

AGENCY OF NATURAL RESOURCES
Department of Environmental Conservation
1 National Life Drive, Main 2
Montpelier, VT 05620-3521

**DRAFT INDIRECT
DISCHARGE PERMIT**

Permit No.: ID-9-0310
PIN: NS92-0025

SECTION A – “ADMINISTRATION”

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

Long Trail Brewing Company
5520 U.S. Route 4
Bridgewater Corners, VT 05035

is authorized to discharge two non-sewage, high strength wastewater streams from a brewery located in Bridgewater, Vermont to an anaerobic digester in Randolph, Vermont and to manure pits located in Bethel, Braintree, Randolph and Williamstown, Vermont. The resulting manure/wastewater mixture is expected to be managed in accordance with the Vermont Agency of Agriculture’s Required Agricultural Practices. **This is a permit renewal.**

A1. Permit Summary:

| | |
|---|--|
| Expiration Date | December 31, 2022 |
| Type of Wastes | Beer/Yeast Slurry, Non-Sewage Sludge |
| Disposal System | Discharge of wastewater into digester and manure pits followed by management of the wastewater/manure mixture in accordance with Required Agricultural Practices |
| Waste Generated | Approx. 8,000 gallons per week (approx. 416,000 gallons per year) |
| Total Digester/Manure Pit Capacity Available for Non-Manure Waste | 1,136,250 gallons per year |

A2. Compliance Schedule:

The following schedule summarizes the actions and requirements necessary for compliance with the conditions of this permit. The permittee shall complete the requirements in accordance with the dates indicated. See the designated section for specific details.

| <u>Condition # & Description</u> | <u>Schedule Date</u> |
|--|----------------------|
| A3. Apply for renewal of Indirect Discharge Permit | September 30, 2022 |
| D1. Perform wastewater sampling and analyses | Semi-Annually |
| D2. Submit disposal report | Monthly |
| D3. Maintain daily journal | Daily |
| D4. Other monitoring | As required |

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 Vermont Guidelines for Land Application of Dairy Processing Wastes. Renewal of this Indirect Discharge Permit will be subject to all rules applicable at the time of application for renewal, including biological standards to determine significant alteration of aquatic biota.

The permittee should apply for an Indirect Discharge Permit renewal by September 30, 2022 for continued authorization to discharge brewery waste. 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 January 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 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 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 increase the frequency of monitoring or reporting in accordance with Condition D(4) of this permit.

A8. Indirect Discharge Rules:

This indirect discharge was reviewed and qualified for an Indirect Discharge Permit in accordance with the Vermont Water Quality Standards; Section 14-1902(c) of the Indirect Discharge Rules; and the Vermont Guidelines for Land Application of Dairy Processing Wastes.

A9. Right of the Agency to Inspect:

The permittee shall make arrangements to insure that the Secretary or the Secretary's authorized representative, upon the presentation of their credentials and at reasonable times, may enter upon any field or inspect any manure pit being used as a disposal site.

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. Additions to Disposal System:

The permittee may submit an application for a permit amendment to add other disposal locations or methods to the list of approved disposal options in Attachment A in accordance with the following:

- a. For the addition of manure pits, submittal of a written agreement between the permittee and the farmer(s). Each agreement must state the location and volume of the farmer's manure pit, state that the farmer agrees to manage the wastewater/manure mixture in accordance with Required Agricultural Practices, and be signed and dated by both parties. Documentation verifying the construction and volume of the pit(s) must also be submitted.

A11. Additions to Disposal System (continued):

- b. For the addition of an anaerobic digester, submittal of a written agreement between the permittee and the farmer. The agreement shall include estimated volumes to be delivered to the farm on an annual basis, the frequency of the deliveries, state that the farmer agrees to manage the digestate in accordance with Required Agricultural Practices, and be signed and dated by both parties. Large and medium farm operations may need to update their nutrient management plans and/or receive approval from the Vermont Agency of Agriculture Food and Markets to be approved as a disposal location.
- c. For the direct land application of the waste, submittal of a site evaluation in accordance with the Vermont Guidelines for Land Application of Dairy Processing Wastes.

