AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WASTEWATER MANAGEMENT DIVISION
103 SOUTH MAIN STREET
WATERBURY, VERMONT 05671-0405

FACT SHEET
October 2008

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

PROJECT ID NO.: EJ95-0314
PERMIT NO.: 3-1279
NAME AND ADDRESS OF APPLICANT:

City of St. Albans
PO Box 867
St. Albans, VT 05478

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

St. Albans Wastewater Treatment Facility
Rewes Drive
St. Albans, Vermont

RECEIVING WATER AND CLASSIFICATION: Wetlands contiguous with Lake Champlain: 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 of 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 has applied to the Vermont Department of Environmental Conservation for renewal of its permit to discharge into the designated receiving water. The facility is engaged in the treatment of domestic wastewater from the City of St. Albans and the Town of St. Albans. The discharge is from the St. Albans Wastewater Treatment Facility outfall to the Stevens Brook wetlands contiguous with Lake Champlain.

II. Description of Discharge

This permit authorizes the discharge of 4.0 MGD of treated and disinfected municipal wastewater. The wastewater treatment facility receives wastewater from the City of St. Albans and the Town of St. Albans. The treatment system is considered advanced treatment of wastewater. The influent first enters primary clarifiers, then it is pumped to a trickling filter for preliminary biological treatment, the wastewater then passes through rotating biological contactors (RBCs), then into flocculation tanks where alum and polymer are added for phosphorus removal. The wastewater then flows to secondary clarifiers, then through a sand filter for effluent polishing. Disinfection is achieved by chlorination followed by dechlorination prior to discharge to Lake Champlain.

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
Monitoring Requirements:	Pages 5, 6, and 7

IV. Permit Basis and Explanation of Effluent Limitation Derivation

History & Summary

On April 8, 2007 the City of St. Albans submitted an application for renewal of their discharge permit.

The wastewater treatment facility provides wastewater treatment capacity for both existing residential and commercial properties and for new development, in areas that lie within the sewered area of the City of St. Albans and the Town of St. Albans.

Having completed its review of the application, the Department has made a determination to renew the discharge permit for the wastewater treatment facility's discharge and a draft permit was placed on public comment from June 25, 2007 through July 25, 2007.

Based upon comments received from interested persons and further consideration by the Agency, it was decided to revise the original draft permit and place the revised draft permit on public notice for additional public comment. Therefore a revised draft permit was placed on public comment from the August 31, 2007 through September 30, 2007 to solicit additional comments.

Receiving Water

The draft permit and previous permits identified Stevens Brook as the receiving water for this discharge. However, between the close of the public comment period on this draft permit (September 30, 2007), and the issuance of this final permit, concerns were raised by Agency staff regarding the exact location of the outfall pipe for the St. Albans WWTF.

Consequently the Agency investigated the exact location on the outfall. Based on a site visit and a review of the "Record Plan – City of St. Albans Outfall Sewer -Sheet 2 dated April 1984", it was determined that the due to the elevation of the outfall, the receiving water for this discharge is a wetland contiguous with Lake Champlain. Specifically while the pipe outlets in a defined channel, the bottom of the outfall pipe is at 92.4' which is significantly below the lowest recorded lake level, therefore the discharge is constantly under the influence of Lake Champlain.

Effluent Limitations

Flow

This permit includes a flow limitation of 4.0 MGD, annual average, based on the design capacity of the facility. This is unchanged from the previous permit. Flow monitoring is required daily. This facility maintains a continuous discharge.

Biochemical Oxygen Demand (BOD_5), Total Suspended Solids (TSS) and Total Kjeldahl Nitrogen (TKN)

For the Period of June 1 through September 30.
The BOD, TSS, and TKN mass limitations remain at 334 lbs/day, monthly average, and are unchanged from the previous permit. The BOD, TSS and TKN effluent concentration limits are 10 mg/l, monthly average. These limitations are set to maintain the Water Quality Standards in the receiving water and are more restrictive than the BOD and TSS limitation specified for secondary treatment in 40 CFR Part 133.102 and are unchanged from the previous permit. Sampling is required once per week.

For the Period of October 1 through May 31.
The BOD and TSS, mass limitations remain at 1001 lbs/day monthly average and 1501 lbs/day weekly average and are unchanged from the previous permit. 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 and are unchanged from the previous permit.

In addition a 50 mg/l, daily maximum, limitation is included in the draft permit. 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 sampling events which would enable the discharger to comply with the weekly average and monthly average permit limitations.

