File

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

FACT SHEET
(November 2002)

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

NPDES NO: VT0100871
FILE NO: 11-19
PERMIT NO: 3-1285
PROJECT ID NO: RU95-0265

NAME AND ADDRESS OF APPLICANT:

City of Rutland
PO Box 969 City Hall
Rutland, VT 05702

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Rutland Wastewater Treatment Facility
Greens Hill Lane
Rutland, Vermont

RECEIVING WATER: Otter Creek

CLASSIFICATION: Class B

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

The above named applicant applied to the Vermont Department of Environmental Conservation on August 30, 2002 for renewal of the permit to discharge into the designated receiving water. The facility is engaged in the treatment of municipal wastewater. The discharge is from the outfall of the City of Rutland Wastewater Treatment facility (WWTF) to Otter Creek.

In addition to the request for renewal of the permit, the applicant is requesting a hydraulic increase from 6.8 mgd to 8.1 mgd. The purpose of the increase is to address the combined sewer overflows (CSO) at three overflow points (#1 Cemetery, #2 Homeplate, and #9 Third Base) by sending more flow through the treatment facility during rain events. There is no increase proposed for any of the other effluent limits.

In June 2002 the Department approved the City's Phase 2A "Basis for Final Design" report dated March 2002 with revisions received on June 14 and 25, 2002. As background, in 1994 the City and the Agency entered into an Assurance of Discontinuance (AOD) for the construction and implementation of a combined sewer overflow (CSO) correction plan. The Department is currently discussing potential changes to the correction plan based on the approved Phase 2A "Basis for Final Design".

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:	Pages 2, 3, 4 and 5 of 22
Monitoring Requirements:	Pages 8, 9 and 10 of 22
Implementation Schedule:	Pages 7 and 8 of 22

IV. Permit Basis and Explanation of Effluent Limitation Derivation

The City of Rutland operates the Rutland Wastewater Treatment Facility which is an extended air activated sludge treatment system. The facility currently receives and treats wastewater from the City of Rutland and some areas of the Towns of Rutland, Mendon, Killington and Clarendon. The City is currently addressing corrections to the combined sewer overflow discharges and this permit will reflect Phase 2A of those changes. The Facility discharges secondary treated, chlorinated/dechlorinated wastewater to Otter Creek.

Over the past several years the City of Rutland has been evaluating and implementing alternatives to bring the combined sewer collection system into compliance with the Agency's 1990 Combined Sewer Overflow Control Policy. In 1992 the City completed Phase 1 of their CSO abatement plan. This permit will reflect additional improvements to the treatment facility (Phase 2A). Specifically these improvements include: increasing the collection system conveyance capacity, increasing the River Street Pump Station pump capacity, and increasing the WWTF wet weather flow capacity (new grit removal equipment, new primary settling tank, a new larger chlorine contact chamber).

Following completion of the improvements the City will collect data in order to determine compliance with the CSO Policy. After a two year study period (Condition I.C. of the permit) a report will be submitted to the Department addressing this issue. If there is not compliance with the CSO Policy, a schedule for design and implementation of Phase 2B will need to be submitted. Phase 2B, if necessary, would likely include improvements (ie. storage) in the

collection system.

Flow - The draft permit contains an annual average flow limitation of 6.8 mgd which is unchanged from the previous permit. Following improvements to the facility to address the CSOs the flow limitation will increase to 8.1 mgd, annual average.

Ultimate Oxygen Demand - The draft permit contains an ultimate oxygen demand (UOD) limitation of 2,250 pounds per day, maximum day, between the period of June 15 and October 1. This limitation is set according to the Otter Creek Wasteload Allocation Order, May 14, 1991. The load and weekly monitoring remain unchanged from the previous permit.

Biochemical Oxygen Demand - The draft permit contains a biochemical oxygen demand (BOD) limitation of 1701 pounds per day (30 mg/l) monthly average, a weekly average of 2252 pounds per day (45 mg/l), and 50 mg/l, maximum day, between October 1 and June 15. The monthly and weekly average limitations are set according to the limitations specified for secondary treatment in 40 CFR Part 133.102 and the maximum day limitation is the State of Vermont standard applied to all such discharges.

