VERMONT

State of Vermont
Department of Environmental Conservation

Agency of Natural Resources

Wastewater Management Division
103 South Main Street - Sewing Bldg.
Waterbury, Vermont 05671-0405

Telephone: (802) 241-3822
Fax: (802) 241-2596
www.anr.state.vt.us/dec/ww/wwmd.cfm

November 26, 2008

Dan Werner
Town of Middlebury
94 Main Street
Middlebury, VT 05753

Re: Final Discharge Permit #3-1210

Dear Mr Werner:

Enclosed is your copy of the above referenced permit, which has been signed by the Director of the Wastewater Management Division for the Commissioner of the Department of Environmental Conservation. Please read the permit carefully and familiarize yourself with all its terms and conditions. Your attention is particularly directed to those conditions which may require written responses by certain dates.

Please note that Total Nitrogen monitoring is included in the final permit for reasons discussed in the fact sheet. If you have any questions concerning your permit, please contact Carol Carpenter at 241-3828.

Sincerely,

Brian D. Kooiker

Brian D. Kooiker, Chief
Discharge Permits Section

Enclosure

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

Permit No. 3-1210
Project ID No. RU98-0028
NPDES No. VT0100188

Name of Applicant: Town of Middlebury
94 Main Street
Middlebury, VT 05753

Expiration Date: September 30, 2013

DISCHARGE PERMIT

In compliance with the provisions of the Vermont Water Pollution Control Act as amended (hereinafter referred to as the "Act") and the Federal Clean Water Act, as amended (33 U.S.C. §1251 et seq), the Town of Middlebury, Vermont (hereinafter referred to as the "permittee") is authorized by the Secretary, Agency of Natural Resources, Waterbury, Vermont, to discharge from the Middlebury Wastewater Treatment Facility to Otter Creek in accordance with the following general and special conditions.

This permit shall become effective on the date of signing.

Laura Q Pelosi, Commissioner
Department of Environmental Conservation

By: Christine Thompson Date: November 25, 2008
Christine Thompson, Director
Wastewater Management Division

I. SPECIAL CONDITIONS

A. EFFLUENT LIMITS

1. Until September 30, 2013, the permittee is authorized to discharge from S/N 001 - outfall, the Middlebury Wastewater Treatment Facility, to Otter Creek, an effluent whose characteristics shall not exceed the values listed below:

DISCHARGE LIMITATIONS								
Effluent Characteristic	**Annual Limit**	**Monthly Average**	**Weekly Average**	**Maximum Day**	**Monthly Average**	**Weekly Average**	**Maximum Day**	**Instantaneous Maximum**
		.....	(lbs / day)	.....	.....	(Concentration)	.....	
Flow (annual average)	2.2 MGD							
Biochemical Oxygen Demand, 5-day, 20° C		550 lbs	826 lbs		30 mg/l	45 mg/l	50 mg/l	
Total Suspended Solids		550 lbs	826 lbs		30 mg/l	45 mg/l	50 mg/l	
Total Phosphorus (Total Annual Pounds) (a)	4018 lbs				0.8 mg/l			
Total Nitrogen					Monitor only, mg/l			
Settleable Solids								1.0 ml/l
Escherichia coli Bacteria (b)								300/100 ml
pH					Between 6.5 and 8.5 Standard Units			

(a) **Total Annual Pounds of Phosphorus** discharged shall be defined as the sum of all the **Total Monthly Pounds of Phosphorus** discharged for the calendar year.

Total Monthly Pounds of Phosphorus discharged shall be calculated as follows:
(Monthly Average Phosphorus Concentration) x (Total Monthly Flow) x 8.34 (See Total Phosphorus monitoring report form WR43-PO4).

(b) See Special Condition A.2. below.

2. In accordance with Section 2-04 of the Vermont Water Quality Standards, this permit hereby establishes a mixing zone for *E. coli* bacteria not to exceed 200 feet from the point of discharge. Within the mixing zone, Section 3-04 B.3. of the Water Quality Standards is waived in accordance with Section 2-04. up to the *E. coli* discharge limitation of 300 colonies/100 ml.

3. The effluent shall not have concentrations or combinations of contaminants including oil, grease, scum, foam, or floating solids which would cause a violation of the water quality standards of the receiving waters.

4. The discharge shall not cause visible discoloration of the receiving waters.

5. The monthly average concentrations of BOD_5 and total suspended solids in the discharge shall not exceed 15 percent of the monthly average concentrations of BOD_5 and total suspended solids in the influent into the permittee's wastewater treatment facilities. For the purposes of determining whether the permittee is in compliance with this condition, samples from the discharge and the influent shall be taken with appropriate allowance for detention times. See Part I, Special Conditions, Paragraph F.2., Effluent Monitoring.

6. When the effluent discharged for a period of 90 consecutive days exceeds 80 percent of the permitted flow limitation, the permittee shall submit to the permitting authority projected loadings and a program for maintaining satisfactory treatment levels consistent with approved water quality management plans.

7. Any action on the part of the Agency of Natural Resources in reviewing, commenting upon or approving plans and specifications for the construction of wastewater treatment facilities shall not relieve the permittee from the responsibility to achieve effluent limitations set forth in this permit and shall not constitute a waiver of, or act of estoppel against any remedy available to the Agency, the State of Vermont or the federal government for failure to meet any requirement set forth in this permit or imposed by state or federal law.

8. The permittee shall clean the quartz sleeves of the ultraviolet light disinfection system at a frequency that assures that effective disinfection is maintained and shall replace the ultraviolet light disinfection system lamps **as necessary to maintain compliance with the *E. coli* bacteria effluent limitation**. The dates and a description of the UV light disinfection system maintenance activities shall be included on the monthly discharge monitoring report form.

9. The permittee shall maintain processing capacity for use only in receiving and processing septage for the useful life of the facility as required under 10 V.S.A. §1626a (a),(c) and (d). "Such septage shall be accepted from any Vermont municipality, and shall not be restricted to specific municipalities. The rate or rates charged for acceptance by the plant of septage from sources other than the users for whom the plant is designed primarily to serve, shall be equal to the rate or rates charged the primary users, and shall not subsidize the primary users."

B. WHOLE EFFLUENT TOXICITY TESTING

The permittee shall complete the following whole effluent toxicity testing:

1. One *acute/chronic* Whole Effluent Toxicity (WET) test on *Pimephales promelas* and *Ceriodaphnia dubia* conducted on a 24-hour composite effluent sample taken during the month of **August or September 2011**. The results shall be submitted to the Department by October 31, 2011.

2. One *acute* Whole Effluent Toxicity (WET) test on *Pimephales promelas* and *Ceriodaphnia dubia*, conducted on a 24-hour composite effluent sample taken during the month of **January or February 2012**. The results shall be submitted to the Department by March 31, 2012.