Sampling is required weekly. This is an increase in sampling frequency since the previous permit only requires BOD and TSS sampling twice per month from October 1 through May 31. This sampling frequency has been increased to be consistent with other facilities discharging 1.0 MGD or greater.

Phosphorus
This discharge permit contains a phosphorus effluent mass effluent limit of 6,089 total pounds, annual limitation. This annual effluent limitation is based on the Lake Champlain Phosphorus TMDL, effective November 4, 2002. Specifically, the TMDL allocated 2.762 metric tons per year or 6,089 pounds per year to the St. Albans WWTF.

The annual total pounds are the total of the twelve monthly totals which are calculated by multiplying the total monthly flow x the monthly average phosphorus concentration x 8.34. The monthly total must be submitted with each monthly monitoring report using form WR-43-PO4. The annual total must be submitted with the December monthly monitoring report.

This permit also contains a phosphorus concentration effluent limitation of 0.5 mg/l, monthly average. This limitation is unchanged from the permit which previously authorized this discharge.

A phosphorus concentration effluent limitation of 0.8 mg/l, monthly average, based upon the requirements of 10 V.S.A. 1266a and an annual average phosphorus concentration limitation of 0.5 mg/l. was proposed in the draft permit. However to reach a pragmatic solution that addresses the positions of several interested parties including the Agency, EPA, and the City of St. Albans,

the 0.5 mg/l, monthly average, phosphorus limitation will be maintained.

This permit requires weekly sampling for total phosphorus. This is an increase in sampling frequency since the previous permit only required phosphorus sampling twice per month from October 1 through May 31. This sampling frequency has been increased to be consistent with other facilities discharging 1.0 MGD or greater.

Ammonia
In order to gather data on the amount of ammonia in this discharge and its potential impact on the receiving water, a "monitor only" requirement for ammonia has been included in this permit. Ammonia monitoring is required once per month.

Escherichia 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 is unchanged from the previous permit. *E. coli* monitoring is required weekly. This is an increase in sampling frequency since the previous permit only requires *E. coli* monitoring once per month from October 1 through May 31. This sampling frequency has been increased to be consistent with other facilities discharging 1.0 MGD or greater.

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 is unchanged from the previous permit. Sampling is required once per day and is unchanged from the previous permit.

Total Residual Chlorine
The Total Residual Chlorine limitation is 0.1 mg/l, instantaneous maximum. This limitation will ensure that the instream water quality criteria of chlorine of 0.019 mg/l (acute) and 0.011 mg/l (chronic) of the Vermont Water Quality Standards is met. This limitation is unchanged from the previous permit. Total residual chlorine sampling is required once per day and is unchanged from the previous permit.

Waste Management Zone
This permit established a waste management zone beginning at the outfall of the St. Albans Wastewater Treatment Facility and extending downstream in the Lake Champlain - Stevens Brook wetland complex to the Route 36 Bridge (approximately 1 mile).

Toxicity Testing and Additional Pollutant Testing
Although the actual receiving water for this discharge is Lake Champlain, the discharge enters a defined channel within the Stevens Brook wetland complex. It is believed that effluent dilution at the point of discharge may be quite low at low lake levels, however typical stream flow dilution calculations are not applicable due to the influence of Lake Champlain water levels. The Agency has decided to retain the WET limitation from the previous permit but remains open to revisiting and reopening the WET limitations should the City conduct an effluent dilution study at low lake levels which supports a less stringent limitation..

It should be noted that Whole Effluent Toxicity (WET) tests conducted on this discharge during the term of the previous permits have indicated that this discharge has not resulted in an instream

toxic impact

.

Annual Monitoring Requirements

Per the requirements of 40 CFR 122.21.j, annual monitoring for temperature, Dissolved Oxygen, Oil & Grease, Nitrate/Nitrite, and Total Dissolved Solids has been included in the permit.

Primary Overflow Monitoring

During larger storm events and periods of high runoff from snow melt, the primary clarifier can overflow and cause a portion of the influent to bypass the tertiary treatment process. The overflow is chlorinated and then combines with the tertiary treated effluent and is discharged via S/N 001. In order to ensure compliance with effluent limitations and to gather data on the quality of this combined discharge, the permit requires sampling of the combined effluent during a minimum of 12 overflow events per year. Samples must be analyzed for the parameters and comply with the limitation specified in the permit, except Whole Effluent Toxicity. Grab samples must be representative of the combined discharge during an overflow event to the extent practicable and the results must be noted on the monthly discharge monitoring report and incorporated into the monitoring results.

