



Vermont Department of Environmental Conservation  
Watershed Management Division  
1 National Life Drive, Main 2  
Montpelier VT 05620-3522  
www.watershedmanagement.vt.gov

Agency of Natural Resources

[phone] 802-828-1535  
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March 4, 2016

Mr. Robert W. Nutting, Chair  
Town of Bradford  
P.O. Box 603  
Bradford, VT 05033

**Re: Discharge Permit #3-1157**

Dear Mr. Nutting:

Enclosed is your copy of the Discharge Permit No. 3-1157 which has been signed on behalf of the Commissioner of the Department of Environmental Conservation. This permit authorizes the discharge of treated wastewater from the Town of Bradford's Wastewater Treatment Facility to the Waits River. Of note, this permit includes the requirements of EPA's Long Island Sound Nitrogen TMDL (See Condition I.B). The TMDL requires the Town to monitor for Total Nitrogen, develop and implement a Nitrogen Optimization Plan, assess the adequacy of the Plan, and annually report the Total Nitrogen discharged from your facility.

Please review the permit carefully and make note of the effluent limitations, monitoring requirements and other special conditions.

Since we did not receive any comments on the draft permit during the public notice period, the final permit is unchanged from the draft that was placed on notice for comment.

If you have questions regarding the permit, please contact Julia Butzler at (802) 490-6182.

Sincerely,

Ernest F. Kelley, Program Manager  
Wastewater and Residuals Management Program  
Watershed Management Division

Enclosures (2)

cc:

Jonathan Thornton, Chief Water & Sewer Operator  
Jeff Fehrs, Wastewater Management Program VT DEC

AGENCY OF NATURAL RESOURCES  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
WATERSHED MANAGEMENT DIVISION  
ONE NATIONAL LIFE DRIVE, MAIN BUILDING, 2<sup>nd</sup> FLOOR  
MONTPELIER, VT 05620-3522

Permit No.: 3-1157  
PIN: BR95-0194  
NPDES No.: VT0100803

Name of Applicant: Town of Bradford  
P.O. Box 603  
Bradford, VT 05033

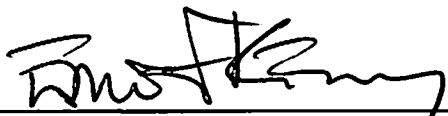
Expiration Date: December 31, 2020

DISCHARGE PERMIT

In compliance with the provisions of the Vermont Water Pollution Control Act as amended (10 V.S.A. chapter 47), the Vermont Water Pollution Control Permit Regulations as amended, and the federal Clean Water Act as amended (33 U.S.C. § 1251 *et seq.*), the Town of Bradford, Vermont (hereinafter referred to as the "Permittee") is authorized by the Secretary of Natural Resources (Secretary) to discharge from the Bradford Wastewater Treatment Facility to the Waits River in accordance with the following conditions.

This permit shall become effective on the date of signing.

Alyssa B. Schuren, Commissioner  
Department of Environmental Conservation

By: 

Ernest F. Kelley, Program Manager  
Wastewater and Residuals Management Program  
Watershed Management Division

Date: 3/4/16

**I. SPECIAL CONDITIONS****A. EFFLUENT LIMITS**

1. Until December 31, 2020, the Permittee is authorized to discharge from outfall serial number S/N 001 of the Bradford Wastewater Treatment Facility (WWTF) to the Waits River, an effluent for which the characteristics shall not exceed the values listed below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS							
	Annual Average	Monthly Average	Weekly Average	Maximum Day	Monthly Average	Weekly Average	Maximum Day	Instantaneous Maximum
	Mass (lbs/day)				Concentration (mg/L)			
Flow	0.137 MGD							
Biochemical Oxygen Demand (5-day, 20° C) (BOD <sub>5</sub> )		34.3	51.4		30	45	50	
Total Suspended Solids (TSS)		34.3	51.4		30	45	50	
Total Phosphorus (TP)							Monitor only	
Total Nitrogen (TN) <sup>1,2</sup>	See Special Condition I.B						Monitor only	
Total Kjeldahl Nitrogen (TKN)							Monitor only	
Nitrate/Nitrite Nitrogen (NO <sub>x</sub> )							Monitor only	
Settleable Solids								1.0 mL/L
<i>Escherichia coli</i>								0.1 mg/L
Total Residual Chlorine								77/100 mL
pH					Between 6.5-8.5 Standard Units			

<sup>1</sup> TN = TKN + NO<sub>x</sub><sup>2</sup> See Total Nitrogen Form WR-43-TN

2. The effluent shall not have concentrations or combinations of contaminants including oil, grease, scum, foam, or floating solids which would cause a violation of the Vermont Water Quality Standards.
3. The effluent shall not cause visible discoloration of the receiving waters.
4. The monthly average concentrations of Biochemical Oxygen Demand (BOD<sub>5</sub>) and Total Suspended Solids (TSS) in the effluent shall not exceed 15 percent of the monthly average concentrations of BOD<sub>5</sub> and TSS in the influent into the Permittee's WWTF. For the purposes of determining whether the Permittee is in compliance with this condition, samples from the effluent and the influent shall be taken with appropriate allowance for detention times.
5. If the effluent discharged for a period of 90 consecutive days exceeds 80 percent of the permitted flow limitation, the Permittee shall submit to the Agency projected loadings and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans.
6. Any action on the part of the Agency in reviewing, commenting upon or approving plans and specifications for the construction of WWTFs shall not relieve the Permittee from the responsibility to achieve effluent limitations set forth in this permit and shall not constitute a waiver of, or act of estoppel against any remedy available to the Agency, the State of Vermont or the federal government for failure to meet any requirement set forth in this permit or imposed by state or federal law.

