engineer or designated representative shall verify the proper operation of the distributing valve structure, motorized valves and the controller. The timers controlling the discharge to each leachfield shall be checked to ensure that they are operating properly.

C2. Construction Inspection (continued):

e. The engineer or designated representative 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 designated representative 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 minimum pressure at the end of each distribution line shall be one (1) psi (or 2.3 feet of head). The difference in discharge rate, between any two orifices in the same disposal field during a dose cycle, as measured in gallons per square foot, shall not exceed 15%. Differences in discharge rates greater than 15% and/or pressures less than one psi will require corrective action. The permittee shall notify the Secretary at least one week prior to the distribution testing of all leachfields.

g. The engineer shall provide general inspection of the work at reasonable intervals to assure that construction is in accordance with the approved plans and specifications.

h. The engineer shall maintain written reports of all inspections performed including dates, items inspected and comments. Copies of all inspection reports shall be submitted to the Secretary a minimum of once every two weeks.

i. When the system construction is complete and before the inspecting engineer has issued their certification, the permittee shall arrange an inspection of the system with the engineer and the representatives of the Secretary.

C3. Construction Certification**:**

Within 30 days following completion of construction of the wastewater treatment and disposal system, the engineer shall certify in writing to the Secretary that the construction is complete and in accordance with approved plans and specifications, and shall submit As-Built drawings for the system. The numerical results of the leakage tests on the sewer force mains, gravity sewer lines, manholes, all tankage, and pressure distribution testing shall be submitted as part of the inspecting engineer's certification of construction. The engineer's certification of construction shall be subject to the review and acceptance of 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 and; (5) not significantly alter the aquatic biota of the receiving waters.

The disposal fields shall be alternated on an annual basis.

In accordance with accepted design practices, the effluent disposal rate to the disposal fields shall not exceed 11,102 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 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. verifying the alternation of the disposal fields;

2. 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;

3. evaluating the accumulation of solids and scum in all septic tanks and verifying the pumping of the septic tanks, if required;

4. checking the septic tank effluent filters and determining if they need cleaning or other maintenance;

5. checking the calibration of the effluent flow measuring device (please note that a drawdown test may be required for this requirement);

6. checking the proper operation of the pumps, alarms and controls;

7. checking the proper operation of the distribution valves;

D2. Annual Inspection (continued):

8. checking all the observation wells and noting the depth of liquid level in each well;

9. walking all the disposal fields and noting any signs of failure; and

10. 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. the measured depths of sludge and scum in each septic tank as required;

3. an evaluation of the sewage flow records for the previous calendar year;

4. a tabulation and evaluation of the degree of ponding observed in the shallow in-field observation wells;

5. a tabulation and evaluation of the seasonal high groundwater level below the disposal fields; and

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

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 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 is to be or was 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.

D7. Construction of Fields E and F

Prior to the connection of any unit located in either Phase E or Phase F (as depicted on the As-Built Drawing entitled “EASTFIELD – Drawing 1 of 12, dated March, 2005, revised 11/11/08) the permittee shall complete construction of Leachfields E and F in accordance with the requirements of Conditions C1, C2 and C3.

SECTION E "MONITORING"

E1. Quality Assurance/Quality Control (QA/QC) Plan:

The permittee shall perform all sampling and monitoring in accordance with the Quality Control/Quality Assurance plan submitted on October 4, 2006 and the schedules specified below.

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:

A. Chemical

The effluent to the disposal fields shall be sampled and analyzed as follows:

Parameter	Units	Sample Type	Sample Frequency
Biochemical Oxygen Demand (5-day)	mg/L	grab	Twice per year in Feb. & Sept.
Total Suspended Solids (TSS)	mg/L	grab	Twice per year in Feb. & Sept.
Chloride (Cl^-)	mg/L	grab	Twice per year in Feb. & Sept.
Total Phosphorus (TP)	mg/L	grab	Twice per year in Feb. & Sept.
Total Dissolved Phosphorus (TDP)	mg/L	grab	Twice per year in Feb. & Sept.
Total Kjeldahl Nitrogen (TKN)	mg/L	grab	Twice per year in Feb. & Sept.
Ammonia Nitrogen (NH_3)	mg/L	grab	Twice per year in Feb. & Sept.
Nitrate Nitrogen (NO_3)	mg/L	grab	Twice per year in Feb. & Sept.
pH	S.U.	grab	Twice per year in Feb. & Sept.

