

AGENCY OF NATURAL RESOURCES  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
WATERSHED MANAGEMENT DIVISION  
103 SOUTH MAIN STREET  
WATERBURY, VERMONT 05671-0408

FACT SHEET  
(February 2012)

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

NPDES NO: VT0101010  
PERMIT NO: 3-1225  
PROJECT ID NO: NS93-0043

NAME AND ADDRESS OF APPLICANT:

Town of Hartford  
173 Airport Road  
White River Junction, VT 05001

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

White River Junction Wastewater Treatment Facility  
319 Latham Works Lane  
White River Junction, Vermont

RECEIVING WATER: Connecticut River

CLASSIFICATION: Class B with a waste management zone. Class B waters are suitable for bathing and recreation, irrigation and agricultural uses; good fish habitat; good aesthetic value; 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 above named applicant applied on July 13, 2011 to the Vermont Department of Environmental Conservation for renewal of the permit to discharge into the designated receiving water. At this time the Department has made a tentative decision to reissue the discharge permit. The facility is engaged in the treatment of municipal and industrial wastewater. The discharge is from the outfall of the Town of Hartford White River Junction 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.

The complete application, draft permit, and other information used in the development of this permit are on file and may be inspected at the VTDEC, Watershed Management Division, VSAC Building, Winooski, VT. Copies will be made at a cost based on the current Secretary of State Official Fee Schedule for Copying Public Records from 8:00 AM to 4:30 PM, Monday through Friday. The draft permit and fact sheet may also be viewed on the Division's website at <http://www.vtwaterquality.org/wastewater.htm>.

## 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:	Pages 2 and 3 of 22
Monitoring Requirements:	Pages 5 through 8 and 10 of 22

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

The Town of Hartford owns and operates the White River Junction WWTF. The secondary facility was completed in 1988 and the upgrade/expansion to sequential batch reactor (SBR) technology is near completion and services the communities of White River Junction and Wilder within the Town of Hartford.

The Town also owns and operates a combined sewer collection system which collects both stormwater and sewage and conveys it to the wastewater treatment facility. During certain precipitation/runoff events the volume of combined wastewater exceeds the capacity of the existing collection system causing untreated combined wastewater to overflow to the Connecticut River. There are currently five such overflow points within the Town's combined sewer system (see Appendix A of the permit). In response to compliance schedules issued by the Department, the Town has completed several construction projects designed to eliminate combined sewer overflow events. This has included significant sewer separation projects during the 1990s and more recently in 2008. (See also discussion of Combined Sewer Overflows below.)

On May 28, 2009 the Town of Hartford submitted an application to amend their discharge permit to reflect the proposed upgrade and expansion of the White River Junction WWTF. The Agency issued Discharge Permit #3-1225 on November 6, 2009 for the White River Junction WWTF. EPA formally objected to the discharge permit via a letter dated February 12, 2010. Following a public hearing and discussions between the Department and the EPA, the Department has modified this renewed permit (see Total

Nitrogen Section below) to include an interim Total Nitrogen limit to address EPA's concerns.

The 7Q10 flow of the Connecticut River at the point of discharge is 859 CFS, resulting in an in-stream waste concentration of 0.0022 using the design flow of the existing WWTF (1.215 MGD) and 0.0026 using the design flow of the proposed expanded facility (1.45 MGD). The hardness of the Connecticut River is estimated to be 40 mg/l at the point of discharge using USGS water quality data from the North Walpole, NH stream gage site. The above data is utilized to determine compliance with Vermont's aquatic biota based metals criteria as specified in Section 3-01 B.10.c. and Appendix C of the Vermont Water Quality Standards, January 1, 2008.

**Flow** - The current permit includes a flow limitation of 1.215 MGD, annual average, based on the design capacity of the facility. Upon completion of the upgrade and expansion the flow limitation will increase to 1.45 MGD. Flow monitoring is required daily. This facility maintains a constant discharge.

**Biochemical Oxygen Demand (BOD<sub>5</sub>) and Total Suspended Solids (TSS)** - The BOD and TSS mass limitations are 304 lbs/day, monthly average, and 456 lbs/day, weekly average, and are unchanged from the previous permit. These mass limitations are based on concentration limitations and the currently permitted flow from the WWTF (1.215 MGD). These limitations will not change upon completion of the upgrade and expansion project.

