

STATE OF VERMONT
AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
1 NATIONAL LIFE DRIVE, MAIN 2
MONTPELIER, VT 05620-3522

1272 ORDER - Discharge Permit No. 3-1290

IN THE MATTER OF:

Town of St. Johnsbury, Permit 3-1290

1187 Main Street, Suite 2

St. Johnsbury, VT 05819

In accordance with the provisions of 10 V.S.A. § 1272 and the Combined Sewer Overflow Rule (Environmental Protection Rule, Chapter 34), the Secretary (Secretary) of the Vermont Agency of Natural Resources (Agency) makes the following findings of fact. The definitions in the Combined Sewer Overflow Rule shall apply to this Order.

FINDINGS OF FACT

(1) The Town of St. Johnsbury (St. Johnsbury) owns and operates the St. Johnsbury Wastewater Treatment Facility (WWTF), which collects and treats both sewage and stormwater.

(2) The WWTF is authorized to discharge treated and disinfected wastewater into the Passumpsic River under the terms and conditions of Discharge Permit No. 3-1290.

(3) Discharge Permit No. 3-1290 contains a list of combined sewer overflow (CSO) outfalls within the collection system. During certain storm events, these CSO outfalls discharge untreated sewage to the Passumpsic River and Sleepers River. Such discharges adversely affect the quality of waters of the State and create public health concerns.

(4) The discharges from these CSO outfalls violate 10 V.S.A. Chapter 47, the Vermont Water Quality Standards (VWQS), and Discharge Permit No. 3-1290.

(5) In May 1991, a preliminary engineering assessment, conducted for St. Johnsbury by Whitman and Howard, Inc., determined that the optimum alternative for elimination of its combined sewer overflow discharges was separation of the stormwater and sanitary collection systems.

(6) The preliminary engineering assessment submitted to the Agency identified a multi-phased separation of the stormwater and sanitary collection systems as the most feasible method of eliminating the combined sewer overflow discharges.

(7) St. Johnsbury completed portions of the sewer separation project, eliminated CSO

#019 and CSO #003, and reduced the frequency of overflows at CSO #021.

(8) St. Johnsbury planned to undertake a multi-phased project consisting of Phases A, B, C, D, and E to complete the combined sewer overflow elimination project.

(9) Phase A entailed separation work in the Cliff Street and Central Street areas and would eliminate or significantly reduce the frequency and magnitude of overflows at CSO #027.

(10) Phase B1 entailed separation work in the Hastings Hill area and would eliminate or reduce the frequency and magnitude of overflows at CSO #020.

(11) Phase B2 entailed separation work in the Hastings Hill area and would eliminate or reduce the frequency and magnitude of overflows at CSO #020.

(12) Phase C entailed work in the Cliff Street, Summer Street, Central Street, Church Street, Winter Street, Webster Street, and Mount Pleasant Street areas and would eliminate or reduce the frequency and magnitude of overflows at CSO #021.

(13) Phase E entailed work alongside Portland Street and pipe work contributory to CSO #007 and would eliminate or reduce the frequency and magnitude of overflows at CSO #007.

(14) On August 23, 2006, the Agency issued 1272 Order No. 3-1290-A, which required St. Johnsbury to complete Phase A and Phase B1 of the combined sewer overflow elimination project by December 31, 2006 and submit a study measuring the effectiveness of Phases A and B1 and all other sewer overflow elimination projects completed as part of the combined sewer overflow elimination project to the Agency by November 30, 2007 to verify if the combined sewer overflow elimination project had resulted in compliance with the Vermont Combined Sewer Overflow Control Policy, June 1990 (CSO Policy).

(15) In November 2007, St. Johnsbury completed Phase A and Phase B1 of the combined sewer overflow elimination project.

(16) On April 23, 2008, St. Johnsbury submitted a study measuring the effectiveness of the completed combined sewer separation projects (CSO Effectiveness Study). The CSO Effectiveness Study indicated that due to the condition of the sewer system and unanticipated construction problems, and funding limitations, the original multi-phased CSO elimination project was not an efficient method to eliminate the CSOs.

(17) On July 25, 2008, the Agency and St. Johnsbury met to discuss the results of the CSO Effectiveness Study.

(18) On August 7, 2008, the Agency requested minor modifications to the CSO Effectiveness Study and requested that St. Johnsbury provide comments on the proposed schedule for the next portion of the combined sewer overflow elimination project.

(19) On April 2, 2009, St. Johnsbury submitted the modifications to the CSO Effectiveness Study and provided comments on the proposed schedule for the next portion of the combined sewer overflow elimination project.