Samples shall be taken at the pump station. The results of the effluent analysis shall be submitted to the Secretary prior to the 15th day of the second month following the date of sampling.

E2. Effluent Monitoring (continued):

B. Sewage Volume:

The permittee shall record total sewage flows to the disposal fields on a monthly basis, on the first of each month. Flows to each disposal field shall be recorded individually. The monthly totals shall be submitted to the Secretary in the annual inspection report required by Condition D2(B).

Alternatively, the permittee may propose other methods for estimating monthly sewage flows (e.g. water meter readings) to the Secretary for review and approval.

E3. Groundwater Monitoring:

A. Chemical & Bacteriological Monitoring:

The groundwater in one (1) upgradient and three (3) downgradient monitoring wells shall be sampled and analyzed for the following parameters:

Parameter	Units	Sample Types	Sample Frequency
Chloride (Cl^-)	mg/L	grab	Twice per year in Feb & Sept.
Total Dissolved Phosphorus (TDP)	mg/L	grab	Twice per year in Feb & Sept.
Nitrate Nitrogen (NO_3)	mg/L	grab	Twice per year in Feb. & Sept.
pH	S.U.	grab	Twice per year in Feb & Sept.
Escherichia coli	Colonies/ 100 ml	grab	Twice per year in Feb & Sept.
Depth to groundwater (Below Ground surface)	inches		At time of sampling

A. Chemical & Bacteriological Monitoring (continued):

Because of the changing water table conditions, the samples from the groundwater monitoring wells may not be collected on the same day or in the same week if water is not available. If a monitoring well has water at any time during the month a sample is required, then a sample is required to be collected and analyzed. For the purpose of determining if groundwater is present, the monitoring wells shall be checked weekly during the months of February and September until samples for all parameters listed above are collected from each well during each month.

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. Groundwater and Observation Well Levels:

Each year, the depth to groundwater (below ground surface) shall be measured and recorded weekly for the period March 1 to May 31 and weekly in February and September.

The results of depth to groundwater measurements shall be submitted to the Secretary by the 15th day of the month following the date of measurement.

The depth of ponding in the observation wells shall be measured and recorded once per month during the months of March, April and May, with the ponding measurements reported in the annual inspection report.

E4. Summary Water Quality Evaluation:

By March 31, 2021, the permittee shall have a qualified water quality specialist submit an evaluation to the Secretary of all effluent, groundwater and surface water (if required) quality data and determine what, if any, short or long term impacts there have been on groundwater or surface water quality.

E5. 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 Secretary.

E6. Miscellaneous Requirements:

If the permittee monitor any required parameter set forth in this permit for this treatment and disposal system more frequently or at additional locations outside the treatment facility other than required by this permit, the results of such monitoring shall be included in the monthly monitoring report.

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, or longer if requested by the Secretary. Records shall include laboratory bench sheets showing exact location, time and composites of sample as well as analytical procedures used, interim results obtained and all calculations supporting the reported test results.

E7. Increased Monitoring Requirements:

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, including surface water and/or biological monitoring, in accordance with Condition A(7) should operation of the system fail to meet the requirements of Sections D(1) or 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 health hazard or a significant alteration of the aquatic biota has occurred, 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 Indirect Discharge Permit, ID-9-0289, to the Eastfield Condominium Association, Inc., 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-9-0289, issued to the Eastfield Condominium Association, Inc., for the discharge of treated domestic sewage from the Eastfield Condominiums located in Fairfax, Vermont, is effective on this 12th day of January, 2017.

Joanna Pallito, Commissioner
Department of Environmental Conservation

By: Bryan J. Redmond
Bryan Redmond, Director
Drinking Water and Groundwater Protection Division