

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  
(August 2016)

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

**PERMIT NO:** 3-1242  
**PIN:** NS97-0153  
**NPDES NO:** VT0100064

**NAME AND ADDRESS OF APPLICANT:**

Town of Brattleboro  
211 Fairground Road  
Brattleboro, VT 05301

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

Brattleboro Wastewater Treatment Facility  
340 Riverside Drive  
Brattleboro, VT

**RECEIVING WATER:** Connecticut 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 30, 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 Brattleboro Wastewater Treatment Facility to the Connecticut 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 draft permit, the monitoring requirements, and any implementation schedule (if required), may be found on the following pages of the draft permit:

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

## IV. Receiving Water

The receiving water for this discharge is the Connecticut River, a designated Cold Water Fish Habitat. At the point of discharge, the river has a contributing drainage area of 6,200 square miles. The summer 7Q10 flow of the river is estimated to be 1,263.56 cubic feet per second (CFS) and the summer Low Median Monthly flow is estimated to be 3,403.18 CFS. The instream waste concentration at the summer 7Q10 flow is 0.004 (0.4%) and the instream waste concentration at the summer Low Median Monthly flow is 0.001 (0.1%).

## V. Facility History and Background

The Town of Brattleboro owns and operates the Brattleboro Wastewater Treatment Facility. The facility recently underwent a major refurbishment. The facility consists of the headworks, two primary clarifiers, four trains of rotating biological contactors (RBSs), two secondary clarifiers, and a chlorine disinfection tank. Solids are processed using the 2PAD Anaerobic Digestion System; a thermophilic and mesophilic system.

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

**Flow** – The draft permit maintains the annual average flow limitation of 3.0 MGD, 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 draft 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 (751 lbs/day, monthly average and 1126 lbs/day, weekly average) are derived by multiplying the concentration limits by the permitted flow. The BOD<sub>5</sub> monitoring requirements are proposed to be changed to weekly, year-round, to be consistent with facilities of similar size.

**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 (751 lbs/day, monthly average and 1126 lbs/day, weekly average) are derived by multiplying the concentration limits by the permitted flow. The TSS monitoring requirements are proposed to be changed to weekly, year-round, to be consistent with facilities of similar size.

**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 week 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 Agency 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 draft permit requires the Permittee have a qualified consultant develop and submit a Nitrogen Removal Optimization Plan by December 31, 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 (NO<sub>x</sub>) Nitrogen. Weekly monitoring will be required for TKN and NO<sub>x</sub>. The sum of TKN and NO<sub>x</sub> 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. The monitoring requirements are proposed to be changed to weekly, year-round, to be consistent with facilities of similar size.

**Total Residual Chlorine** – The Total Residual Chlorine limit of 1.0 mg/L, weekly average, and 2.0 mg/L, instantaneous maximum, are 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.

**Waste Management Zone (WMZ)** – As defined under 10 V.S.A. §1251(16), a WMZ 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 1 mile downstream from the outfall in the Connecticut River.

**Toxicity Testing** – 40 CFR Part 122.44(d)(1) and 122.21(j) require 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. Per these federal requirements, the Permittee shall conduct WET testing and toxic pollutant analyses according to the schedule outlined in Section I.F of the draft permit.

If the results of these tests indicate a reasonable potential to cause an instream toxic impact, the Agency may require additional WET testing, establish a WET limit, or require a Toxicity Reduction Evaluation.

**Monitoring and Reporting** – For all facilities with a design flow of greater than 0.1 MGD, 40 CFR § 122.21(j) requires the submittal of effluent monitoring data for those parameters identified in Section I.G.3 of the draft permit. Samples must be collected once annually such that by the end of the term of the permit, all quarters have been sampled at least once, and the results will be submitted by December 31 of each year.

The draft permit requires the Permittee to submit all monitoring data using an Agency-approved DMR form (WR-43). The Permittee shall submit all monitoring data using an electronic reporting system designated by the Agency once directed to do so by the Agency.

**Operation, Management, and Emergency Response Plans** – 10 V.S.A. Section 1278 requires the Permittee to prepare and implement an Operation, Management and Emergency Response Plan for the wastewater treatment facility, sewage pump/ejector stations, stream crossings, and collection systems. An Operation, Management and Emergency Response Plan for the facility, pump stations and stream crossings was received by the Agency on April 2, 2008. The Agency reviewed and returned the Plan for revision on December 31, 2008. By December 31, 2016, the Permittee shall update and resubmit for review the plan for the facility, pump stations and stream crossings; the update shall also should address the collection system. The Permittee shall implement the plan on approval. Through the term of this permit, the Permittee shall revise as necessary these plans to reflect any changes to the equipment or operation of the facility.

**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 UV disinfection systems, not less than secondary treatment) plus disinfection.

**Noncompliance Notification** – As required by the passage of 10 V.S.A. §1295, promulgated in the 2016 legislative session, Section II.A.2 has been included in the proposed permit. This condition requires the Permittee to provide public notification of untreated discharges from wastewater facilities. The Permittee is required to post a public alert within one hour of discovery, and submit to the Agency specified information regarding the discharge within 12 hours of discovery.

## VII. Procedures for Formulation of Final Determinations

The public comment period for receiving comments on this draft permit is from **August 22 through September 22, 2016** during which time interested persons may submit their written views on the draft permit. All written comments received by 4:30 PM on **September 22, 2016** will be retained by the Agency and considered in the formulation of the final determination to issue, deny or modify the draft permit. The comment period may be extended at the discretion of the Agency.

Written comments should be sent to:

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

Comments may also be faxed to: 802-828-1544 or submitted by e-mail using the e-mail comment provisions included at <http://www.watershedmanagement.vt.gov/>

Any interested person or groups of persons may request or petition for a public hearing with respect to this draft permit. Any such request or petition for a public hearing shall be filed within the public comment period described above and shall indicate the interest of the party filing such request and the reasons why a hearing is warranted.

The Agency will hold a hearing if there is significant public interest in holding such a hearing. Any public hearing brought in response to such a request or petition will be held in the geographical area of the proposed discharge or other appropriate area, at the discretion of the Agency and may, as appropriate, consider related groups of draft permits. Any person may submit oral or written statements and data concerning the draft permit at the public hearing. The Agency may establish reasonable limits on the time allowed for oral statements and may require the submission of statements in writing. All statements, comments, and data presented at the public hearing will be retained by the Agency and considered in the formulation of the final determination to issue, deny, or modify the draft permit.

The complete application, draft permit, and other information are on file and may be inspected by

appointment on the 2<sup>nd</sup> floor of the Main Building at One National Life Drive, Montpelier, Vermont. Copies may be obtained by calling 802-828-1535 from 7:45 AM to 4:30 PM Monday through Friday, and will be made at a cost based upon the current Secretary of State Official Fee Schedule for Copying Public Records. The draft permit and fact sheet may also be viewed on the Watershed Management Division's website at <http://www.watershedmanagement.vt.gov/>