(20) On June 2, 2009, the Agency issued 1272 Order No. 3-1290-A1 to St. Johnsbury. This Order required St. Johnsbury, by no later than December 31, 2009, to confirm the location and status of CSO #023 and CSO #025 through TV inspection or equivalent technology, physically eliminate CSO #015, CSO #016A, CSO #026, and CSO #014A, and provide a written summary of this work to the Agency.

(21) In the summer of 2009, St. Johnsbury located and eliminated CSO #025. CSOs #014A, #015, #016, #016A, and #026 were also eliminated in the summer of 2009.

(22) In December 2009, CSO #023 was located and showed no signs of activity.

(23) In 2010 and 2011, St. Johnsbury completed municipal infrastructure projects which decreased the volume of stormwater entering the combined sewer collection system and reduced the magnitude and frequency of discharges from the remaining CSO outfalls.

(24) On July 11, 2013, the Agency and St. Johnsbury met to discuss the current status of the CSO abatement projects.

(25) At the July 11, 2013 meeting, the Agency and St. Johnsbury concluded it was necessary to inventory the work done to date and the currently ongoing projects in order to develop a feasible strategy to address the remaining CSOs.

(26) Also during the July 11, 2013 meeting, St. Johnsbury indicated that the town was investigating recent reports of sewage backups in homes and possible collection system overflows in the subcatchment of CSO #003 which had been eliminated in 2002.

(27) On August 2, 2013, the Agency issued 1272 Order No. 3-1290-A2, which required St. Johnsbury to complete an inventory of all CSO abatement projects completed to date; update the "Town of St. Johnsbury, Vermont Sewer System Map" prepared by Earth Tech, Inc. in October 2008; and include an inventory of any new CSO abatement projects planned for the next three years.

(28) On December 9, 2013, Dufresne Group submitted a CSO No. 3 Investigations Report to the Agency in response to 1272 Order No. 3-1290-A2. The condition of the combined sewer on Portland Street and Concord Avenue was in poor condition with debris and sediment buildup, which reduced hydraulic capacity and resulted in sewer backups at 54 State Street and 809 Portland Avenue. Flushing and cleaning activities reduced the amount of debris and sediment and significantly improved the hydraulic capacity. A standard operating procedure was developed by the Public Works Director and Dufresne Group to ensure that proper maintenance activities would be achieved by spring of 2015 and to establish a monthly schedule

for CSO inspections and maintenance. Recommendations included abandonment of the combined sewer section near Carrol Concrete; installation of a new sewer main on Portland Street, Ely Street, and State Street, and the Moose River Bridge; and installation of overflow bypass structures on Portland Street at multiple intersections.

(29) On December 20, 2013, Dufresne Group submitted to the Agency a Preliminary Engineering Report. The report recommended upgrading primary pumps, installing a magnetic flow meter at the septage receiving station, replacing the influent screening and grinding equipment, replacing pumps at the Hood and Oak Street pump stations, replacing the digester mixing system for two anaerobic digesters, and repairing the deteriorated exterior walls on the digester.

(30) On December 30, 2013, Dufresne Group submitted to the Agency an Annual CSO Inspection Report in response to 1272 Order 3-1290-A2. The report summarized maintenance activities performed in 2013 and listed recommended maintenance and repair activities to be performed during 2014. Inconsistencies in the CSO identification system were observed. A table referencing the CSO numbering system for the Annual Inspection Report was provided along with the historical numbering systems used. A recommendation was made to complete additional research to coordinate the CSO numbering systems prior to the 2014 annual inspection.

(31) On October 3, 2014, Dufresne Group submitted to the Agency a Combined Sewer Overflow Abatement Inventory Report & 3-Year Plan in response to 1272 Order 3-1290-A2. A summary of CSO abatement projects completed in the last 30 years was provided and no CSO abatement projects were proposed for the next three years. The locations of the CSOs were verified and multiple CSOs deemed unnecessary were plugged.

(32) After reviewing the CSO reports submitted by Dufresne Group in 2013 and 2014, inconsistencies regarding the status of and numbering scheme for the CSO outfalls were observed. Further clarification is needed in order to determine the current status of CSO outfalls, including whether they are active or have been closed.

ORDER

Based on the foregoing findings of fact, the Secretary issues the following Order, under 10 V.S.A. § 1272 and the Combined Sewer Overflow Rule (Environmental Protection Rule, Chapter 34), to ensure all remaining CSOs in St. Johnsbury are brought into compliance with the applicable requirements of state and federal law, including the VWQS.

