



State of Vermont
Department of Environmental Conservation
Wastewater Management Division
103 South Main St -- The Sewing Bldg
Waterbury VT 05671-0405
www.anr.state.vt.us/dec/ww/wwmd.cfm

[phone] 802-241-3822
[fax] 802-241-2596

Agency of Natural Resources

March 22, 2011

John O'Keefe
Town of Manchester
6039 Main Street
Manchester Center, VT 05255

Re: Final Discharge Permit #3-1153

Dear Mr O'Keefe:

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. As you are aware, EPA raised concern over certain issues in the Town's draft permit and fact sheet which delayed final issuance of this permit. All EPA correspondence concerning the permit and fact sheet has been previously sent to the Town via e-mail. Due to the delays in issuing the final permit, the Department has amended the dates for the biomonitoring requirements (see Part I,C., pages 3-4 of the permit) in order to provide the Town additional time to plan for these permit requirements. 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.

During the public notice period, comments were received by the Town and are addressed in the enclosed Response Summary.

If you have any questions concerning your permit, please contact Carol Carpenter at 241-3828.

Sincerely,

A handwritten signature in cursive script that reads "Brian D. Kooiker".

Brian D. Kooiker, Chief
Discharge Permits Section

Enclosures



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

Permit No. 3-1153
Project ID No. RU97-0116
NPDES No. VT0100170

Name of Applicant: Town of Manchester
6039 Main Street
Manchester Center, VT 05255

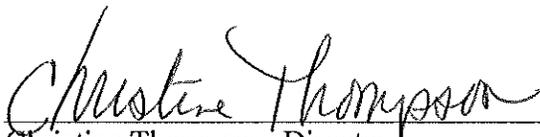
Expiration Date: September 30, 2015

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 Manchester, Vermont (hereinafter referred to as the "permittee") is authorized by the Secretary, Agency of Natural Resources, Waterbury, Vermont, to discharge from the Manchester Wastewater Treatment Facility to the Batten Kill in accordance with the following general and special conditions.

This permit shall become effective on the date of signing.

David K Mears, Commissioner
Department of Environmental Conservation

By: 
Christine Thompson, Director
Wastewater Management Division

Date: March 23, 2011

I. SPECIAL CONDITIONS

A. EFFLUENT LIMITS

1. Until September 30, 2015, the permittee is authorized to discharge from S/N 001 - outfall, the Manchester Wastewater Treatment Facility, to the Batten Kill, an effluent whose characteristics shall not exceed the values listed below:

DISCHARGE LIMITATIONS							
Effluent Characteristic	Monthly Average	Weekly Average	Maximum Day	Monthly Average	Weekly Average	Maximum Day	Instantaneous Maximum
 (lbs / day) (Concentration)			
Flow (Annual Avg)				0.600 MGD			
Biochemical Oxygen Demand, 5-day, 20° C	150	225		30 mg/l	45 mg/l	50 mg/l	
Total Suspended Solids	225	225		45 mg/l	45 mg/l	50 mg/l	
Total Phosphorus				Monitor only, mg/l			
Total Nitrogen				Monitor only, mg/l			
Settleable Solids							1.0 ml/l
Total Residual Chlorine							0.1 mg/l
<i>Escherichia coli</i> Bacteria							77/100 ml
pH				Between 6.5 and 8.5 Standard Units			
Biomonitoring and Effluent Toxicity				See Special Conditions I.C. and I.D.			
Annual constituents monitoring				See Special Condition I.G.3.			

2. 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.
3. The discharge shall not cause visible discoloration of the receiving waters.
4. The monthly average concentrations of BOD₅ in the discharge shall not exceed 15 percent of the monthly average concentration of BOD₅ in the influent into the permittee's wastewater treatment facilities. The monthly average concentrations of total suspended solids in the discharge shall not exceed 30 percent of the monthly average concentration of 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 G.2., Effluent Monitoring.
5. 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.
6. 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.

B. 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 Manchester Wastewater Treatment Facility in the Batten Kill downstream 1.5 miles.

C. BIOMONITORING AND WATER QUALITY ASSESSMENT

The permittee shall complete an assessment of the water quality and macroinvertebrate assemblage characteristics of the Batten Kill. The collection and analysis of the data shall comply with procedures established by the Department's Water Quality Division, Biomonitoring and Aquatic Studies Section. The permittee/contractor shall submit a study plan to VTDEC Biomonitoring Section for approval before sampling begins. All data shall be submitted electronically on excel type spreadsheets. Taxonomic data shall be submitted using VT taxonomic codes.