Whole Effluent Toxicity tests shall be conducted in accordance with the Methods recommended by EPA: Peltier, W And Weber, CI, Methods for Measuring Acute Toxicity of Effluents to Freshwater and Marine Organisms (the most recent edition) and Lewis, PA, DJ Klemm, JM Lazorchak, TJ Norberg-King, WH Peltier, MA Heber (Editors). "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms" (the most recent edition).

Based upon the results of these tests or any other tests conducted on this discharge, this permit may be amended to include effluent limitations, or to require additional testing, or to require a Toxicity Reduction Evaluation.

C. WASTE MANAGEMENT ZONE

In accordance with 10 V.S.A. Section 1252, this permit hereby establishes a waste management zone that extends from the outfall of the Middlebury Wastewater Treatment Facility in Otter Creek downstream one mile to Belden's Dam.

D. REAPPLICATION

If the permittee desires to continue to discharge after the expiration of this permit, the permittee shall reapply on the application forms then in use at least 180 days before this permit expires.

Reapply for a Discharge Permit by: March 31, 2013.

E. OPERATING FEES

This discharge is subject to operating fees. The permittee shall submit the operating fees in accordance with the procedures provided by the Secretary.

F. MONITORING AND REPORTING

1. Sampling and Analysis

The sampling, preservation, handling, and analytical methods used shall conform to regulations published pursuant to Section 304(g) of the Clean Water Act, under which such procedures may be required. Guidelines establishing these test procedures have been

published in the Code of Federal Regulations, Title 40, Part 136 (Federal Register, Vol. 56, No. 195, July 1, 1999 or as amended).

If applicable, *Escherichia coli* shall be tested using one of the following methods:

a. "Most Probable Number" (MPN) method 9223B found in Standard Methods for the Examination of Water and Wastewater, 18th or subsequent approved edition(s). Premade formulations are available as Colilert and Colilert 18 from IDEXX Labs Inc., Westbrook, ME;
b. EPA "membrane filtration" (MF) method 1603 using modified mTEC; or
c. A single step membrane filtration (MF) method using mColiBlue 24 available from Hach Company, Loveland, CO.

Samples shall be representative of the volume and quality of effluent discharged over the sampling and reporting period. All samples are to be taken during normal operating hours. The permittee shall identify the effluent sampling location used for each discharge.

2. Effluent Monitoring

The permittee shall monitor and record the quality and quantity of discharge(s) S/N 001 - outfall, the Middlebury Wastewater Treatment Facility, according to the following schedule and other provisions until September 30, 2013.

PARAMETER	MINIMUM FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	Continuous	Daily Total
BOD_5	1 x weekly	24-hour composite
TSS	1 x weekly	24-hour composite
Total Phosphorus	1 x weekly	24-hour composite
Total Nitrogen (1)	1 x monthly	24-hour composite
Settleable Solids	1 x daily	grab (2)
Escherichia coli Bacteria	1 x weekly	grab (2)
pH	1 x daily	grab (2)

(1) Notwithstanding Part I.F.1., Total Nitrogen shall be determined by the persulfate digestion method (Standard Methods for the Examination of Water and Wastewater, 21st edition, method 4500-N C) with a minimum detection limit of 0.5 mg/l.

(2) Grab samples shall be collected in an alternating manner to be representative of each SBR cell discharge. (For example, on Monday the sample shall be collected as cell #1 discharges, on Tuesday the sample shall be collected as cell #2 discharges, etc.).

3. **Annually, by December 31**, the permittee shall monitor S/N 001 and submit the results, including units of measurement, as an attachment to the Discharge Monitoring Report form (WR-43) for the month in which the samples were taken for the following parameters:

Temperature
Ammonia (as N)
Dissolved Oxygen
Nitrate/Nitrite
Total Kjeldahl Nitrogen
Oil & Grease
Total Dissolved Solids

Grab samples shall be used for temperature, ammonia, dissolved oxygen, and oil & grease. All other parameters shall be composite samples. Samples shall be representative of the seasonal variation in the discharge.

4. Influent Monitoring

The permittee shall monitor the quality of the influent according to the following schedule and other provisions.

PARAMETER	MINIMUM FREQUENCY OF ANALYSIS	SAMPLE TYPE
Influent Flow	Daily	Total, Min/Max
Influent BOD_5	1 x monthly	24-hour composite
Influent TSS	1 x monthly	24-hour composite
Septage	Daily	Total volume received

5. Reporting

The permittee is required to submit monthly reports of monitoring results on forms WR-43 and WR-43-PO4. Reports are due on the 15th day of each month, beginning with the month following the effective date of this permit.

If, in any reporting period, there has been no discharge, the permittee must submit that information by the report due date.

Signed copies of these, and all other reports required herein, shall be submitted to the Secretary at the following address:

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

All reports shall be signed:

a. In the case of corporations, by a principal executive officer of at least the level of vice president, or his/her duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge described in the permit form originates;

b. In the case of a partnership, by a general partner;

c. In the case of a sole proprietorship, by the proprietor;

d. In the case of a municipal, State, or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

In addition to the monitoring and reporting requirements given above, daily monitoring of certain parameters for operational control are required by the Agency. Operations reports (reporting form WR-43) shall be submitted monthly.

6. Recording of Results

The permittee shall maintain records of all information resulting from any monitoring activities required, including:

a. The exact place, date, and time of sampling;
b. The dates and times the analyses were performed;
c. The person(s) who performed the analyses;
d. The analytical techniques and methods used including sample collection handling and preservation techniques;
e. The results of all required analyses;
f. The records of monitoring activities and results, including all instrumentation and calibration and maintenance records;
g. The original calculation and data bench sheets of the operator who performed analysis of the influent or effluent pursuant to requirements of Section I.(A) of this permit.

The results of monitoring requirements shall be reported (in the units specified) on the Vermont reporting form WR-43 or other forms approved by the Secretary.

7. Additional Monitoring

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report Form WR-43. Such increased frequency shall also be indicated.

G. COMBINED SEWER OVERFLOWS

The discharges from the combined sewer overflows, listed on Attachment A of this permit, are authorized by this permit during storm events only, provided the discharges do not violate Water Quality Standards and contain no septage or holding tank waste. In addition,

1. The permittee shall implement Best Management Practices (BMPs) for the combined collection system. BMPs include:

   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 the 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; and

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

2. The permittee shall monitor the CSO outfalls through *May 31, 2011* in order to determine compliance with the Agency's 1990 CSO Control Policy. This shall be accomplished by, at a minimum, installing a tell-tale block in the overflow line, checking the block after each significant precipitation event, and documenting the results to include total precipitation (and intensity, if possible). The results shall be submitted each month as an attachment to the Discharge Monitoring Report Form WR-43.

A report containing the results of the monitoring and a statement whether or not each overflow structure complies with the CSO Control Policy shall be submitted by **September 30, 2011**.