During the period of June 15 through October 1, BOD must be restricted to ensure that the UOD limitation is not violated. The effluent limits and monitoring frequency are unchanged from the previous permit.

Total Suspended Solids - The draft permit contains a total suspended solids (TSS) effluent limitation of 1701 pounds per day (30 mg/l) monthly average, 2252 pounds per day (45 mg/l) weekly average, and 50 mg/l maximum day. The monthly and weekly limitations are set according to the limitations specified for secondary treatment in 40 CFR Part 133.102 and the 50 mg/l maximum day limitation is the State of Vermont standard applied to all such discharges. The effluent limits and monitoring are unchanged from the previous permit.

Total Kjeldahl Nitrogen - The draft permit contains a requirement to monitor Total Kjeldahl nitrogen (TKN) and to maintain the TKN concentration to ensure that the UOD limitation is not violated. The monitoring frequency for TKN remains the same as in the previous permit during the period June 15 through September 30. Monitoring is no longer required during the period October 1 through June 14.

Phosphorus - The draft permit contains a monthly average phosphorus limit of 0.8 mg/l and 45.4 lbs. This limitation and monitoring requirement are unchanged from the previous permit.

***E. coli* Bacteria** - The *E. coli* limit of 77/100 ml is unchanged from the previous permit. Monitoring during the June 15 through September 30 period is unchanged at weekly. Monitoring during the October 1 through June 14 period has been changed from twice monthly to weekly.

Chlorine - The effluent limitation for Total Residual Chlorine (TRC) is unchanged at 0.1 mg/l instantaneous maximum with daily monitoring.

pH - The pH limitation of 6.5 - 8.5 standard units is unchanged from the previous permit. Daily monitoring is required.

Settleable Solids - The settleable solids limit remains at 1.0 ml/l and daily monitoring is required.

Influent Monitoring - Influent monitoring for Total Kjeldahl Nitrogen (TKN) and Ammonia (NH_3) has been removed from the draft permit.

Whole Effluent Toxicity and Priority Pollutant Testing - WET testing was included in the previous permit and indicated that the discharge does not cause or contribute to an instream excursion above a narrative water quality criterion, or result in any type of toxic associated impact. Due to the size of the facility, the industrial discharges into it, and the significant instream wastewater concentrations at low flow conditions, one two-species acute test is required for this next permit period. The sampling must take place in August/September 2005 and results submitted by November 30, 2005. The permit also includes a requirement for a priority pollutant scan to be completed in August/September 2005 and submitted by November 30, 2005.

Special Conditions

Special Condition I.A5. states that the CSO improvements shall be considered complete when the Department is notified by means of an engineer's certification that the new facility is operational and the Department issues a written acknowledgment of its operational status.

Special Condition I.A6. requires that at least 30 days prior to commencement of any construction on the proposed CSO improvements project, the City submit detailed operating procedures which will assure proper operation of the wastewater treatment facility and full compliance with all the effluent limitations established by this permit.

Implementation Schedule - Condition I.C. requires that the City conduct a CSO Effectiveness Study for a period of two years following completion of the improvements.

Waste Management Zone - On the basis of the Department's Waste Management Zone Length Determination Model, a waste management zone in Otter Creek extending 2.1 miles downstream from the Rutland wastewater treatment facility outfall is appropriate at the current flow of 6.8 mgd. Following the improvements and for a flow of 8.1 mgd the waste management zone increases in length to 2.5 miles. (See also the attached Waste Management Zone Findings)

Emergency Power Plan - With the application for permit renewal the City submitted an Emergency Power Plan prepared by Dufresne-Henry. The Department has reviewed the plan and finds it acceptable as proposed.