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. Nature of Indirect Discharge:

The wastewater authorized for disposal by this permit is a high strength waste from the manufacturing of beer at the Long Trail Brewing Company in Bridgewater, Vermont. The high strength wastewater consists of two waste streams; a beer/yeast slurry and a non-sewage sludge from Long Trail's activated sludge wastewater treatment process. The permittee generates approximately 8,000 gallons of beer/yeast slurry and non-sewage sludge per week, or roughly 416,000 gallons of high strength waste per year. The high strength waste is discharged to an anaerobic digester in Randolph, Vermont. The permittee can also discharge to manure pits located in Bethel, Braintree, Randolph and Williamstown, Vermont if the digester is not available. The maximum disposal capacity available in the digester and manure pits listed in Attachment A is 1,136,250 gallons per year.

B1. Nature of Indirect Discharge (continued):

Based on analytical data from 19 wastewater samples collected from both waste streams during 2013 - 2017, the wastewater is expected to have the following approximate range of concentrations:

| <u>Parameter</u> | <u>Process Sludge Conc. (mg/L)</u> | <u>Beer/Yeast Slurry Conc. (mg/L)</u> |
|-------------------------------|--|---|
| Biochemical Oxygen Demand | 690 – 6,100 | 68,000 – 150,000 |
| Chemical Oxygen Demand | 6,200 – 38,000 | 120,000 – 230,000 |
| Total Kjeldahl Nitrogen (TKN) | 360 – 3,400 | 1,400 – 9,300 |
| Total Phosphorus | 33 – 280 | 110 – 1,600 |
| Potassium | 9.4 - 160 | 47 – 2,600 |
| Sodium | 57 - 640 | 37 - 130 |
| Chloride | 110 - 580 | 260 – 1,200 |
| pH | 7.10 – 8.40 S.U. | 3.60 – 5.10 S.U. |

These are not permit limits and exceedences of these values may occur.

B2. Chemicals Utilized:

The permittee has submitted a list of chemicals which are used at the facility, primarily for cleaning equipment. The permittee has indicated that these chemicals are typical of most food and dairy plants and are the only chemicals which could potentially be found in the wastewater sludge. The permittee has indicated that the beer/yeast slurry is not exposed to chemicals. Prior to making any changes in the chemicals used, the permittee shall submit a request for evaluation of the new chemicals to the Secretary. If the Secretary determines that the change in chemicals is a significant change, the permittee shall be required to apply for a permit amendment. Minor changes in chemicals used, as determined by the Secretary, will not require permit amendment. For those chemicals which are obtained from a different supplier or source and are identical to the chemicals listed in the application, the permittee shall notify the Secretary of the change and no evaluation will be necessary.

SECTION C - "SYSTEM OPERATION"

C1. General:

The wastewater shall be handled at all times in a manner that will (1) not permit the surface runoff of wastewater to waters of the State and (2) not result in a violation of the Vermont Water Quality Standards.

C2. Limits on Disposal:

This permit authorizes only the discharge of beer/yeast slurry and non-sewage sludge from the manufacturing of beer at the Long Trail Brewing Company in Bridgewater, Vermont to the digester and manure pits identified in Attachment A. The permittee shall not exceed the maximum disposal limits indicated in Attachment A. The resulting manure/wastewater mixture is expected to be managed in accordance with the Vermont Agency of Agriculture's Required Agricultural Practices.

SECTION D - "MONITORING"

D1. Monitoring Requirements:

Upon the effective date of this permit, the permittee shall sample and analyze both the beer/yeast slurry and non-sewage sludge as follows:

| <u>Parameter</u> | <u>Units</u> | <u>Sample Type</u> | <u>Sample Frequency</u> |
|---|--------------|--------------------|-------------------------|
| Biochemical Oxygen Demand (BOD ₅) | mg/L | grab | Semi-Annually |
| Chemical Oxygen Demand (COD) | mg/l | grab | Semi-Annually |
| Sodium (Na+) | mg/L | grab | Semi-Annually |
| Chloride (Cl-) | mg/L | grab | Semi-Annually |
| Potassium (K) | mg/L | grab | Semi-Annually |
| Total Phosphorus (TP) | mg/L | grab | Semi-Annually |
| Total Kjeldahl Nitrogen (TKN) | mg/L | grab | Semi-Annually |
| pH | S.U. | grab | Semi-Annually |

Semi-annual periods are January – June and July – December. If any disposal of beer/yeast slurry or non-sewage sludge occurs in a semi-annual period, a sample is required to be collected and analyzed. Samples shall be taken from the collection tanks after agitation of the contents of the tanks.