## **B. TOTAL NITROGEN**

### **1. Optimization Plan**

By **June 30, 2016** the Permittee shall develop and submit to the Agency of Natural Resources (Agency) for review and approval a Nitrogen Removal Optimization Evaluation Plan for the evaluation of alternative methods of operating the existing WWTF to optimize the removal of nitrogen. The methods to be evaluated include: operational, process, equipment changes designed to enhance nitrification and denitrification (seasonal and year-round); incorporation of anoxic zones; septage receiving policies and procedures; and side stream management. The Permittee shall implement these recommended operational changes to maintain a mass discharge of total nitrogen (TN) lower than the existing mass loading of TN. The baseline annual average daily TN load discharge from this facility is estimated to be **approximately 13 lbs/day**.

This plan shall be developed by a qualified professional with experience in the operation and/or design of municipal WWTFs in conjunction with the Chief Operator of the facility.

This plan shall be provided to the Agency for review and approval prior to implementation and shall be revised by the Permittee upon the Agency's request to address equipment or operational changes.

Implementation of the plan shall commence within 30 days of its approval by the Agency.

## **2. Plan Evaluation**

Within one year following the implementation, the Permittee shall evaluate the effectiveness of the plan. The evaluation shall be conducted by a qualified professional with experience in the operation and/or design of municipal WWTFs in conjunction with the Chief Operator of the facility. The results of the evaluation shall be submitted to the Agency for review and approval within one year and six months following the implementation of the plan and shall be revised at the Agency's request. Actions to implement the approved nitrogen removal optimization practices, if any, shall be initiated within 90 days of the Agency's approval.

## **3. Reporting**

**Annually**, the Permittee shall submit a report to the Agency as an attachment to the **December** DMR WR-43 that documents the annual average daily TN discharged (in pounds per day) from the facility, summarizes nitrogen removal optimization and efficiencies, and tracks trends relative to the previous year. The first annual report shall include data collected during 2017, and shall be attached to the December 2018 DMR WR-43.

TN = Total Kjeldahl Nitrogen (TKN) + Nitrite/Nitrate ( $\text{NO}_x$ ).

TN pounds per day, annual average, shall be calculated as follows:

1. Calculate the pounds of TN discharged on each sample date:

$\text{TN (lbs/day)} = \text{TN (mg/L)} \times \text{volume discharged (million gallons) on day of sample} \times 8.34$

2. Calculate the TN, pounds per day, annual average:

$\text{TN (lbs/day, annual average)} = (\text{Sum of all TN [lbs/day]}) / (\text{count of TN samples})$

## **4. Wasteload Allocation**

This permit does not establish a formal Wasteload Allocation for the facility nor does it convey any right to ownership of the facility's estimated baseline annual average TN load.

The Agency reserves the right to reopen and amend this permit to include an alternate TN limitation and/or additional monitoring requirements based on the monitoring data, the results of nitrogen optimization activities, or a formal Wasteload Allocation promulgated

under Vermont's Wasteload Allocation Rule for Total Nitrogen in the Connecticut River Watershed based on the Long Island Sound Total Nitrogen Total Maximum Daily Load.

### **C. WASTE MANAGEMENT ZONE**

In accordance with 10 V.S.A. § 1252, this permit hereby establishes a waste management zone that extends from the outfall of the Bradford WWTF in the Waits River to its confluence with the Connecticut River, a length of approximately 0.2 miles and further extends in the Connecticut River, west of the New Hampshire/Vermont border for an additional 0.8 miles.

### **D. REAPPLICATION**

If the Permittee desires to continue to discharge after the expiration of this permit, the Permittee shall reapply on the application forms then in use at least 180 days before this permit expires.

Reapply for a Discharge Permit by: June 30, 2020

### **E. OPERATING FEES**

This discharge is subject to operating fees as required by 3 V.S.A. § 2822.

### **F. WHOLE EFFLUENT TOXICITY TESTING**

During **August or September 2018**, the Permittee shall conduct a two-species (*Pimephales promelas* and *Ceriodaphnia dubia*) acute WET test on a composite effluent sample collected from S/N 001. The results shall be submitted to the Agency by **December 31, 2018**.

The WET tests shall be conducted according to the procedures and guidelines specified in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" (October 2002 or, if a newer edition is available, the most recent edition) U.S. EPA document.

Based upon the results of these tests or any other toxicity tests conducted, the Agency reserves the right to reopen and amend this permit to require additional WET testing or a Toxicity Reduction Evaluation be conducted.

### **G. MONITORING AND REPORTING**

#### **1. Sampling and Analysis**

The sampling, preservation, handling, and analytical methods used shall conform to the test procedures published in 40 C.F.R. Part 136.

The permittee shall use sufficiently sensitive test procedures (i.e., methods) approved under the Code of Federal Regulations, Title 40, Part 136 for the analysis of the pollutants or pollutant parameters specified in Condition I.A. above.

Samples shall be representative of the volume and quality of effluent discharged over the sampling and reporting period. All samples are to be taken during normal operating hours. The Permittee shall identify the effluent sampling location used for each discharge.