The BOD and TSS effluent concentration limits are 30 mg/l, monthly average, and 45 mg/l, weekly average. These limitations are set in accordance with the limitations specified for secondary treatment in 40 CFR Part 133.102. These effluent limitations will not change upon completion of the upgrade and expansion project. The permittee must comply with the mass limitation or the concentration limitation, whichever is more restrictive.

In addition, the current permit contains a 50 mg/l, maximum day, BOD and TSS limitation. This is a limitation which the Agency implements 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. This limitation will not change upon completion of the upgrade and expansion project. The sampling frequency for BOD and TSS is once per week and will remain unchanged upon completion of the upgrade and expansion project.

**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.

**Settleable Solids** - The Settleable Solids limitation is 1.0 ml/l, instantaneous maximum and is established in support of the narrative standard in Section 3-01.B.5 of the Vermont Water Quality Standards. This limitation will be unchanged upon completion of the

upgrade and expansion project. Sampling is required once per day and will be unchanged upon completion of the upgrade and expansion project.

**Total Phosphorus** - The Agency is currently in the process of proposing scientifically based phosphorus criteria for lakes and streams for review by the Vermont Water Resources Panel for inclusion in the next revision of the Vermont Water Quality Standards. In support of this effort the Department is including requirements in WWTF discharge permits to monitor discharges for total phosphorus. Once adopted the total phosphorus criterion will be used to determine the potential of WWTF discharges to cause or contribute to eutrophication and adversely impact the aquatic biota downstream of the discharge. Monthly Total Phosphorus monitoring is required.

**Total Nitrogen** - EPA, in a November 10, 2011 letter to the Agency indicated that Vermont must establish total nitrogen limitations in permits such that the total nitrogen load from all facilities in the Connecticut River watershed is consistent with the requirements of the Long Island Sound Total Maximum Daily Load (TMDL). The letter also requested that the Agency submit to EPA a modified permit within 30 days of receipt of EPA's letter (i.e. December 16, 2011). Because the previous permit expired on December 31, 2011 and there was insufficient time to complete the 30-day public notice requirement prior to the expiration date, the Agency is including a nitrogen limit in this proposed renewed permit.

The proposed permit includes an interim Total Nitrogen limit of 181 pounds per day, annual average. This limit is based on the expanded design flow of 1.45 MGD and a concentration limit of 15 mg/l. This concentration limit was based on EPA's 'Response to Comments' from the March 2, 2011 public hearing in White River Junction where the response to Comment #6. states: "The LIS TMDL estimated baseline nitrogen loadings by assuming discharge levels of 15 mg/l total nitrogen at design discharge flows."

The permit includes a reopener provision for TN as follows:

"The Department reserves the right to reopen and amend this permit to include an alternate TN limitation based on future monitoring data, results of nitrogen optimization and/or the final Long Island Sound TMDL."

In addition, at EPA's request, monitoring will be required for Total Kjeldahl Nitrogen and Nitrate+Nitrite (NO<sub>x</sub>) Nitrogen. The sum of TKN and Nitrate+Nitrite shall be calculated in order to determine Total Nitrogen. Weekly monitoring is required year round. Beginning in October 2014, the permittee may choose to decrease the winter time monitoring (October through February) to monthly.

***E. coli* Bacteria** – The *E. coli* limitation is 77/100ml, instantaneous maximum and is based on Section 3-04.B.3 of the Vermont Water Quality Standards. This limitation and weekly monitoring requirement will be unchanged upon completion of the upgrade and expansion project.

**Total Residual Chlorine (TRC)** - The upgrade and expansion project at the WWTF has replaced the chlorine based disinfection system with an ultraviolet light (UV) disinfection system. Therefore, the Total Residual Chlorine limitation has been eliminated and the monitoring requirement terminated.