Operation, Management, and Emergency Response Plan

Per the requirements of the revisions to 10 V.S.A. Section 1278, promulgated in the 2006 legislative session, Condition I.G. was included in the draft permit. The draft permit contained a condition that required submittal of an Operation, Management and Emergency Response Plan for the components of the wastewater treatment facility, pump/ejector stations, and stream crossings by July 1, 2008 and submittal of an Operation, Management and Emergency Response Plan for the sewage collection system by March 31, 2010.

Between the close of the public comment period on this draft permit (September 30, 2007), and the issuance of this final permit, the City of St. Albans submitted an Operation, Management and Emergency Response Plan for the components of the wastewater treatment facility, pump/ejector stations and stream crossings which the Agency reviewed and approved. Therefore Condition I.G.1 now reads:

"The permittee shall implement the Operation, Management and Emergency Response Plan for the wastewater treatment facility, sewage pump/ejector stations, and stream crossings approved by the Agency on August 13, 2008."

In regards to the Operation, Management and Emergency Response Plan for the sewage collection system, Act 130 was promulgated by the legislature during the 2008 legislative session which modified 10 V.S.A. 1278 to require that Operation, Management and Emergency Response Plan for the sewage collection systems, be submitted by July 1, 2010.

Therefore to be consistent with 10 V.S.A. 1278, Condition I.G.2 has been modified and requires submission of an Operation, Management and Emergency Response Plan for the sewage collection systems, by July 1, 2010.

Engineering Evaluation

Since the St. Albans WWTF was constructed and/or upgraded more than 20 years ago, Condition I.H. has been included in the permit. This condition requires that an in-depth engineering

evaluation/inspection of the facility be conducted and a written report submitted to the Agency by December 31, 2012.

Combined Sewer Overflows (CSOs)

In 2007, the Agency issued 1272 Order No. 3-1279-A1 to St. Albans. This Order required the City to assess their collection system for any remaining overflows that were not eliminated during the CSO elimination project conducted in the late 1980s.

This assessment identified one CSO in the collection system. The overflow is located on lower Welden Street and discharges to Stevens Brook.

Therefore on August 21, 2008, the Agency issued 1272 Order No. 3-1279-A2 to St. Albans. This Order required the City to formally assess the "Welden Street" CSO and develop a plan for its correction by no later than June 30, 2009, and implement best management practices for a combined sewer system.

In addition to this 1272 Order to address the CSO, Condition I.A.I has been added to the permit. This condition mandates that St. Albans comply with the requirements of 1272 Order No. 3-1279-A2 and requires implementation of the following controls to reduce the combined sewer overflow discharge and its effects on the quality of the receiving water:

a. implementation of proper operation and regular maintenance programs for the sewer system and the combined sewer overflow such as routine catch-basin, sewer, and interceptor cleaning;

b. maximizing the use of the collection system for storage;

c. maximizing wet-weather flow to the wastewater treatment facility;

d. elimination of any discharge from combined sewer overflow during dry weather;

e. control of solid and floatable material in the combined sewer overflow;

f. pollution prevention programs such as litter control and street sweeping to reduce the contaminants in the combined sewer overflow discharge;

g. implementation of a public notification process to ensure that the public receives adequate notification of when and where a combined sewer overflow discharge occurs;

h. monitoring to characterize the impacts of the combined sewer overflow discharge and to determine the effectiveness of these controls.

With respect to the review and modification of pretreatment requirements to ensure that CSO impacts are minimized, VT ANR administers the Pretreatment Program in Vermont. There are 3 facilities in the St. Albans collection system with pretreatment permits and one of these facility has a discharge upstream of the CSO outfall. The Agency will evaluate this discharge and its effects on the quality of the CSO upon renewal of its pretreatment discharge permit.

VI. Procedures for Formulation of Final Determinations

The original public comment period for receiving comments on this draft permit was from June 25, 2007 through July 25, 2007 during which time interested persons submitted their written

views on the draft permit.

The Agency then revised this draft permit and placed it on public comment from the August 31, 2007 through September 30, 2007 to solicit additional comments.

During this time interested persons could submit their written views on the revised draft permit. All written comments 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 could be sent to:

Vermont Agency of Natural Resources
Department of Environmental Conservation
Wastewater Management Division - Sewing Building
103 South Main Street
Waterbury, VT 05671-0405

Comments could also be faxed to: 802-241-2596.

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 draft 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.

The complete application, draft permit, and other information are on file and may be inspected at the VTDEC, Wastewater Management Division, Waterbury Office. Copies will be made at a cost based on the previous Secretary of State Official Fee Schedule for Copying Public Records from 8:00 am to 4:00 pm, Monday through Friday.