## 2. Effluent Monitoring

The Permittee shall monitor and record the quality and quantity of discharge(s) at outfall serial number S/N 001 of the Bradford WWTF, according to the following schedule and other provisions: until December 31, 2020

PARAMETER	MINIMUM FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	Continuous	Daily Total, Max., Min.
Biochemical Oxygen Demand (BOD <sub>5</sub> )	1 × month	composite <sup>1</sup>
Total Suspended Solids (TSS)	1 × month	composite <sup>1</sup>
Total Phosphorus (TP)	1 × month	composite <sup>1</sup>
Total Nitrogen (TN)	1 × month	[calculated <sup>2,3</sup> ]
Total Kjeldahl Nitrogen (TKN)	1 × month	composite <sup>1,3</sup>
Nitrate/Nitrite Nitrogen (NO <sub>x</sub> )	1 × month	composite <sup>1,3</sup>
Settleable Solids	1 × day	grab <sup>4</sup>
<i>Escherichia coli</i>	1 × month	grab <sup>5</sup>
Total Residual Chlorine	1 × day	grab <sup>5,6</sup>
pH	1 × day	grab

<sup>1</sup> Composite samples for BOD<sub>5</sub>, TSS, TP, TKN and NO<sub>x</sub> shall, at a minimum, be taken during the hours 6:00 AM to 6:00 PM, unless otherwise specified. Eight hours is the minimum period for the composite, 24 hours is the maximum for the composite.

<sup>2</sup> TN = TKN + NO<sub>x</sub>

<sup>3</sup> Submit results each month on Total Nitrogen Monitoring Report Form WR-43-TN.

<sup>4</sup> Settleable Solids samples shall be collected between 10:00 AM and 2:00 PM or during the period of peak flow.

<sup>5</sup> The monthly *E. coli* sample shall be collected at the same time and location as a daily Total Residual Chlorine sample. Samples shall be collected between the hours of 6:00 AM and 6:00 PM.

<sup>6</sup> Total Residual Chlorine shall be monitored and recorded both prior to and following dechlorination.

3. Annually, by December 31, the Permittee shall monitor S/N 001 and submit the results, including units of measurement, as an attachment to the DMR WR-43 for the month in which the samples were taken for the following parameters:

Temperature  
 Ammonia (as N)  
 Dissolved Oxygen  
 Oil & Grease  
 Total Dissolved Solids

Grab samples shall be used for Temperature, Ammonia, Dissolved Oxygen, and Oil & Grease; a composite sample shall be used for Total Dissolved Solids. Samples shall be representative of the seasonal variation in the discharge.

#### 4. Influent Monitoring

The Permittee shall monitor the quality of the influent according to the following schedule and other provisions.

PARAMETER	MINIMUM FREQUENCY OF ANALYSIS	SAMPLE TYPE
Biochemical Oxygen Demand (BOD <sub>5</sub> )	1 × month	composite <sup>1</sup>
Total Suspended Solids (TSS)	1 × month	composite <sup>1</sup>
Total Nitrogen (TN)	1 × quarter	[calculated <sup>2,3</sup> ]
Total Kjeldahl Nitrogen (TKN)	1 × quarter	composite <sup>1,3,4</sup>
Nitrate/Nitrite Nitrogen (NO <sub>x</sub> )	1 × quarter	composite <sup>1,3,4</sup>

<sup>1</sup> Composite samples for BOD<sub>5</sub>, TSS, TKN and NO<sub>x</sub> shall, at a minimum, be taken during the hours 6:00 AM to 6:00 PM, unless otherwise specified. Eight hours is the minimum period for the composite, 24 hours is the maximum for a composite.

<sup>2</sup> TN = TKN + NO<sub>x</sub>

<sup>3</sup> Submit results each month on Total Nitrogen Monitoring Report Form WR-43-TN.

<sup>4</sup> The influent TKN and NO<sub>x</sub> sample shall be collected on the same day as an effluent TKN and NO<sub>x</sub> sample.

#### 5. Reporting

The Permittee is required to submit monthly reports of monitoring results on form DMR WR-43. Reports are due on the 15th day of each month, beginning with the month following the effective date of this permit.

If, in any reporting period, there has been no discharge, the Permittee must submit that information by the report due date.



Signed copies of these, and all other reports required herein, shall be submitted to the Secretary at the following address:

Agency of Natural Resources  
Department of Environmental Conservation  
Watershed Management Division  
One National Life Drive, Main Building, 2<sup>nd</sup> Floor  
Montpelier, VT 05620-3522

All reports shall be signed:

- a. In the case of corporations, by a principal executive officer of at least the level of vice president, or his/her duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge described in the permit form originates and the authorization is made in writing and submitted to the Agency;
- b. In the case of a partnership, by a general partner;
- c. In the case of a sole proprietorship, by the proprietor; or
- d. In the case of a municipal, State, or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

In addition to the monitoring and reporting requirements given above, daily monitoring of certain parameters for operational control shall be submitted to the Agency on the DMR WR-43. Operations reports shall be submitted monthly.

## **6. Recording of Results**

The Permittee shall maintain records of all information resulting from any monitoring activities required, including:

- a. The exact place, date, and time of sampling or measurement;
- b. The individual(s) who performed the sampling or measurements;
- c. The dates and times the analyses were performed;
- d. The individual(s) who performed the analyses;
- e. The analytical techniques and methods used including sample collection handling and preservation techniques;
- f. The results of such analyses;
- g. The records of monitoring activities and results, including all instrumentation and calibration and maintenance records; and

- h. The original calculation and data bench sheets of the operator who performed analysis of the influent or effluent pursuant to requirements of Section I.A of this permit.**

The results of monitoring requirements shall be reported (in the units specified) on the Vermont reporting form DMR WR-43 or other forms approved by the Agency.

## **7. Additional Monitoring**

If the Permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the DMR WR-43. Such increased frequency shall also be indicated.

## **H. DRY WEATHER FLOWS**

Dry weather flows of untreated municipal wastewater from any sanitary or combined sewers are not authorized by this permit and are specifically prohibited by state and federal laws and regulations.