H. DRY WEATHER FLOWS

Dry weather flows of untreated municipal wastewater from any sanitary or combined sewers are not authorized by this permit and are specifically prohibited by State and Federal laws and regulations.

I. OPERATION, MANAGEMENT, AND EMERGENCY RESPONSE PLAN

1. The permittee shall implement the Operation, Management and Emergency Response Plan for the wastewater treatment facility, sewage pump/ejector stations, and stream crossings as approved by the Agency.

2. By **July 1, 2010**, The permittee shall prepare and submit to the Agency for review and approval an Operation, Management and Emergency Response Plan for the sewage collection system.

3. The Plan shall include the following:

   a. the identification of the components that are determined to be prone to failure based on installation, age, design or other relevant factors and which, if one or more failed, would result in a significant release of untreated or partially treated sewage to waters of the State.

   b. an inspection schedule for the components identified in subsection I.2.a. above.

   c. an emergency contingency plan to reduce the volume of a detected sewage release and to mitigate the effect of such a release on public health and the environment.

Upon the Secretary's approval of the inspection schedule as specified in I.3.b. above, the permittee shall implement the Operation, Management, and Emergency Response Plan.

J. EMERGENCY ACTION - ELECTRIC POWER FAILURE

The permittee shall indicate in writing to the Secretary **within 30 days after the effective date of this permit** that the discharge shall be handled in such a manner that, in the event the primary source of electric power to the waste treatment facilities (including pump stations) fails, any discharge into the receiving waters will attempt to comply with the conditions of this permit, but in no case shall the wastes receive less than primary treatment (or in the case of ultraviolet light disinfection systems, not less than secondary treatment) plus disinfection.

The permittee shall either provide an alternative source of power for the operation of its treatment facilities, or demonstrate that the treatment facility has the capacity to store the wastewater volume that would be generated over the duration of the longest power failure that would have affected the facility in the last five years, excluding catastrophic events.

The alternative power supply, whether from a generating unit located at the plant site or purchased from an independent source of electricity, must be separate from the existing power source used to operate the waste treatment facilities. If a separate unit located at the plant site is to be used, the permittee shall certify in writing to the Secretary when the unit is completed and prepared to generate power.

The determination of treatment system storage capacity shall be submitted to the Wastewater Management Division upon completion.

K. SEWER ORDINANCE

The permittee shall have in effect a sewer use ordinance acceptable to the Secretary which, at a minimum, shall

1. Prohibit the introduction by any discharger into the permittee's sewerage system or treatment facilities of any pollutant which:

   a. is a toxic pollutant in toxic amounts as defined in standards issued from time to time under Section 307(a) of the Clean Water Act;

   b. creates a fire or explosion hazard in the permittee's treatment works;

   c. causes corrosive structural damage to the permittee's treatment works, including all wastes with a pH lower than 5.0;

   d. contains solid or viscous substances in amounts which would cause obstruction to the flow in sewers or other interference with proper operation of the permittee's treatment works; or

   e. in the case of a major contributing industry, as defined herein, contains an incompatible pollutant, as further defined herein, in an amount or concentration in excess of that allowed under standards or guidelines issued from time to time pursuant to Sections 304, 306, and/or 307 of the Clean Water Act.

2. Require 45 days prior notification to the permittee by any person or persons of a:

   a. proposed substantial change in volume or character of pollutants over that being discharged into the permittee's treatment works at the time of issuance of this permit;

   b. proposed new discharge into the permittee's treatment works of pollutants from any source which would be a new source as defined in Section 306 of the Clean Water Act if such source were discharging pollutants; or

   c. proposed new discharge into the permittee's treatment works of pollutants from any source which would be subject to Section 301 of the Clean Water Act if it were discharging such pollutants.

3. Require any industry discharging into the permittee's treatment works to perform such monitoring of its discharge as the permittee may reasonably require, including the installation, use, and maintenance of monitoring equipment methods, to keep records of the results of such monitoring, and to report the results of such monitoring to the permittee. Such records shall be made available by the permittee to the Secretary upon request.

4. Authorize the permittee's authorized representatives to enter into, upon, or through the premises of any industry discharging into the permittee's treatment works to have access to and copy any records, to inspect any monitoring equipment or method required under subsection 3 above, and to sample any discharge into the permittee's treatment works.

The permittee shall notify the Secretary of any discharge specified in subsection 2 above within 30 days of the date on which the permittee is notified of such discharge. This permit may be modified accordingly.

II. GENERAL CONDITIONS

A. MANAGEMENT REQUIREMENTS

1. Facility Modification / Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit. Such a violation may result in the imposition of civil and/or criminal penalties as provided for in Section 1274 and 1275 of the Vermont Water Pollution Control Act. Any anticipated facility expansions or process modifications which will result in new, different, or increased discharges of pollutants must be reported by submission of a new permit application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the permit issuing authority of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.

In addition, the permittee shall provide notice to the Secretary of the following:

a. any new introduction of pollutants into the treatment works from a source which would be a new source as defined in Section 306 of the Clean Water Act if such source were discharging pollutants;

b. except for such categories and classes of point sources or discharges specified by the Secretary, any new introduction of pollutants into the treatment works from a source which would be subject to Section 301 of the Clean Water Act if such source were discharging pollutants; and

c. any substantial change in volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into such works at the time of issuance of the permit.

The notice shall include:

i. the quality and quantity of the discharge to be introduced into the system, and

ii. the anticipated impact of such change in the quality or quantity of the effluent to be discharged from the permitted facility.

2. Noncompliance Notification

In the event the permittee is unable to comply with any of the conditions of this permit due, among other reasons, to:

a. breakdown or maintenance of waste treatment equipment (biological and physical-chemical systems including, but not limited to, all pipes, transfer pumps, compressors, collection ponds or tanks for the segregation of treated or untreated wastes, ion exchange columns, or carbon absorption units),

b. accidents caused by human error or negligence, or

c. other causes such as acts of nature,

the permittee shall notify the Secretary within 24 hours of becoming aware of such condition or by the next business day and shall provide the Secretary with the following information, in writing, within five (5) days:

i. cause of non-compliance

ii. a description of the non-complying discharge including its impact upon the receiving water;

iii. anticipated time the condition of non-compliance is expected to continue or, if such condition has been corrected, the duration of the period of non-compliance;

iv. steps taken by the permittee to reduce and eliminate the non-complying discharge; and

v. steps to be taken by the permittee to prevent recurrence of the condition of non-compliance.

3. Operation and Maintenance

All waste collection, control, treatment, and disposal facilities shall be operated in a manner consistent with the following:

a. The permittee shall, at all times, maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

b. The permittee shall provide an adequate operating staff which is duly qualified to carry out the operation, maintenance, and testing functions required to insure compliance with the conditions of this permit; and

c. The operation and maintenance of this facility shall be performed only by qualified personnel. The personnel shall be certified as required under the Vermont Water Pollution Abatement Facility Operator Certification Regulations.