**Toxicity Testing** - 40 CFR Part 122.44(d)(1) and the 1994 Vermont Toxic Discharge Control Strategy require the Department to assess whether the discharge causes, has the reasonable potential to cause, or contribute to an excursion above any narrative or numeric water quality criteria. In addition, Part 122.21 requires all publicly owned treatment works (POTW) with flows greater than or equal to one MGD to complete a minimum of four WET tests. WET testing was conducted by the Town in September 2008 and March 2010; also, toxicity scans were completed in July 2009, April 2010, and March 2011. Those results indicated that this discharge did not have an instream toxic impact. Confirmation that those findings are still valid is required at permit renewal. The proposed permit includes (Part I.B.) two two-species acute WET tests during the term of the permit to ensure compliance with Part 122.21, 122.44(d)(1), and the Toxic Discharge Control Strategy. The permit also includes three toxicity scans in compliance with Part 122.21 which must be submitted by June 30, 2016 (when the next application for renewal is due).

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

**Additional Monitoring** - For all facilities with a design flow of greater than 0.1 MGD, 40 CFR § 122.21(j), Application for a permit, requires the submittal of effluent monitoring data for those parameters identified in Condition I.F.3. of the permit.

Samples must be collected once annually during various seasons (i.e. include each of the four quarters during the permit period) and the results submitted on that month's Discharge Monitoring Report form.

**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 proposed permit retains the existing waste management zone (WMZ) that extends downstream from the outfall for approximately one mile in the Connecticut River.

**Electric Power Failure** - Within 30 days of the effective date of the permit, the permittee must submit to the Department, 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.

**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 Plan, as approved by the Agency, for the wastewater treatment facility, sewage pump/ejector stations, stream crossings, and collection system.

### **Combined Sewer Overflows**

The collection system for the White River Junction WWTF is a combined sewer system that collects both stormwater and sanitary sewage and conveys it to the WWTF. During certain precipitation/runoff events the combined flow of stormwater and sewage exceeds the capacity of the collection system resulting in the overflow of untreated combined wastewater to the Connecticut River. There are currently five such overflow points (i.e. combined sewer overflows) within the Town's collection system. See Attachment A of the permit for a description of the location of the overflow points.

Section 402 (q) of the Clean Water Act requires that discharges from municipal combined storm and sanitary sewers conform to the Combined Sewer Overflow Policy signed by EPA on April 11, 1994. That Policy establishes technology based controls and requires the development and implementation of long term control plans designed to abate the discharges from CSOs.

The technology based controls for CSOs are referred to as the Nine Minimum Controls (NMC) in the EPA CSO Policy and are included in this permit under Part I.G.1., with the exception of NMC #3. which requires review and modification of pretreatment requirements to assure CSO impacts are minimized. The Department notes that unlike most other states the administration of the federal pretreatment program is not the responsibility of individual Vermont municipalities since that program was delegated to the State of Vermont, Agency of Natural Resources via a Memorandum of Agreement signed by EPA on March 16 1982. Therefore NMC #3 is not applicable to the Town of Hartford and is not included as a condition of this permit.

With respect to the long term control plan for the CSO discharges, the Town completed several sewer separation projects in the 1990s for the combined sewer collection systems contributory to CSOs #003, 004 and 005. Most recently in 2008 the Town completed a sewer separation project for the combined sewer collection system contributory to CSOs #009 and 010. The Town's compliance schedule for long term abatement of the remaining CSOs was contained in a Stipulated Emergency Order dated December 16, 2005. The Town has complied with the requirements of the Order. Specifically the Town completed the final phase of the combined sewer separation project and has completed effectiveness studies to verify compliance with the Vermont Combined Sewer Overflow Control Policy and is now in the process of conducting an update study for submittal and review by September 30, 2012 (see March 8, 2011 letter from Randy Bean to the Town of Hartford).

Continued monitoring and reporting of overflow events utilizing tell-tales is required during the term of the permit.

V. Procedures for Formulation of Final Determinations

The public comment period for receiving comments on this draft permit is from February 21 through March 22, 2012 during which time interested persons may submit their written views on the draft permit. All written comments received by 4:30 PM on March 22, 2012 will be retained by the Department and considered in the formulation of the final determination to issue, deny or modify the draft permit. The period of comment may be extended at the discretion of the Department.