## **I. OPERATION, MANAGEMENT, AND EMERGENCY RESPONSE PLANS**

- 1. The Permittee shall implement the Operation, Management, and Emergency Response Plan for the WWTF, pump stations, and stream crossings as approved by the Agency on October 3, 2008.**
- 2. The Permittee shall implement the Operation, Management, and Emergency Response Plan for the wastewater collection system as approved by the Agency on October 3, 2008.**

The Permittee shall revise these plans upon the Agency's request or on its own motion to reflect equipment or operational changes.

## **J. EMERGENCY ACTION - ELECTRIC POWER FAILURE**

**The Permittee shall indicate in writing to the Agency within 30 days after the effective date of this permit that the discharge shall be handled in such a manner that, in the event the primary source of electric power to the WWTF (including pump stations) fails, any discharge into the receiving waters will attempt to comply with the conditions of this permit, but in no case shall the wastes receive less than primary treatment (or in the case of ultraviolet light disinfection systems, not less than secondary treatment) plus disinfection and dechlorination.**

**The Permittee shall either provide an alternative source of power for the operation of its WWTF, or demonstrate that the treatment facility has the capacity to store the wastewater volume that would be generated over the duration of the longest power failure that would have affected the facility in the last five years, excluding catastrophic events.**

**The alternative power supply, whether from a generating unit located at the WWTF or purchased from an independent source of electricity, must be separate from the existing power**

source used to operate the WWTF. If a separate unit located at the WWTF is to be used, the Permittee shall certify in writing to the Agency when the unit is completed and prepared to generate power.

The determination of treatment system storage capacity shall be submitted to the Agency upon completion.

## **K. SEWER ORDINANCE**

The Permittee shall have in effect a sewer use ordinance acceptable to the Agency which, at a minimum, shall

1. Prohibit the introduction by any person into the Permittee's sewerage system or WWTF of any pollutant which:
  - a. Is a toxic pollutant in toxic amounts as defined in standards issued from time to time under Section 307(a) of the Clean Water Act;
  - b. Creates a fire or explosion hazard in the Permittee's treatment works;
  - c. Causes corrosive structural damage to the Permittee's treatment works, including all wastes with a pH lower than 5.0;
  - d. Contains solid or viscous substances in amounts which would cause obstruction to the flow in sewers or other interference with proper operation of the Permittee's treatment works; or
  - e. In the case of a major contributing industry, as defined in this permit, contains an incompatible pollutant, as defined in this permit, in an amount or concentration in excess of that allowed under standards or guidelines issued from time to time pursuant to Sections 304, 306, and/or 307 of the Clean Water Act.
2. Require 45 days prior notification to the Permittee by any person or persons of a:
  - a. Proposed substantial change in volume or character of pollutants over that being discharged into the Permittee's treatment works at the time of issuance of this permit;
  - b. Proposed new discharge into the Permittee's treatment works of pollutants from any source which would be a new source as defined in Section 306 of the Clean Water Act if such source were discharging pollutants; or
  - c. Proposed new discharge into the Permittee's treatment works of pollutants from any source which would be subject to Section 301 of the Clean Water Act if it were discharging such pollutants.
3. Require any industry discharging into the Permittee's treatment works to perform such monitoring of its discharge as the Permittee may reasonably require, including the installation, use, and maintenance of monitoring equipment and monitoring methods,

keeping records of the results of such monitoring, and reporting the results of such monitoring to the Permittee. Such records shall be made available by the Permittee to the Agency upon request.

4. Authorize the Permittee's authorized representatives to enter into, upon, or through the premises of any industry discharging into the Permittee's treatment works to have access to and copy any records, to inspect any monitoring equipment or method required under subsection 3 above, and to sample any discharge into the Permittee's treatment works.

The Permittee shall notify the Agency of any discharge specified in subsection 2 above within 30 days of the date on which the Permittee is notified of such discharge. This permit may be modified accordingly.

## **II. GENERAL CONDITIONS**

### **A. MANAGEMENT REQUIREMENTS**

#### **1. Facility Modification / Change in Discharge**

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit. Such a violation may result in the imposition of civil and/or criminal penalties pursuant to 10 V.S.A. chapters 47, 201, and/or 211. Any anticipated facility alterations or expansions or process modifications which will result in new, different, or increased discharges of any pollutants must be reported by submission of a new permit application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the Agency of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.

In addition, the Permittee shall provide notice to the Agency of the following:

- a. Any new introduction of pollutants into the treatment works from a source which would be a new source as defined in Section 306 of the Clean Water Act if such source were discharging pollutants;
- b. Except for such categories and classes of point sources or discharges specified by the Agency, any new introduction of pollutants into the treatment works from a source which would be subject to Section 301 of the Clean Water Act if such source were discharging pollutants; and
- c. Any substantial change in volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into such works at the time of issuance of the permit.

The notice shall include:

- i. The quality and quantity of the discharge to be introduced into the system, and

- ii. The anticipated impact of such change in the quality or quantity of the effluent to be discharged from the WWTF.

## **2. Noncompliance Notification**

The Permittee shall give advance notice to the Agency of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

In the event the Permittee is unable to comply with any of the conditions of this permit due, among other reasons, to:

- a. Breakdown or maintenance of waste treatment equipment (biological and physical-chemical systems including all pipes, transfer pumps, compressors, collection ponds or tanks for the segregation of treated or untreated wastes, ion exchange columns, or carbon absorption units);
- b. Accidents caused by human error or negligence;
- c. Any unanticipated bypass or upset which exceeds any effluent limitation in the permit;
- d. Violation of a maximum day discharge limitation for any of the pollutants listed by the Agency in this permit; or
- e. Other causes such as acts of nature,

the Permittee shall notify the Agency within 24 hours of becoming aware of such condition and shall provide the Agency with the following information, in writing, within five days:

- i. Cause of non-compliance;
- ii. A description of the non-complying discharge including its impact upon the receiving water;
- iii. Anticipated time the condition of non-compliance is expected to continue or, if such condition has been corrected, the duration of the period of non-compliance;
- iv. Steps taken by the Permittee to reduce and eliminate the non-complying discharge; and
- v. Steps to be taken by the Permittee to prevent recurrence of the condition of non-compliance.