4. Quality Control

The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at regular intervals to ensure accuracy of measurements, or shall ensure that both activities will be conducted.
The permittee shall keep records of these activities and shall provide such records upon request of the Secretary.

The permittee shall demonstrate the accuracy of the effluent flow measurement device weekly and report the results on the monthly report forms. The acceptable limit of error is ± 10%.

The permittee shall analyze any additional samples as may be required by the Agency of Natural Resources to ensure analytical quality control.

5. Bypass

The diversion or bypass of facilities (including pump stations) necessary to maintain compliance with the terms and conditions of this permit is prohibited, except where authorized under the terms and conditions of an Emergency Pollution Permit issued pursuant to 10 V.S.A. Section 1268.

6. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any adverse impact to waters of the State resulting from non-compliance with any condition specified in this permit, including accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge.

7. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed, calibration and maintenance of instrumentation, and recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, and shall be submitted to Department representatives upon request. This period shall be extended during the course of unresolved litigation regarding the discharge of pollutants or when requested by the Secretary.

8. Solids Management

Collected screenings, sludges, and other solids removed in the course of treatment and control of wastewaters shall be stored, treated and disposed of in accord with 10 V.S.A., Chapter 159 and with the terms and conditions of any certification, interim or final, transitional operation authorization or order issued pursuant to 10 V.S.A., Chapter 159 that is in effect on the effective date of this permit or is issued during the term of this permit.

9. Emergency Pollution Permits

Maintenance activities, or emergencies resulting from equipment failure or malfunction, including power outages, which result in an effluent which exceeds the effluent limitations specified herein, shall be considered a violation of the conditions of this permit, unless the permittee immediately applies for, and obtains, an emergency pollution permit under the provisions of 10 V.S.A., Chapter 47, Section 1268. The permittee shall notify the Department of the emergency situation by the next working day.

10 V.S.A., Chapter 47, Section 1268 reads as follows:

"When a discharge permit holder finds that pollution abatement facilities require repairs, replacement or other corrective action in order for them to continue to meet standards specified in the permit, he may apply in the manner specified by the secretary for an emergency pollution permit for a term sufficient to effect repairs, replacements or other corrective action. The permit may be issued without prior public notice if the nature of the emergency will not provide sufficient time to give notice; provided that the secretary shall give public notice as soon as possible but in any event no later than five days after the effective date of the emergency pollution permit. No emergency pollution permit shall be issued unless the applicant certifies and the secretary finds that:

(1) there is no present, reasonable alternative means of disposing of the waste other than by discharging it into the waters of the state during the limited period of time of the emergency;

(2) the denial of an emergency pollution permit would work an extreme hardship upon the applicant;

(3) the granting of an emergency pollution permit will result in some public benefit;

(4) the discharge will not be unreasonably harmful to the quality of the receiving waters;

(5) the cause or reason for the emergency is not due to wilful or intended acts or omissions of the applicant."

Application shall be made to the Secretary of the Agency of Natural Resources, Department of Environmental Conservation, 103 South Main Street, Waterbury, Vermont 05671-0405.

B. RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the Secretary or authorized representative, upon the presentation of proper credentials:

a. to enter upon the permittee's premises in which an effluent source or any records required to be kept under terms and conditions of the permit are located;

b. to have access to and copy any records required to be kept under the terms and conditions of the permit;

c. to inspect any monitoring equipment or method required in the permit; or

d. to sample any discharge of pollutants.

2. Transfer of Ownership or Control

This permit is not transferable without prior written approval of the Secretary. All application and operating fees must be paid in full prior to transfer of this permit. In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the permittee shall provide a copy of this permit to the succeeding owner or controller and shall send written notification of the change in ownership or control to the Secretary. The permittee shall also inform the prospective owner or operator of their responsibility to make an application for transfer of this permit.

This request for transfer application must include at a minimum:

a. a properly completed application form as provided by the Secretary and the applicable processing fee.

b. A written statement from the prospective owner or operator certifying:

i. The conditions of the operation that contribute to, or affect, the discharge will not be materially different under the new ownership.

ii. The prospective owner or operator has read and is familiar with the terms of the permit and agrees to comply with all terms and conditions of the permit.

iii. The prospective owner or operator has adequate funding to operate and maintain the treatment system and remain in compliance with the terms and conditions of the permit.

c. The date of the sale or transfer.

The Secretary may require additional information dependent upon the current status of the facility operation, maintenance, and permit compliance.

3. Confidentiality

Pursuant to 10 V.S.A. 1259(b):

"Any records, reports or information obtained under this permit program shall be available to the public for inspection and copying. However, upon a showing satisfactory to the secretary that any records, reports or information or part thereof, other than effluent data, would, if made public, divulge methods or processes entitled to protection as trade secrets, the secretary shall treat and protect those records, reports or information as confidential. Any records, reports or information accorded confidential treatment will be disclosed to

authorized representatives of the state and the United States when relevant to any proceedings under this chapter."

4. Permit Modification

After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

a. violation of any terms or conditions of this permit;

b. obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

c. a change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

5. Toxic Effluent Standards

If a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under section 307(a) of the Federal Act for a toxic pollutant which is present in the permittee's discharge and such standard or prohibition is more stringent than any limitation upon such pollutant in this permit, then this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee so notified.

6. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under 10 V.S.A. §1281.

7. Other Materials

Other materials ordinarily produced or used in the operation of this facility, which have been specifically identified in the application, may be discharged at the maximum frequency and maximum level identified in the application, provided:

a. They are not:

i. designated as toxic or hazardous under provisions of Sections 307 and 311, respectively, of the Clean Water Act, or

ii. known to be hazardous or toxic by the permittee, except that such materials indicated in (a) and (b) above may be discharged in certain limited amounts with the written approval of, and under special conditions established by, the Secretary or his designated representative, if the substances will not pose any imminent hazard to the public health or safety;

b. The discharge of such materials will not violate applicable water quality standards; and

c. The permittee is not notified by the Secretary to eliminate or reduce the quantity of such materials entering the watercourse.

8. Navigable Waters

This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

9. Civil and Criminal Liability

Except as provided in, "Bypass" (Part II.A., paragraph 5.), "Emergency Action - Electric Power Failures" (Part I, paragraph J.), and "Emergency Pollution Permits" (Part II.A., paragraph 9.), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Civil penalties, as authorized under 10 V.S.A. §1274 and 10 V.S.A. §8010, shall not exceed $10,000 a day for each day of violation. Criminal penalties, as authorized under 10 V.S.A. §1275, shall not exceed $25,000 for each day of violation, imprisonment for up to six months, or both.

10. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Clean Water Act.

11. Property Rights

Issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

12. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

13. Authority

This permit is issued under authority of 10 V.S.A. §1259 which states that: "No person shall discharge any waste, substance, or material into waters of the State, nor shall any person discharge any waste, substance, or material into an injection well or discharge into a publicly owned treatment works any waste which interferes with, passes through without treatment, or is otherwise incompatible with those works or would have a substantial

adverse effect on those works or on water quality, without first obtaining a permit for that discharge from the Secretary", and under the authority of Section 402 of the Clean Water Act, as amended.

14. Definitions

For purposes of this permit, the following definitions shall apply.

The Act - The Vermont Water Pollution Control Act, 10 V.S.A. Chapter 47

Annual Average - The highest allowable average of daily discharges calculated as the sum of all daily discharges (mg/l, lbs or gallons) measured during a calendar year divided by the number of daily discharges measured during that year.

Average - The arithmetic means of values taken at the frequency required for each parameter over the specified period.

The Clean Water Act - The federal Clean Water Act, as amended.

Composite Sample - A sample consisting of a minimum of one grab sample per hour collected during a 24-hour period (or lesser period as specified in the section on Monitoring and Reporting) and combined proportionally to flow over that same time period.

Daily Discharge - The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling.

For pollutants with limitations expressed in pounds the daily discharge is calculated as the total pounds of pollutants discharged over the day.

For pollutants with limitations expressed in mg/l the daily discharge is calculated as the average measurement of the pollutant over the day.

Grab Sample - An individual sample collected in a period of less than 15 minutes.

Incompatible Substance (Pollutant) - Any waste being discharged into the treatment works which interferes with, passes through without treatment, or is otherwise incompatible with said works or would have a substantial adverse effect on these works or on water quality. This includes all pollutants required to be regulated under the Federal Clean Water Act.

Instantaneous Maximum - A value not to be exceeded in any grab sample.

Major Contributing Industry - One that: (1) has a flow of 50,000 gallons or more per average work day; (2) has a flow greater than five percent of the flow carried by the municipal system receiving the waste; (3) has in its wastes a toxic pollutant in toxic amounts as defined in standards issued under Section 307(a) of the Clean Water Act; or (4) has a significant impact, either singly or in combination with other contributing industries, on a publicly owned treatment works or on the quality of effluent from that treatment works.

Maximum Day (maximum daily discharge limitation) - The highest allowable "daily discharge" (mg/l, lbs or gallons).
Mean - The mean value is the arithmetic mean.

Monthly Average - (Average monthly discharge limitation) - The highest allowable average of daily discharges (mg/l, lbs or gallons) over a calendar month, calculated as the sum of all daily discharges (mg/l, lbs or gallons) measured during a calendar month divided by the number of daily discharges measured during that month.

NPDES - The National Pollutant Discharge Elimination System.

Secretary - The Secretary of the Agency of Natural Resources

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

Weekly Average - (Average weekly discharge limitation) - The highest allowable average of daily discharges (mg/l, lbs or gallons) over a calendar week, calculated as the sum of all daily discharges (mg/l, lbs or gallons) measured during a calendar week divided by the number of daily discharges measured during that week.

ATTACHMENT A

S/N 002:	CSO #001
Location:	Pump Station 9, Weybridge Street
Receiving Water:	Otter Creek
S/N 003:	CSO # 002
Location:	Pump Station 3, Route 23, between Murdock Court and Shannon Road
Receiving Water:	Otter Creek
S/N 011:	CSO #010
Location:	Pump Station 2, Battell Block
Receiving Water:	Otter Creek
S/N 013:	CSO #012
Location:	Pump Station 17 (Main Pump Station), Lucius Shaw Lane
Receiving Water:	Otter Creek

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

FACT SHEET
(revised November 2008)

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

NPDES NO: VT0100188
FILE NO: 01-11
PERMIT NO: 3-1210
PROJECT ID NO: RU98-0028

NAME AND ADDRESS OF APPLICANT:

Town of Middlebury
94 Main Street
Middlebury, VT 05752

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Middlebury Wastewater Treatment Facility
243 Industrial Avenue
Middlebury, Vermont

RECEIVING WATER: Otter Creek

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 September 17, 2007 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 wastewater. The discharge is from the outfall of the Town of Middlebury Wastewater Treatment Facility to Otter Creek.

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:	Page 2 of 20
Monitoring Requirements:	Pages 4 through 6 of 20

IV. Permit Basis and Explanation of Effluent Limitation Derivation

The Town of Middlebury owns and operates the Middlebury Wastewater Treatment Facility, a sequencing batch reactor (SBR) activated sludge process with chemical addition for phosphorus removal and ultraviolet light disinfection. The facility receives domestic sewage from the Town, as well as industrial wastewater from the Agri-Mark dairy processing facility and other industrial sources.

The 7Q10 flow of Otter Creek used for calculation purposes for this permit is 156 CFS. The design flow of the facility is 2.2 MGD (1.42 CFS). The instream waste concentration (IWC) is 0.02% and the dilution factor is 111. For purposes of certain metals calculations, a hardness of 77 mg/l for Otter Creek was used (from 1999-05 data).

The complete application, draft permit, and other information, including calculations, are on file and may be inspected at the VTDEC, Wastewater Management Division, Waterbury Office.

Flow - The effluent flow limitation remains at 2.2 MGD, annual average, representing the facility's design flow. The facility maintains a constant discharge.

Biochemical Oxygen Demand (BOD_5) - The effluent limitations for biochemical oxygen demand remain unchanged from the previous 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 permit contains a 50 mg/l, maximum day, BOD limitation. This is the Department 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 (550 lbs/day, monthly average and 826 lbs/day, weekly average) are derived by multiplying the concentration limits by the permitted flow. The BOD weekly monitoring requirement is unchanged from the previous permit.

Total Suspended Solids (TSS) - The effluent limitations for total suspended solids remain unchanged from the previous 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 permit contains a 50 mg/l, maximum day, TSS limitation. This is the Department 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 (550 lbs/day, monthly average and 826 lbs/day, weekly average) are derived by multiplying the concentration limits by the permitted flow. The TSS weekly monitoring requirement is unchanged from the previous 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, effective February 9, 2006. Monitoring remains at daily.

Settleable Solids - The limitation of 1.0 ml/l instantaneous maximum and daily monitoring remain unchanged from the previous permit. This numeric limit was established in support of the narrative standard in Section 3-01 B.5. of the Vermont Water Quality Standards, effective February 9, 2006.

Total Phosphorus - The concentration limitation of 0.8 mg/l, monthly average, remains unchanged from the previous permit. The concentration limit is based on requirements in Title 10, Chapter 47 §1266a. The Total Phosphorus weekly monitoring requirement is unchanged from the previous permit.