WASTE MANAGEMENT (WMZ) ZONE DESIGNATION FINDINGS

In the matter of: **City of Rutland**
Municipal Wastewater Treatment Facility

Section 2-04 of the Vermont Water Quality Standards (effective July 2, 2000)

FINDING a: The proposed increased Rutland waste management zone shall be the minimum length necessary to accommodate the authorized discharge.

Based on the design of the WWTF, the proposed waste management zone is the minimum length necessary to accommodate the proposed increase in flow from 6.8 to 8.1 mgd at the Rutland WWTF.

FINDING b: Establishing the Rutland WWTF waste management zone increase from 2.1 to 2.5 miles in Otter Creek will be consistent with the antidegradation policy (Section 1-03) of these rules.

The Department has determined that establishing the increased WWTF waste management zone an additional 0.4 miles in Otter Creek will be consistent with the antidegradation policy in the Vermont Water Quality Standards. There is only a proposed increase in flow, no permitted increases in load are proposed.

FINDING c: The proposed increased Rutland waste management zone shall not result in significantly increased health risks when evaluated using reasonable assumptions about exposure pathways

The proposed WWTF is specifically designed such that the associated WMZ will not result in any increased health risks when evaluated using reasonable assumptions about exposure pathways.

FINDING d: The proposed increased Rutland WWTF waste management zone will be located and managed so as to not result in more than a negligible increased risk to public health adjacent to or downstream of the waste management zone.

The proposed improvements to the WWTF and the associated increased WMZ will not result in any increased health risks adjacent to or downsteam of the waste management zone.

FINDING e: The proposed increased Rutland WWTF waste management zone will not constitute a barrier to the passage or movement of fish or prevent the full support of aquatic biota, wildlife, and aquatic habitat uses.

The proposed increased WMZ will not constitute a barrier to the passage or migration or fish or result in an undue adverse effect on aquatic biota or wildlife. Dechlorination follows chlorination in the disinfection process.

Per 10 V.S.A. Section 1252(5), (6), and (7)

FINDING 1: There will be no cumulative impacts due to overlapping waste management zones with the proposed increased Rutland WWTF waste management zone.

There are no other waste management zones in Otter Creek that will overlap with the proposed increased Rutland WWTF waste management zone.

FINDING 2: The proposed increased Rutland WWTF waste management zone is in the public interest as defined in 10 V.S.A. Section 1253(e).

The Department has considered the criteria contained in10 V.S.A. Section 1253(e) and has found that positive findings can be made with respect to these criteria and that the proposed WMZ is in the public interest. Specifically, the improvement to the River Street Pump Station and the treatment facility will significantly decrease the amount of overflows at three CSO points. Also, based on the findings of the existing use study completed in summer 2002, the increase of 0.4 miles will not result in an increased risk to the existing uses of Otter Creek.

FINDING 3: The proposed increased Rutland WWTF waste management zone will not create a public health hazard.

Based on the design of the facility, the Department has determined that the proposed WMZ will not create a public health hazard.

FINDING 4: The proposed increased Rutland WWTF waste management zone will not constitute a barrier to the passage or migration of fish or result in an undue adverse effect on fish, aquatic biota or wildlife.

The proposed increased WMZ will not constitute a barrier to the passage or migration or fish or result in an undue adverse effect on fish, aquatic biota or wildlife. The disinfection system utilizes dechlorination following chlorination.

FINDING 5: The proposed increased Rutland WWTF waste management zone will not interfere with those uses that have actually occurred on or after November 28, 1975 in or on Otter Creek, whether or not the uses are included in the Class B standards.

Improvements to the Rutland WWTF has been specifically designed to ensure that the proposed WMZ increase will not interfere with those uses that have actually occurred on or after November 28, 1975 in or on Otter Creek. The existing use study documented that this reach of river does not support contact recreation.

FINDING 6: Establishing the increased Rutland WWTF waste management zone in Otter Creek will not be inconsistent with the antidegradation policy (Section 1-03) in the water quality standards.

The Department has determined that establishing the increase to the existing waste management zone by 0.4 miles in Otter Creek will not be inconsistent with the antidegradation policy in the Vermont Water Quality Standards.