## **3. Operation and Maintenance**

All waste collection, control, treatment, and disposal facilities shall be operated in a manner consistent with the following:

- a. The Permittee shall, at all times, maintain in good working order and operate as efficiently as possible all treatment and control facilities and systems (and related appurtenances) installed or used by the Permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the Permittee only when the operation is necessary to achieve compliance with the conditions of this permit.
- b. The Permittee shall provide an adequate operating staff which is duly qualified to carry out the operation, maintenance, and testing functions required to insure compliance with the conditions of this permit; and
- c. The operation and maintenance of this facility shall be performed only by qualified personnel. The personnel shall be certified as required under the Vermont Wastewater Treatment Facility Operator Certification Rule.

#### **4. Quality Control**

The Permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at regular intervals to ensure accuracy of measurements, or shall ensure that both activities will be conducted.

The Permittee shall keep records of these activities and shall provide such records upon request of the Agency.

The Permittee shall demonstrate the accuracy of the effluent flow measurement device weekly and report the results on the monthly report forms. The acceptable limit of error is  $\pm 10\%$ .

The Permittee shall analyze any additional samples as may be required by the Agency to ensure analytical quality control.

#### **5. Bypass**

The bypass of facilities (including pump stations) is prohibited, except where authorized under the terms and conditions of an Emergency Pollution Permit issued pursuant to 10 V.S.A. § 1268. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the activity in order to maintain compliance with the conditions of this permit.

#### **6. Duty to Mitigate**

The Permittee shall take all reasonable steps to minimize or prevent any adverse impact to waters of the State resulting from non-compliance with any condition specified in this permit, including accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge.

**7. Records Retention**

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed, all calibration and maintenance of instrumentation records and all original chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained for a minimum of three years, and shall be submitted to the Agency upon request. This period shall be extended during the course of unresolved litigation regarding the discharge of pollutants or when requested by the Agency.

**8. Solids Management**

Collected screenings, sludges, and other solids removed in the course of treatment and control of wastewaters shall be stored, treated and disposed of in accordance with 10 V.S.A. chapter 159 and with the terms and conditions of any certification, interim or final, transitional operation authorization or order issued pursuant to 10 V.S.A. chapter 159 that is in effect on the effective date of this permit or is issued during the term of this permit.

**9. Emergency Pollution Permits**

Maintenance activities, or emergencies resulting from equipment failure or malfunction, including power outages, which result in an effluent which exceeds the effluent limitations specified herein, shall be considered a violation of the conditions of this permit, unless the Permittee immediately applies for, and obtains, an emergency pollution permit under the provisions of 10 V.S.A. § 1268. The Permittee shall notify the Agency of the emergency situation by the next working day.

10 V.S.A. § Section 1268 reads as follows:

When a discharge permit holder finds that pollution abatement facilities require repairs, replacement or other corrective action in order for them to continue to meet standards specified in the permit, he may apply in the manner specified by the secretary for an emergency pollution permit for a term sufficient to effect repairs, replacements or other corrective action. The permit may be issued without prior public notice if the nature of the emergency will not provide sufficient time to give notice; provided that the secretary shall give public notice as soon as possible but in any event no later than five days after the effective date of the emergency pollution permit. No emergency pollution permit shall be issued unless the applicant certifies and the secretary finds that:

- (1) there is no present, reasonable alternative means of disposing of the waste other than by discharging it into the waters of the state during the limited period of time of the emergency;
- (2) the denial of an emergency pollution permit would work an extreme hardship upon the applicant;

- (3) the granting of an emergency pollution permit will result in some public benefit;
- (4) the discharge will not be unreasonably harmful to the quality of the receiving waters;
- (5) the cause or reason for the emergency is not due to wilful or intended acts or omissions of the applicant.

Application shall be made to the Secretary at the following address: Agency of Natural Resources, Department of Environmental Conservation, One National Life Drive, Main Building, 2<sup>nd</sup> Floor, Montpelier VT 05620-3522.

## **B. RESPONSIBILITIES**

### **1. Right of Entry**

The Permittee shall allow the Agency or authorized representative, upon the presentation of proper credentials:

- a. To enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. To have access to and copy, at reasonable times, any records required to be kept under the terms and conditions of this permit;
- c. To inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d. To sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

### **2. Transfer of Ownership or Control**

This permit is not transferable without prior written approval of the Agency. All application and operating fees must be paid in full prior to transfer of this permit. In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the Permittee shall provide a copy of this permit to the succeeding owner or controller and shall send written notification of the change in ownership or control to the Agency at least 30 days in advance of the proposed transfer date. The notice to the Agency shall include a written agreement between the existing and new Permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them. The Permittee shall also inform the prospective owner or operator of their responsibility to make an application for transfer of this permit.