In addition, the requirements of the 2002 "Lake Champlain Phosphorus Total Maximum Daily Load" (TMDL) are being incorporated into this permit. The TMDL became effective on November 4, 2002 and allocated 1.823 metric tons or 4018 pounds per year to the Middlebury Wastewater Treatment Facility (2.2 MGD, design flow). Consequently this limitation has been included in the permit. The limitation replaces the 14.7 lbs/day, monthly average phosphorus limitation contained in the previous permit.

The annual total pounds is the sum of the twelve monthly totals, which are calculated by multiplying the total monthly flow x the monthly average phosphorus concentration x 8.34.

Total Nitrogen – Vermont DEC is currently in the process of proposing scientifically based nitrogen criteria for lakes and wadeable streams for review by the Vermont Water Resources Panel and the USEPA. In support of this effort the Department is including requirements in WWTF discharge permits to monitor discharges for total nitrogen. Once adopted the total nitrogen criteria 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. Monitoring is required monthly.

***E. coli* Bacteria** – A mixing zone of 200 feet downstream from the discharge point has been established for *E. coli* bacteria (see Special Condition I.A.2. of permit). A limit of up to 300 colonies/100 ml is allowed at the point of discharge. This limitation ensures

that the water quality standard of 77 colonies/100 ml is met at the end of the 200 foot mixing zone. Section 2-04 of the Vermont Water Quality Standards allows creation of a mixing zone provided that it does not exceed 200 feet from the point of discharge and that it meets effluent limitations at the end of the mixing zone.

The mixing zone must: 1) not create a public health hazard; 2) not constitute a barrier to the passage of fish or prevent the full support of aquatic biota; 3) not kill organisms passing through; 4) protect and maintain existing uses; 5) be free from materials that settle to form objectionable deposits; 6) be free from floating debris, oil, scum and other materials that form nuisances; 7) be free from substances that produce objectionable color, odor, taste or turbidity; and 8) be free from substances that produce undesirable aquatic life or result in a dominance of nuisance species.

A mixing zone was established in a previous permit when the facility implemented UV light disinfection. It was determined that a mixing zone was necessary in order to allow UV disinfection to be utilized at this treatment facility. A review of recent self-monitoring data indicated that the mixing zone is still necessary for this facility to meet water quality standards.

The Department has also determined that the mixing zone criteria have been and will continue to be met. Therefore, the existing limit of 300 colonies/100 ml and weekly monitoring remain unchanged from the previous permit.

On March 26, 2007 EPA published new guidelines establishing new bacterial testing procedures for wastewater and sewage sludge as part of 40 CFR Part 136 (see Federal Register Vol. 72, No. 57, Monday, March 26, 2007, p.14220). The new guidelines establish the *E. coli* analytical methods cited in Part I.F. of the permit as the only approved methods for enumerating *E. coli* in wastewater and sewage sludge. The guidelines are effective April 25, 2007.

Notably the membrane filter method using the two step incubation technique (i.e. Method 9213D, Standard Methods) which was previously approved by prior NPDES discharge permits is no longer cited by EPA as an approved method. Therefore permittees who are currently using Method 9213D for *E. coli* analysis must switch over to one of the three approved methods listed in Part I.F. of the permit.

Whole Effluent Toxicity (WET) Testing - 40 CFR Part 122.44(d)(1) requires 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. Whole Effluent Toxicity testing is being required in accordance with the 1994 Vermont Toxic Discharge Control Strategy. 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 August 2005 and January 2007. Also, toxicity scans, including metals, were completed in September 2005, January 2007, and April 2007. Those results indicated that this discharge did not have an instream toxic impact. Confirmation that those findings are still valid is required by the Vermont Toxic Discharge Control Strategy at permit renewal. The proposed permit includes (Part I.B.) two two-species acute WET tests (4 tests total in 2011 and 2012) during the term of the permit to ensure compliance with Part 122.21, 122.44(d)(1), and the Toxic Discharge Control Strategy.

If the results of this test 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 as an attachment to that month's DMR 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 in Wright Park for approximately one mile to Belden's Dam in Otter Creek.

Septage Capacity – (Special Condition I.A.9.) Middlebury's facility must conform to the provisions of 10 V.S.A. §1626a, awards for wastewater treatment plants with a capacity of 250,000 gallons or more per day. The facility's capacity must be sufficient to receive, treat and dispose of septage in a quantity equivalent to the ratio of 4,000 gpd of septage for each 1 MGD of facility hydraulic capacity. Thus the facility must reserve 8,800 gpd and its equivalent BOD organic capacity for septage receiving.

Electric Power Failure - Within 30 days of the effective date of the permit, the permittee must submit to the Department, 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 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 and 2008 legislative sessions, Condition 1.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, and stream crossings.

The condition also requires that the second element (the collection system) of the Plan be developed, implemented, and submitted to the Agency for review and approval by *July 1, 2010.*

Combined Sewer Overflows – The Town completed a CSO effectiveness study in 1998 which indicated that the known CSOs complied with the Agency's 1990 CSO Control Policy. Because a decade has passed it is appropriate to determine whether the remaining CSOs monitored in the 1998 study (as well as the Main Pump Station overflow) still

comply with the Policy. As a result, the proposed permit includes a requirement to monitor the remaining CSOs within the collection system until May 31, 2011 and provide a report to the Department by September 30, 2011. The report must address whether or not the CSOs comply with the Policy and include the supporting data (i.e. all CSO monitoring results tabulated). A list of the CSOs is included in Attachment A of the permit.

V. Procedures for Formulation of Final Determinations

The public comment period for receiving comments on this draft permit is from February 4 through March 5, 2008 during which time interested persons may submit their written views on the draft permit. All written comments received by 4:30 PM on March 5, 2008 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
Wastewater Management Division - Sewing Building
103 South Main Street
Waterbury, VT 05671-0405