Written comments should be sent to:

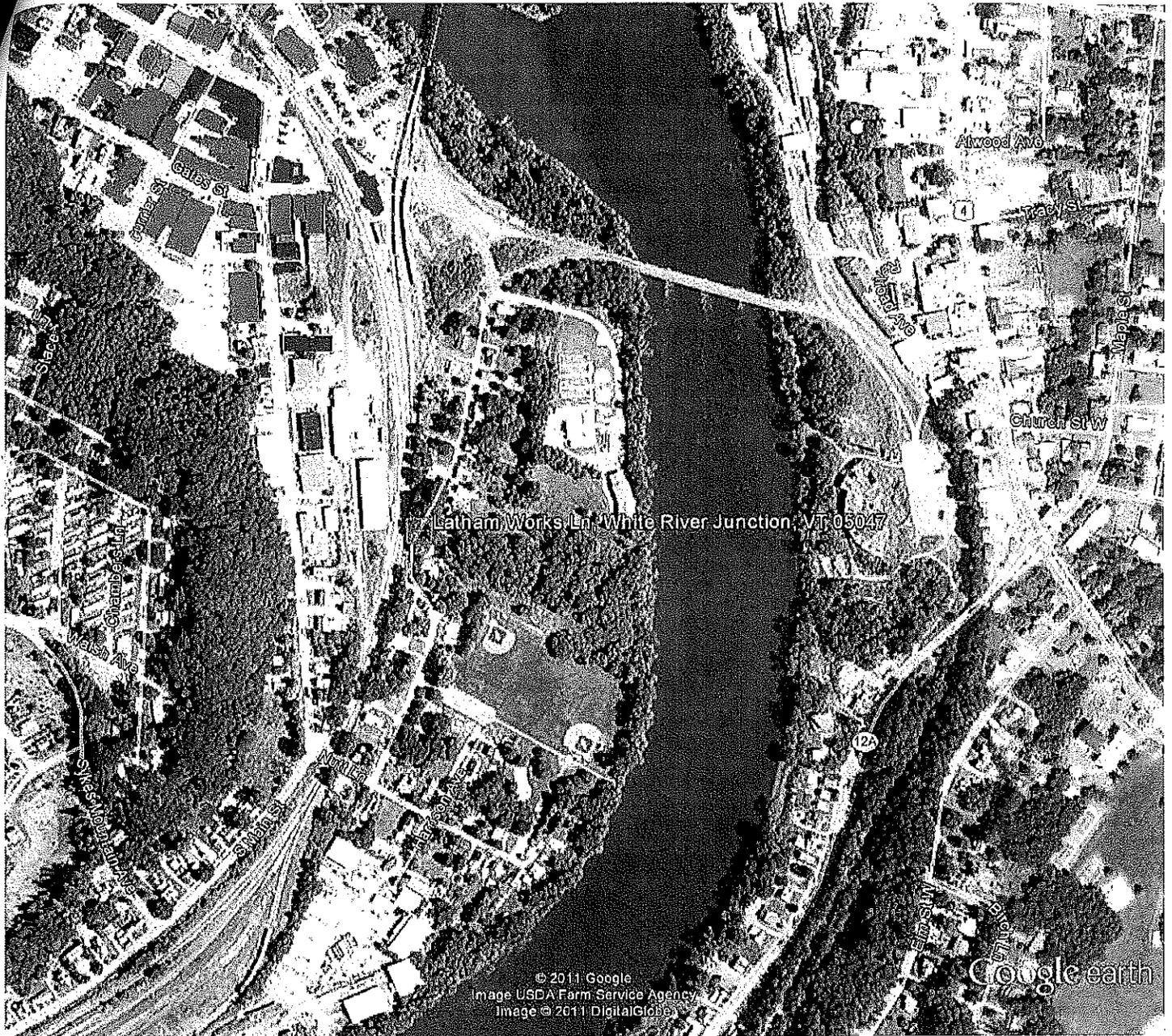
Vermont Agency of Natural Resources  
Department of Environmental Conservation  
Watershed Management Division – Building 10 North  
103 South Main Street  
Waterbury, VT 05671-0408

Comments may also be faxed to: 802-338-4890 or submitted by e-mail using the e-mail comment provisions included at <http://www.vtwaterquality.org/wastewater.htm> .

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 Department 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 Department 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 Department 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 Department and considered in the formulation of the final determination to issue, deny, or modify the draft permit.

*Comments from the Town of Hartford were received during the public notice period. The Agency's responses to those comments are included in the Response Summary document.*



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