This request for transfer application must include as a minimum:

- a. A properly completed application form provided by the Agency and the applicable processing fee.
- b. A written statement from the prospective owner or operator certifying:
  - i. The conditions of the operation that contribute to, or affect, the discharge will not be materially different under the new ownership;
  - ii. The prospective owner or operator has read and is familiar with the terms of the permit and agrees to comply with all terms and conditions of the permit; and
  - iii. The prospective owner or operator has adequate funding to operate and maintain the treatment system and remain in compliance with the terms and conditions of the permit.
- c. The date of the sale or transfer.

The Agency may require additional information dependent upon the current status of the facility operation, maintenance, and permit compliance.

### **3. Confidentiality**

Pursuant to 10 V.S.A. § 1259(b):

Any records, reports or information obtained under this permit program shall be available to the public for inspection and copying. However, upon a showing satisfactory to the secretary that any records, reports or information or part thereof, other than effluent data, would, if made public, divulge methods or processes entitled to protection as trade secrets, the secretary shall treat and protect those records, reports or information as confidential. Any records, reports or information accorded confidential treatment will be disclosed to authorized representatives of the state and the United States when relevant to any proceedings under this chapter.

Claims for confidentiality for the following information will be denied:

- a. The name and address of any permit applicant or Permittee.
- b. Permit applications, permits, and effluent data.
- c. Information required by application forms, including information submitted on the forms themselves and any attachments used to supply information required by the forms.

#### **4. Permit Modification, Suspension, and Revocation**

After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including the following:

- a. Violation of any terms or conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;  
or
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance shall not stay any permit condition.

The Permittee shall provide to the Agency, within a reasonable time, any information which the Agency may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee shall also furnish to the Agency upon request, copies of records required to be kept by this permit.

#### **5. Toxic Effluent Standards**

If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under section 307(a) of the Clean Water Act for a toxic pollutant which is present in the Permittee's discharge and such standard or prohibition is more stringent than any limitation upon such pollutant in this permit, then this permit shall be modified or revoked and reissued in accordance with the toxic effluent standard or prohibition and the Permittee so notified.

#### **6. Oil and Hazardous Substance Liability**

Nothing in this permit shall be construed to preclude the institution of legal action or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject under 10 V.S.A. § 1281.

#### **7. Other Materials**

Other materials ordinarily produced or used in the operation of this facility, which have been specifically identified in the application, may be discharged at the maximum frequency and maximum level identified in the application, provided:

- a. They are not:
  - i. Designated as toxic or hazardous under provisions of Sections 307 and 311, respectively, of the Clean Water Act, or

- ii. Known to be hazardous or toxic by the Permittee, except that such materials indicated in (a) and (b) above may be discharged in certain limited amounts with the written approval of, and under special conditions established by, the Agency or his designated representative, if the substances will not pose any imminent hazard to the public health or safety;
- b. The discharge of such materials will not violate the Vermont Water Quality Standards; and
- c. The Permittee is not notified by the Agency to eliminate or reduce the quantity of such materials entering the watercourse.

#### **8. Navigable Waters**

This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

#### **9. Civil and Criminal Liability**

Except as provided in "Emergency Action – Electric Power Failure" (Section I.K), "Bypass" (Section II.A.5), and "Emergency Pollution Permits" (Section II.A.9), nothing in this permit shall be construed to relieve the Permittee from civil or criminal penalties for noncompliance. Civil and criminal penalties for non-compliance are provided for in 10 V.S.A. Chapters 47, 201, and 211.

#### **10. State Laws**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Clean Water Act.

#### **11. Property Rights**

Issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

#### **12. Other Information**

If the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Agency, it shall promptly submit such facts or information.

### 13. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

### 14. Authority

This permit is issued under authority of 10 V.S.A. §§1258 and 1259 of the Vermont Water Pollution Control Act, the Vermont Water Pollution Control Permit Regulation, and Section 402 of the Clean Water Act, as amended.

### 15. Definitions

For purposes of this permit, the following definitions shall apply.

**Agency** – The Vermont Agency of Natural Resources

**Annual Average** - The highest allowable average of daily discharges calculated as the sum of all daily discharges (mg/L, lbs or gallons) measured during a calendar year divided by the number of daily discharges measured during that year.

**Average** - The arithmetic means of values taken at the frequency required for each parameter over the specified period.

**Bypass** – The intentional diversion of waste streams from any portion of the treatment facility.

**The Clean Water Act** - The federal Clean Water Act, as amended (33 U.S.C. § 1251, *et seq.*).

**Composite Sample** - A sample consisting of a minimum of one grab sample per hour collected during a 24-hour period (or lesser period as specified in the section on Monitoring and Reporting) and combined proportionally to flow over that same time period.

**Daily Discharge** - The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling.

For pollutants with limitations expressed in pounds the daily discharge is calculated as the total pounds of pollutants discharged over the day.

For pollutants with limitations expressed in mg/L the daily discharge is calculated as the average measurement of the pollutant over the day.

**Discharge** – Any wastes, directly or indirectly, that are placed, deposited or emitted into waters of the state.

**Grab Sample** - An individual sample collected in a period of less than 15 minutes.

**Incompatible Substance** – Any waste being discharged into the treatment works which interferes with, passes through without treatment, or is otherwise incompatible with said works or would have a substantial adverse effect on the works or on water quality. This includes all pollutants required to be regulated under the Clean Water Act.

**Instantaneous Maximum** - A value not to be exceeded in any grab sample.

**Major Contributing Industry** - One that: (1) has a flow of 50,000 gallons or more per average work day; (2) has a flow greater than five percent of the flow carried by the municipal system receiving the waste; (3) has in its wastes a toxic pollutant in toxic amounts as defined in standards issued under Section 307(a) of the Clean Water Act; or (4) has a significant impact, either singly or in combination with other contributing industries, on a publicly owned treatment works or on the quality of effluent from that treatment works.