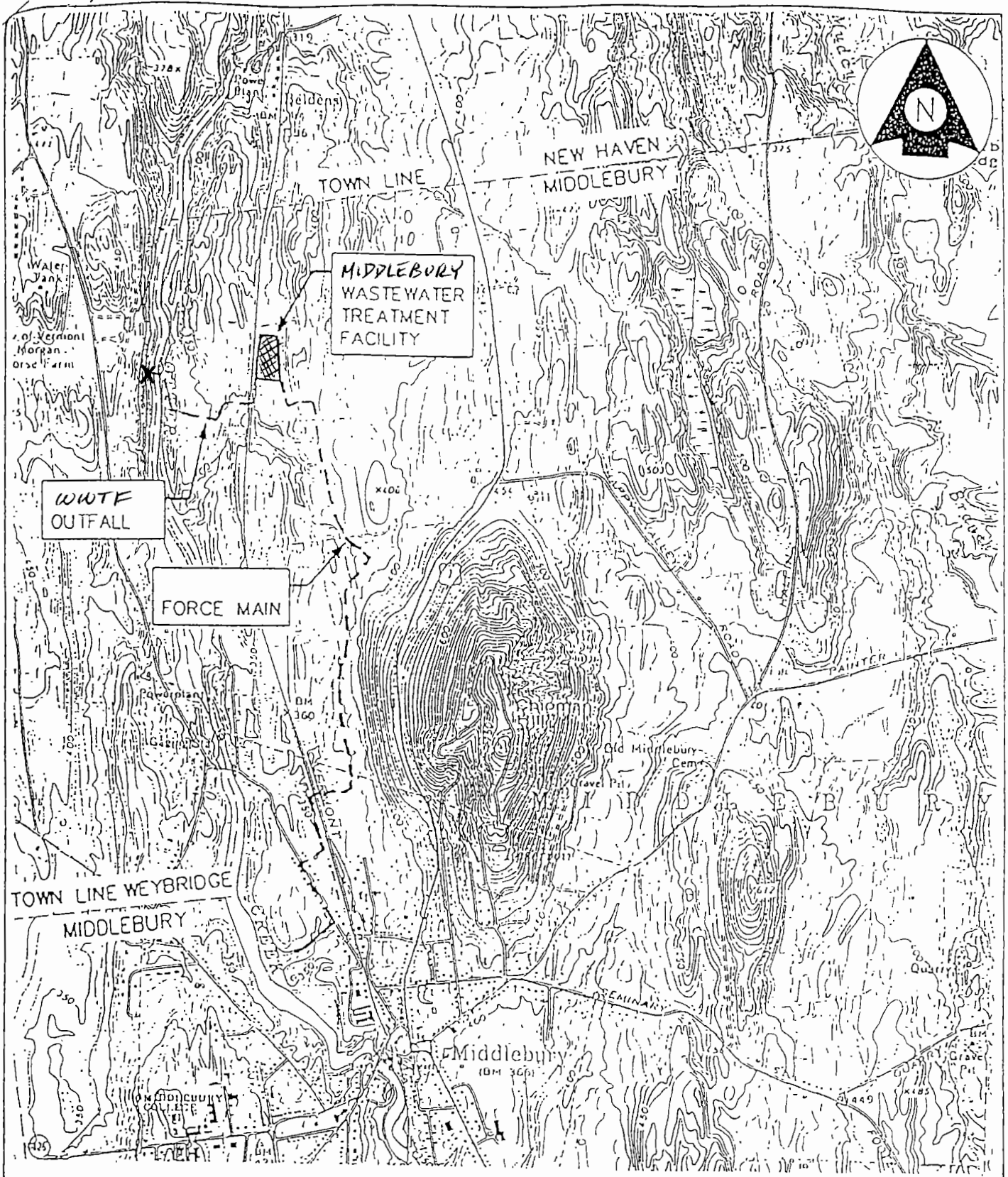
Comments may also be faxed to: 802-241-2596.

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 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.

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 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 www.anr.state.vt.us/dec/ww/wwmd.cfm .

Comments were received from Conservation Law Foundation during the public comment period. Those comments are addressed in the Response Summary.



PROJECT VICINITY MAP

SCALE 1:24000

0 1/2 1 MILE

1000 0 1000 2000 3000 FEET

PROPOSED WASTEWATER FACILITIES

TOWN OF MIDDLEBURY
ADDISON COUNTY
STATE OF VERMONT

APPLICANT: TOWN OF MIDDLEBURY

RESPONSE SUMMARY FOR DRAFT DISCHARGE PERMIT No. 3-1210 Proposed NPDES Municipal Discharge Permit for the Town of Middlebury

The above referenced draft amended permit was placed on public notice for comment from the period of February 4 through March 5, 2008. The draft permit proposed to renew the existing permit for the wastewater treatment facility.

Comments were received during the public notice period from Conservation Law Foundation (CLF). The following is a summary of the comments received on this draft discharge permit, and the Agency's responses to those comments.

1. **Comment:** It doesn't appear that there is a mechanism for operators to keep a running accounting of the phosphorus discharged from the wastewater treatment facility (WWTF) could cause difficulty late in the year if the TMDL allocation is approached before the year is over.

   Response: The discharge permit currently provides for such tracking. A phosphorus monitoring report form (WR43-PO4) that facilities must submit, on a monthly basis, to the Agency tracks the amount of pounds of phosphorus discharged over the course of a calendar year. The December report form includes the total annual pounds of phosphorus discharged.

2. **Comment:** How is the 'monthly average P concentration' established and explain why there is no influent P testing to evaluate the WWTF performance. It seems this would be important for planning purposes and for evaluating the P lost in spills and overflows.

   Response: The Agency interprets the comment to mean that the commenter is requesting how the monthly average is *calculated* versus established as the legal basis under 10 V.S.A. §1266a. The permit (page 19) defines monthly average as: "The highest allowable average of daily discharges (mg/l, lbs or gallons) over a calendar month, calculated as the sum of all daily discharges (mg/l, lbs or gallons) measured during a calendar month divided by the number of daily discharges measured during that month."

   The permit does not require that the Town monitor influent phosphorus. The Agency has obtained sufficient municipal wastewater influent phosphorus data and there is no reason to require additional data collection. In addition, the Town monitors influent phosphorus for process control reasons so that data is available.

3. **Comment:** Total Nitrogen should be measured in effluent monthly and at points upstream and downstream of the discharge to directly demonstrate impacts on Otter Creek and Lake Champlain. This is an issue of growing import due to the recognition of the negative role nitrogen pollution may be playing in specific lake segments.

   Response: The Agency is currently undertaking a statewide nitrogen monitoring strategy in response to emerging issues of nitrogen's role affecting water quality in Vermont's lakes and rivers. The strategy includes the monitoring for nitrogen at all municipal wastewater treatment facilities and is thus incorporated into the Town's permit. The Agency as well as lay monitoring

groups have been collecting in-stream samples throughout many locations in the state including Otter Creek.

4. **Comment:** Oil, grease, scum, foam and floating solids and color should be measured upstream and downstream in order to assess the WWTF's impact and the cumulative impact on Otter Creek and Lake Champlain. Also, describe how the Agency assesses whether the discharge of these pollutants has the reasonable potential to cause or contribute to a violation of the water quality standards' criteria for these pollutants.

   Response: The Agency disagrees with this comment. The Agency is not aware of any water quality violations for these parameters in the receiving water. In addition, it is the Agency's considerable experience that municipal wastewater treatment facilities who comply with the existing permit parameters have not been observed to discharge the pollutants in question in quantities that would adversely affect the receiving water.

5. **Comment:** The mixing zone must change with flow. The permit should make clear the criteria for establishing the mixing zone.