D1. Monitoring Requirements (continued):

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

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.

D2. Monthly Disposal Report:

On a monthly basis, the permittee shall submit a written report to the Secretary listing 1) the dates in which disposal occurred, 2) the digester or farm where disposal occurred, 3) the daily volume in gallons discharged to each digester or manure pit, and 4) the total gallons discharged to the digester and each manure pit for the month. The report shall be signed by the permittee under the following certification language:

"I certify under penalty of law that I have personally examined, and am familiar with, the information submitted herein. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment."

The reports shall be submitted by the 15th day of the month following the dates of disposal.

D3. Daily Journal:

The permittee shall maintain a bound, daily journal at the facility for documenting the disposal of high strength wastewater transported to the digester or manure pits. The journal shall have printed pre-numbered pages. For each load transported to the digester or manure pits, facility personnel shall enter in ink 1) their name (with signature), 2) the date, 3) the digester or manure pit utilized for disposal, 4) the hauler's name, and 5) the volume disposed of. Facility personnel shall also record any accidental spillage or other incidents that may adversely affect the landowner, adjacent landowners, or other members of the public.

D3. Daily Journal (continued):

The journal shall be made available for inspection by the Secretary. Upon request of the Secretary, the permittee shall photocopy daily entries for submission to the Secretary.

D4. Other Water Quality Monitoring:

No other water quality monitoring of the system is required under this permit. However, the Secretary reserves the right to require additional monitoring of the system in accordance with Condition A(7) should operation of the system fail to meet the requirements of Conditions C(1) and C(2).

SECTION E - "COMPLIANCE REVIEW"

If the results of any monitoring or reporting indicate that there is a possibility that the Vermont Water Quality Standards may be violated, the Secretary may require monitoring of the ground and surface water. If continued monitoring and analysis indicates that a violation of the wastewater discharge rate or a violation of the Vermont Water Quality Standards 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-9-0310, to the Long Trail Brewing Company by the Secretary relies upon the data, designs, judgment and other information supplied by the applicant, the applicant's consultants and other experts who have participated in the preparation of the application. The Secretary makes no assurance that this system will meet the performance objectives of the applicant and no warranties or guarantees are given or implied.

SECTION F - "EFFECTIVE DATE"

This Indirect Discharge Permit, ID-9-0310, issued to the Long Trail Brewing Company for the discharge of high strength beer/yeast slurry and non-sewage sludge from the manufacturing of beer to the digester and manure pits listed in Attachment A, is effective on January 1, 2018.

Emily Boedecker, Commissioner
Department of Environmental Conservation

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

ATTACHMENT A

Long Trail Brewing Company
List of Approved Anaerobic Digesters and Manure Pits
January 1, 2018

ANAEROBIC DIGESTER:

| Farm | Location | Town | Maximum Disposal Limits |
|---------------------------|------------|-----------------|-----------------------------------|
| Vermont Technical College | VTC Campus | Randolph Center | 936,000 gallons/year ¹ |

MANURE PITS:

| Farm | Location | Town | Maximum Disposal Limits |
|-----------------|----------------------|---------------------------------|----------------------------------|
| David Pullman | 1878 Baptist Street | Williamstown | 32,496 gallons/year ² |
| Kenneth Preston | 901 Ridge Road | Randolph Center | 65,925 gallons/year ³ |
| Michael Ferris | 1604 Thrasher Road | West Braintree | 29,433 gallons/year ⁴ |
| Warren Preston | 1247 Ridge Road | Randolph Center | 13,403 gallons/year ⁵ |
| Jeff Townsend | 4888 Pleasant Street | Randolph (manure pit in Bethel) | 58,993 gallons/year ⁶ |

Notes:

- 1: Up to 18,000 gallons/week, subject to reduction or suspension of waste accepted by VTC as annual nutrient limits in VTC's Nutrient Management Plan are approached
- 2: 10% of manure pit capacity based on 1990 Soil Conservation Service calculations
- 3: 10% of manure pit capacity based on 1991 Soil Conservation Service calculations
- 4: 10% of manure pit capacity based on 1994 Soil Conservation Service calculations
- 5: 10% of manure pit capacity based on 1983 Soil Conservation Service calculations
- 6: 10% of manure pit capacity based on 2005 NRCS calculations