**Maximum Day** (maximum daily discharge limitation) - The highest allowable “daily discharge” (mg/L, lbs or gallons).

**Mean** - The mean value is the arithmetic mean.

**Monthly Average** (Average monthly discharge limitation) - The highest allowable average of daily discharges (mg/L, lbs or gallons) over a calendar month, calculated as the sum of all daily discharges (mg/L, lbs or gallons) measured during a calendar month divided by the number of daily discharges measured during that month.

**NPDES** - The National Pollutant Discharge Elimination System.

**Secretary** - The Secretary of the Agency of Natural Resources

**State Certifying Agency**      Agency of Natural Resources  
Department of Environmental Conservation  
Watershed Management Division  
One National Life Drive, Main Building, 2<sup>nd</sup> Floor  
Montpelier, VT 05620-3522

**Waste** – Effluent, sewage or any substance or material, liquid, gaseous, solid or radioactive, including heated liquids, whether or not harmful or deleterious to waters.

**Waste Management Zone** – A specific reach of Class B waters designated by a permit to accept the discharge of properly treated wastes that prior to treatment contained organisms pathogenic to human beings. Throughout the receiving waters, water quality criteria must be achieved but increased health risks exist due to the authorized discharge.

**Weekly Average** - (Average weekly discharge limitation) - The highest allowable average of daily discharges (mg/L, lbs or gallons) over a calendar week, calculated as the sum of all

daily discharges (mg/L, lbs or gallons) measured during a calendar week divided by the number of daily discharges measured during that week.

AGENCY OF NATURAL RESOURCES  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
WATERSHED MANAGEMENT DIVISION  
ONE NATIONAL LIFE DRIVE, MAIN BUILDING, 2<sup>ND</sup> FLOOR  
MONTPELIER, VT 05620-3522

FACT SHEET  
(March 2016)

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO  
DISCHARGE TO WATERS OF THE UNITED STATES**

PERMIT NO: 3-1157  
PIN: BR95-0194  
NPDES NO: VT0100803

**NAME AND ADDRESS OF APPLICANT:**

Town of Bradford  
P.O. Box 603  
Bradford, VT 05033

**NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:**

Bradford Wastewater Treatment Facility  
94 Depot Street  
Bradford, Vermont

**RECEIVING WATER: Waits River**

**CLASSIFICATION:** Class B with a waste management zone. Class B waters are suitable for swimming and other forms of water-based recreation, and irrigation of crops and other agricultural uses without treatment; good aesthetic value; aquatic biota and wildlife sustained by high quality aquatic habitat; suitable for boating, fishing, and other recreational uses; acceptable for public water supply with filtration and disinfection. A waste management zone is a specific reach of Class B waters designated by a permit to accept the discharge of properly treated wastes that prior to treatment contained organisms pathogenic to human beings.

**I. Proposed Action, Type of Facility, and Discharge Location**

The Vermont Agency of Natural Resources (Agency) received a renewal application for the permit to discharge into the designated receiving water from the above-named applicant on December 24, 2008. At this time the Agency has made a tentative decision to reissue the discharge permit. The facility is engaged in the treatment of municipal wastewater. The discharge is from the outfall of the Bradford Wastewater Treatment Facility (WWTF) to the Waits River.

## II. Description of Discharge

A quantitative description of the discharge in terms of significant effluent parameters is based on state and federal laws and regulations, the discharge permit application, and the recent self-monitoring data.

## III. Limitations and Conditions

The effluent limitations of the permit, the monitoring requirements, and any implementation schedule (if required), may be found on the following pages of the permit:

Effluent Limitations:	Page 2
Monitoring Requirements:	Pages 6 and 7

## IV. Receiving Water

The receiving water for this discharge is the Waits River, a designated Warm Water Fish Habitat during the period of June 1 through September 30; the river is designated a Cold Water Fish Habitat for the period of October 1 through May 31. At the point of discharge, the river has a contributing drainage area of 149 square miles. The summer 7Q10 flow of the river is 20.68 cubic feet per second (CFS) and the summer Low Median Monthly flow is 59.61 CFS. The instream waste concentration at the summer 7Q10 flow is 0.010 and the instream waste concentration at the summer Low Median Monthly flow is 0.004.

## V. Permit Basis and Explanation of Effluent Limitation Derivation

### ***History and Summary:***

The Town of Bradford owns and operates an extended aeration, secondary wastewater treatment facility that discharges to the Waits River. Disinfection is accomplished by means of liquid chlorination followed by dechlorination.

**Flow** - The effluent flow limitation remains at 0.137 MGD, annual average, based on the facility's design flow. The facility maintains a continuous discharge.

**Biochemical Oxygen Demand (BOD<sub>5</sub>)** – The effluent limitations for BOD<sub>5</sub> remain unchanged from the current permit. The monthly average (30 mg/L) and weekly average (45 mg/L) reflect the minimum level of effluent quality specified for secondary treatment in 40 CFR Part 133.102. In addition, the permit contains a 50 mg/L, maximum day, BOD<sub>5</sub> limitation. This is the Agency standard applied to all such discharges pursuant to 13.4 c. of the Vermont Water Pollution Control Permit Regulations. The Agency implements the limit to supplement the federal technology-based limitations to prevent a gross one-day permit effluent violation to be offset by multiple weekly and monthly sampling events which would enable a discharger to comply with the weekly average and monthly average permit limitations. Mass limits (34.3 lbs/day, monthly average and 51.4 lbs/day, weekly average) are derived by multiplying the concentration limits by the permitted flow. The BOD<sub>5</sub> monthly monitoring requirement is unchanged from the current permit.