   Response: The Agency determined the length of the mixing zone utilizing 7Q10 flow (i.e. 'worst case') conditions. The criteria for establishing the mixing zone (for *E coli*) is discussed on pages 3 and 4 of the fact sheet to the permit and meets the requirement of Section 2-04A. of the Vermont Water Quality Standards.

6. **Comment:** Describe what kind of floral and faunal evaluation has been undertaken as they relate to BOD and TSS.

   Response: The Agency is not aware of any regulation requiring an assessment of flora and fauna as they relate to BOD and TSS.

7. **Comment:** Describe how septage is screened for contaminants prior to combining it with facility flows and also explain how septage influences effluent TSS and BOD and the plants P removal capability.

   Response: Septage is included in the permitted influent monitoring (BOD, TSS). The Town is the responsible party for determining that the septage is of domestic origin. As septage is included in the influent monitoring, it is a portion of the equation in determining percent removal for BOD and TSS (as required under federal regulation). There is no legal requirement for determining percent removal for phosphorus.

8. **Comment:** Describe the protocol for cleaning the UV lamps. Is it time-dependent or based on the nature of the short term influent? Explain the reasoning behind the current approach.

   Response: The permit requires the Town to clean the quartz sleeves of the ultraviolet light disinfection system at a frequency that assures that effective disinfection is maintained and requires replacement of the ultraviolet light disinfection system lamps as necessary to maintain compliance with the *E. coli* bacteria effluent limitation. In addition, the permit requires that maintenance activities be recorded on the monthly discharge monitoring report form. For a more detailed description of the cleaning protocol, we refer the commenter to the Town of Middlebury.

9. **Comment:** Describe how the waste management zone (WMZ) was determined.

Response: The length of the WMZ was determined by utilizing the Agency's *Waste Management Zone Designation Procedure* prior to permitting the facility which was relocated several years ago. This included an existing use determination on that stretch of river.

10. **Comment:** Describe how the wastewater lost to combined sewer overflows (CSOs) is quantified and how the concentrations of regulated parameters are measured.

Response: The discharge permit requires the Town to complete an effectiveness report on the remaining four CSOs. If any of the CSOs do not comply with the Agency's Combined Sewer Overflow Control Policy, then additional elimination work will need to be completed by the Town. In that case, the Town will likely need to quantify the volumes in order to identify an appropriate solution for elimination.

11. **Comment:** Waiting until 2011 to evaluate CSOs in the system is unreasonable. They should be evaluated based on new criteria (1990 CSO Control Policy should be updated to include elimination of CSOs) by January 2009 and have a plan for elimination by April 2010 with implementation to begin during the fall of 2010. In the meantime, the Agency should provide the Town with a CSO monitoring plan so that the magnitude of the nutrient loads can be calculated rather than ignored.

Response: In order to obtain sufficient overflow data, Towns will generally need to generate a *minimum* of two years of data particularly where overflows are infrequent. The Agency does not think it unreasonable to allow the Town until 2011 to complete the effectiveness report. It is important to have sufficient data to plan and design additional elimination work. If additional work is determined to be necessary, the Agency will issue a 1272 Order to the Town with a schedule for completing the project(s). The permit also identifies best management practices which the Town must incorporate to alleviate any CSO discharges.

12. **Comment:** The Agency should require that both portions of the Operation, Management, and Emergency Response Plans be submitted by April 2008 consistent with current law requiring that permits "contain" such plans "upon renewal" of the permit. Waiting until 2010 for the collection system plan is unreasonable and environmentally irresponsible. Also, disclose for public review the record of information available describing the volume and quality of water lost through spills, CSOs, and unforeseen leaks.

Response: This comment has become partially moot given changes the legislature made in 2008. As required by the revisions to 10 V.S.A. Section 1278, promulgated in the 2008 legislative session, the date for submittal of the collection system portion of the plan is July 1, 2010.

The Agency disagrees with the comment that plans be contained in the permit. The permit will, however, reference the plan and the Agency will have a copy of the plans on file.

Any spills (not including permitted CSOs) that discharge to waters of the state are required by statute to be reported to the Agency by municipalities. This information is posted for thirty days on the Agency's Wastewater Management Division website.

13. **Comment:** It isn't clear from the permit whether flows at the facility will increase as a result of this reissuance.

Response: The design flow remains at 2.2 MGD, unchanged from the previous permit as stated in the fact sheet to the permit.

14. **Comment:** Document that the facility is being operated in a manner that maximizes the volume of phosphorus being removed. If it is not, include a permit requirement to have the operation professionally evaluated within the next six months and recommendations and training provided to the operator immediately thereafter. Consider including in the permit an approach for offsetting the increased loadings resulting from spills, CSOs, and unforeseen releases during the annual operation of the facility.

Response: There is no legal basis to require such a condition in this permit. The 2002 Lake Champlain Phosphorus TMDL allocated 1.823 metric tons (or 4018 pounds) per year to the Middlebury WWTF. This allocation has been included in the permit. In addition, the permitted concentration limit of 0.8 mg/l, monthly average, is based on requirements in Title 10, Chapter 47 §1266a. Provided that the permittee meets the TMDL limit and continues to meet the concentration limit, the Town complies with Vermont statute, the EPA approved Lake Champlain Phosphorus TMDL, and the Clean Water Act .

Regarding the offsetting of loading from CSOs, as discussed in Responses 10. and 11., should monitoring of the CSOs indicate a failure to comply with the Agency's CSO Control Policy as documented from the pending CSO effectiveness study, additional CSO abatement work will be required. Attempting to determine loading from unlikely spills and releases is virtually impossible to quantify. In addition, overflow events are typically short term and infrequent compared to the discharge from the wastewater treatment facility.

15. **Comment:** The permit should require the permittee to describe the most crucial facility and collection system components and require that these components be stored in duplicate at the site so that their replacement may be immediate and therefore a form of spill prevention.

Response: The Operation, Management, and Emergency Response Plan, as specified in Condition I.I. of the permit already requires the Town to identify critical components of the wastewater treatment facility (i.e. components that are prone to failure and if they failed would result in the discharge of untreated sewage to state waters). In some instances, the OM&ER Plan may specify that redundant components be purchased and stored at the wastewater treatment facility. However, that decision must be made on a case by case basis and is not necessarily an appropriate universal response for all critical components.

16. **Comment:** The Agency should describe alternatives, long and short term, to permit reissuance and possible flow increases. For example, has any thought been given to gradually decreasing discharges to Otter Creek and Lake Champlain in favor of land application and ground discharges in order to diminish the impacts of several pollutants.

Response: The legal basis for this comment is unclear. The Agency's position is to focus on the removal of pollutants via non-point source reduction rather than to continue to view point source discharges as the primary target in pollution reduction. The cost/benefit ratio of eliminating/reducing point sources has decreased such that more effective cost/benefit approaches can be accomplished by targeting non-point source reduction.