(I) **Initial Assessment.** The municipality shall conduct an assessment of the CSO outfalls listed in Discharge Permit No. 3-1290 and submit a report of this assessment to the Secretary **within 60 days of the date of this Order**, including at a minimum:

- (1) A list of all CSO outfalls, including their latitude and longitude and current status (active or closed),

- (2) For any closed CSOs, the date and method of closure,
- (3) The date of the most recent overflow event for each CSO,
- (4) The type of CSO monitoring used, and
- (5) A list of previous effectiveness studies, if any, completed.

(II) **Minimum Controls.** The municipality shall implement the minimum technology-based requirements below, known as the “Minimum Controls,” which are designed to maximize pollutant capture and minimize impacts to water quality:

- (1) Proper operation and regular maintenance programs for collection systems and CSO outfalls;
- (2) Maximum use of the collection system for storage without endangering public health or property, or causing solids deposition problems;
- (3) Review and modification of pretreatment requirements to assure that CSO impacts are minimized;
- (4) Maximization of flow to the treatment plant for treatment consistent with an evaluation of alternative treatment options;
- (5) Prohibition of CSOs during dry weather;
- (6) Control of solid and floatable materials in CSOs;
- (7) Establishment of pollution prevention programs to minimize contaminants in CSOs;
- (8) Public notification to ensure that the public receives adequate notification of CSOs and CSO impacts, which shall, at a minimum, comply with § 34-404 of the Combined Sewer Overflow Rule (Environmental Protection Rule, Chapter 34);
- (9) Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls, which shall include at a minimum:
 - (A) The municipality shall define through monitoring, modeling, and other means, as appropriate, the sewer system, the response of the system to a range of precipitation events that encompasses the 5-year design storm, the characteristics of the overflows, and the water quality impacts that result from CSOs. To comply with the foregoing requirement, the municipality shall, at a minimum:
 - (i) Establish and maintain a precipitation monitoring system. The system must provide unique precipitation amounts specific to individual CSO subcatchments. Such a system does not necessarily demand a precipitation recording device for each CSO outfall. Precipitation measurements shall be to the nearest 0.01 inches, continuous at a five-minute interval over the duration of a storm event, and indexed to time and date. If establishing a physical precipitation monitoring system, the municipality shall work to minimize impacts of wind and surrounding trees and buildings that may hinder the accuracy of precipitation recording devices. If a municipality proposes to use a system other than a physical precipitation monitoring system, the municipality shall get prior approval from the Secretary.

(ii) Establish a CSO flow monitoring system. At a minimum, the municipality shall install a tell-tale block in each overflow structure and check the block after every precipitation/runoff event.

(B) The municipality shall submit to the Secretary, by no later than January 31st of each year, a report on CSO control project(s) of the previous calendar year. The Secretary will use the information from the report to monitor the progress on implementation of CSO control project(s). The municipality shall report progress on:

- (i) Compliance with the Minimum Controls;
- (ii) The condition and operation of the CSS;
- (iii) The frequency, duration, and magnitude of the precipitation events leading to CSOs from the system in the past year and a comparison to prior years;
- (iv) The frequency, duration, and magnitude of all CSOs from the system in the past year and a comparison to prior years;
- (v) The overall status of the Long Term Control Plan (LTCP); and
- (vi) Key CSO control accomplishments, highlighting those that reduced the frequency and magnitude of CSOs; projects under design; and construction that occurred in the previous year.

(III) **Long Term Control Plan.** The municipality shall create a Long Term Control Plan (LTCP)¹ and submit it to the Secretary **within 18 months of the date of this Order.** In developing a LTCP, the municipality shall employ a public participation process that actively involves the affected public in the decision-making to develop and select the long-term CSO controls. The affected public includes rate payers, industrial users of the sewer system, persons who reside downstream from the CSO outfalls, persons who use and enjoy the downstream waters, and any other interested persons. The LTCP shall, at a minimum, include:

(1) An alternatives analysis that shall evaluate the costs and performance of multiple CSO control alternatives, such as:

- installing a flow metering system for each CSO outfall;
- reducing stormwater flows through the separation of combined stormwater and sanitary sewer lines;
- adding storage tanks or retention basins to hold overflow during storm events;
- expanding the treatment plant capacity;
- adding screening and disinfection facilities for the overflow;
- incorporating green stormwater infrastructure to reduce stormwater flow into CSSs to the greatest extent feasible and practical; and
- providing for disinfection of CSOs at the outfall.

¹ If the municipality wishes to apply for funding from the State to assist in the creation or implementation of its LTCP, the municipality shall draft all reports, including associated planning documents, according to the PER format.