**Total Suspended Solids (TSS)** - The effluent limitations for TSS remain unchanged from the current permit. The monthly average (30 mg/L) and weekly average (45 mg/L) reflect the



minimum level of effluent quality specified for secondary treatment in 40 CFR Part 133.102. In addition, the draft permit contains a 50 mg/L, maximum day, TSS limitation. This is the Agency standard applied to all such discharges pursuant to 13.4 c. of the Vermont Water Pollution Control Permit Regulations. The Agency implements the limit to supplement the federal technology based limitations to prevent a gross one-day permit effluent violation to be offset by multiple weekly and monthly sampling events which would enable a discharger to comply with the weekly average and monthly average permit limitations. Mass limits (34.3 lbs/day, monthly and 51.4 lbs/day, weekly average) are derived by multiplying the concentration limits by the permitted flow. The TSS monthly monitoring requirements are unchanged from the current permit.

**Total Phosphorus (TP)** – In light of the adoption of numeric water quality criteria for phosphorus in the revised Vermont Water Quality Standards (effective October 30, 2014), the Agency is including requirements in discharge permits to monitor for discharges of TP. For future permit reissuance, the criteria will be used to determine the potential of discharges to cause or contribute to eutrophication and/or to adversely impact the aquatic biota downstream of the discharge. The Permittee shall monitor the discharge for TP once per month to be consistent with WWTF of similar size in Vermont.

**Total Nitrogen (TN)** – On November 10, 2011, a letter from the EPA (Region I) to the Vermont Agency of Natural Resources indicated that Vermont must establish TN limitations in permits such that the TN load from all facilities in the Connecticut River watershed is consistent with the requirements of the Long Island Sound Total Maximum Daily Load (TMDL).

Section I.B in this permit requires the Permittee have a qualified consultant develop and submit a Nitrogen Removal Optimization Plan by June 30, 2016. The plan shall be provided to the Agency before implementation. Additionally, an annual report will be due to the Agency documenting the pounds of TN discharged as well as removal optimization and efficiencies; the first annual report shall be submitted by January 15, 2018, as an attachment to the December 2017 DMR WR-43 report. Finally, this Condition contains as clause that allows the Agency to reopen the permit to include a wasteload allocation for this facility based on the LIS TMDL.

TN is a calculated value based on Total Kjeldahl Nitrogen (TKN) and Nitrate/Nitrite ( $\text{NO}_x$ ) Nitrogen. Monthly monitoring will be required for TKN and  $\text{NO}_x$ . The sum of TKN and  $\text{NO}_x$  shall be used to derive TN.

**Settleable Solids** - The limitation of 1.0 mL/L instantaneous maximum and daily monitoring remain unchanged from the current permit. This numeric limit was established in support of the narrative standard in Section 3-01 B.5 of the Vermont Water Quality Standards.

***Escherichia coli*** - The *E. coli* limitation is 77 colonies/100 mL as specified in Section 3-04 B.3, Vermont Water Quality Standards. Monthly monitoring remains the same as in the current permit.

**Total Residual Chlorine** – The Total Residual Chlorine limit of 0.1 mg/L is based on meeting the instream water quality acute and chronic chlorine criteria (0.019 mg/L and 0.011 mg/L respectively) in the Vermont Water Quality Standards, effective February 9, 2006, for the protection of aquatic biota. Daily monitoring is unchanged from the current permit.

**pH** - The pH limitation remains at 6.5 - 8.5 Standard Units as specified in Section 3-01 B.9 in the Vermont Water Quality Standards. Monitoring remains at daily.

**Whole Effluent Toxicity (WET) Testing** - 40 CFR Part 122.44(d)(1) requires the Agency to assess whether the discharge causes, or has the reasonable potential to cause or contribute to an excursion above any narrative or numeric water quality criteria. The goal of the Vermont Toxic Discharge Control Strategy is to assure that the state water quality standards and receiving water classification criteria are maintained. The draft permit includes a requirement to conduct a two-species WET test in August of September of 2018. If the results of this test indicate a reasonable potential to cause an instream toxic impact, the Department may require additional WET testing, establish a WET limit, or require a Toxicity Reduction Evaluation.

**Waste Management Zone** - As defined under 10 V.S.A. §1251(16), a waste management zone is “a specific reach of Class B waters designated by a permit to accept the discharge of properly treated wastes that prior to treatment contained organisms pathogenic to human beings. Throughout the receiving waters, water quality criteria must be achieved but increased health risks exist due to the authorized discharge”.

The draft permit retains the existing waste management zone that extends approximately 0.2 miles down the Waits River to its confluence with the Connecticut River, and further extends in the Connecticut River, west of the New Hampshire/Vermont border for an additional 0.8 miles.

**Operation, Management, and Emergency Response Plans** - As required by the revisions to 10 V.S.A. Section 1278, promulgated in the 2006 legislative session, Condition I.I has been included in the proposed permit. This condition requires that the Permittee implement the Operation, Management and Emergency Response Plans for the wastewater treatment facility, sewage pump/ejector stations, and stream crossings as approved by the Agency on October 3, 2008; and for the collection system as approved by the Agency on October 3, 2008.

**Electric Power Failure** - Within 30 days of the effective date of the permit, the Permittee must submit to the Agency updated documentation addressing how the discharge will be handled in the event of an electric power outage. The effluent must receive a minimum of primary treatment (or in the case of ultraviolet light disinfection systems, not less than secondary treatment) plus disinfection and dechlorination.

#### **VI. Procedures for Formulation of Final Determinations**

*The public comment period for receiving comments on this draft permit ran from February 1 through March 2, 2016. No comments were received concerning the draft permit.*