(2) A detailed list of the selected CSO control projects necessary to bring the CSOs into compliance with the VWQS and a timeline for implementing the projects. Projects shall be prioritized based on the relative importance of adverse impacts upon water quality, including impacts on designated and existing uses. The municipality shall give the highest priority to bringing overflows to “sensitive areas” into compliance with the VWQS. “Sensitive areas” means designated Outstanding Resource Waters, designated National Marine Sanctuaries, waters with threatened or endangered species and their habitat, waters where primary contact recreation occurs, public drinking water intakes or their designated protection areas, and shellfish beds.

(3) A strategy to ensure that new sources of stormwater and wastewater to the CSS do not increase the volume, frequency, or duration of CSO events through implementation of control measures, such as making reductions in existing sources of stormwater or wastewater to the CSS, creating or increasing storage capacity within the collection system, or other measures approved by the Secretary.

(4) Measures to address and prevent any documented, recurrent instances of sewage backups or discharges of raw sewage onto the ground surface.

(5) A financing plan to design and implement the CSO control projects identified pursuant to subsection (III)(2) of this Order.

(6) Green stormwater infrastructure for stormwater runoff and sewer overflow management to the greatest extent possible.

(7) A proposed schedule to bring the municipality’s CSOs into compliance with the Vermont Water Quality Standards. The Agency recognizes CSO abatement and control is a costly process and anticipates plans will take an iterative approach to lessen the number and quantity of CSO events and improve their quality. As such, the schedule may include interim CSO controls as a step in the process of bringing CSOs into compliance with the VWQS. Interim CSO controls should be evaluated and designed based on storms with a theoretical 5-year recurrence interval (also known as the 5- year design storm). The 24-hour and 1-hour extreme precipitation depths at the 5- year recurrence interval for each CSO municipality are listed in Appendix A of the Combined Sewer Overflow Rule (Environmental Protection Rule, Chapter 34).

(IV) General Conditions.

(1) The plans and information required by this Order shall be submitted in electronic format to Katie Parrish, Environmental Analyst, Kathleen.Parrish@vermont.gov.

(2) The Secretary reserves the right to amend this Order at any time as necessary to protect water quality and to comply with state and federal law.

(3) The State of Vermont and the Secretary reserve continuing jurisdiction to ensure

future compliance with all statutes, rules, and regulations applicable to the facts and violations set forth above.

(4) Nothing in this Order shall be construed as having relieved, modified, or in any manner affected the municipality's on-going obligation to comply with all other federal, state, or local statutes nor does it relieve the municipality of the obligation to obtain all necessary federal, state, and local permits.

(5) This Order does not grant any exclusive rights or privileges, which would impair any rights possessed by riparian or littoral owners of the State of Vermont. It does not grant any right, title, or easement to or over any land, nor does it authorize any damage to private property or invasion of private rights or the violation of federal, state, or local laws or regulations.

(6) The Secretary, in issuing this Order, accepts no legal responsibility for any damage, direct or indirect of whatever nature and by whoever suffered, arising out of the activities described.

(7) This Order is not a resolution of any enforcement action that may be pending, contemplated, or initiated in this matter.

(8) The municipality shall allow access to Agency representatives, upon the presentation of proper credentials, to inspect the subject site and sample any discharge or receiving waters as necessary to assess compliance with this Order and applicable state laws related to water quality.

(9) Pursuant to 10 V.S.A. Chapter 220, any appeal of this Order must be filed with the clerk of the Environmental Division of the Superior Court within 30 days of the date of this Order. For further information, see the Vermont Rules for Environmental Court Proceedings, available online at www.vermontjudiciary.org. The address of the Environmental Court is Vermont Superior Court, Environmental Division, 32 Cherry Street, 2nd Floor, Suite 303, Burlington, VT 05401 (Tel # (802) 951-1740). The filing of an appeal does not stay this Order. The Notice of Appeal must specify the parties taking the appeal and the statutory provisions under which each party claims party status; must state the act or decision appealed from; must name the Environmental Division; and must be signed by the appellant or their attorney. In addition, the appeal must give the address or location and description of the property, project, or facility which the appeal is concerned and the name of the applicant or any permit involved in the appeal. The appellant must also serve a copy of the Notice of Appeal in accordance with Rule 5(b)(4)(B) of the Vermont Rules for Environmental Court Proceedings.

(10) This Order shall be effective upon the date of signing and shall remain in effect until such time as the activities governed under this Order are completed or until such time as the Agency rescinds this Order or issues a subsequent Order, whichever occurs first.

Emily Boedecker, Commissioner
Department of Environmental Conservation

By: _____

Date: _____

Peter LaFlamme, Director
Watershed Management Division