1. The macroinvertebrate assessment shall occur in **September 2012** and in **September 2014**. Sampling locations shall include:
 - a. a site located just upstream of the WWTF outfall; and

b. a site located at RM 47.0, approximately 1300 meters below the outfall.

The results of the 2012 assessment shall be submitted by **March 31, 2013**.

The results of the 2014 assessment shall be submitted by **March 31, 2015**.

2. Water quality samples for total phosphorus and total nitrogen shall be collected monthly for the period of **June through October during the years 2012, 2013, and 2014**. A sample shall be collected both upstream and downstream of the discharge. Flow characteristics should be documented for each sample collection. The results shall be submitted on the appropriate Discharge Monitoring Report (form WR-43) for that month.

Based upon the results of the assessment, this permit may be reopened and amended to include effluent limitations, facility modifications, or additional testing.

D. TOXICITY TESTING

The permittee shall complete the following toxicity testing and submit the results by **December 31, 2013**:

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 2013**.

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).

2. The permittee shall complete of two toxic pollutant tests on the effluent by **December 31, 2013**. The list of pollutants is included in Appendix J, Table 2 of the Code of Federal Regulations, Title 40, Part 122. Samples shall be representative of the seasonal variation in the discharge (i.e. one summer test, one winter test).

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

E. 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, 2015.

F. 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.

G. 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 Manchester Wastewater Treatment Facility, according to the following schedule and other provisions until September 30, 2015.

PARAMETER	MINIMUM FREQUENCY OF ANALYSIS	SAMPLE TYPE
Flow	Continuous	Daily Total, Max., Min.
BOD ₅	1 x monthly	8-hour composite ⁽¹⁾
TSS	1 x monthly	8-hour composite ⁽¹⁾
Total Phosphorus	1 x monthly	8-hour composite ⁽¹⁾
Total Nitrogen ⁽²⁾	1 x monthly	8-hour composite ⁽¹⁾
Settleable Solids	1 x daily	grab ⁽³⁾
<i>Escherichia coli</i> Bacteria	1 x monthly	grab ⁽⁴⁾

Total Residual Chlorine	1 x daily	grab ^(4,5)
pH	1 x daily	grab

- (1) Composite samples for BOD₅, TSS, TP, and TN shall be taken during the hours 6:00 a.m. to 6:00 p.m., unless otherwise specified. Eight hours is the minimum period for the composite.
- (2) Notwithstanding Part I.G.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.
- (3) Settleable Solids samples shall be collected between 10:00 A.M. and 2:00 P.M. or during the period of peak flow.
- (4) On the day that the *Escherichia coli* grab sample is collected, the daily total residual chlorine grab sample for that day shall be collected at the same time and location as the *E. coli* sample and reported on the WR-43 form. Samples shall be collected between the hours of 6:00 A.M. to 6:00 P.M.
- (5) Total Residual Chlorine shall be monitored both prior to and following dechlorination.

3. Annual Constituents Monitoring:

By December 31 of each year, 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 BOD ₅	1 x monthly	8-hour composite, minimum (1)
Influent TSS	1 x monthly	8-hour composite, minimum (1)

- (1) Composite samples for BOD₅ and TSS shall be taken during the hours of 6:00 A.M. to 6:00 P.M., unless otherwise specified. Eight hours is the minimum period for the composite.

5. Reporting

The permittee is required to submit monthly reports of monitoring results on form WR-43. 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.

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

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

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 flow measurement device weekly and report the results on the monthly report forms. The acceptable limit of error is $\pm 10\%$.

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 I.), 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.

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

FACT SHEET
(September 2010)

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

NPDES NO: VT0100170
PERMIT NO: 3-1153
PROJECT ID NO: RU97-0116

NAME AND ADDRESS OF APPLICANT:

Town of Manchester
6039 Main Street
Manchester Center, VT 05255

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Manchester Wastewater Treatment Facility
136 Battenkill Lane
Manchester, Vermont

RECEIVING WATER: Batten Kill

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 22, 2008 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 Manchester Wastewater Treatment Facility to the Batten Kill.

II. Description of Discharge

A quantitative description of the discharge in terms of significant effluent parameters is based on state and federal laws and regulations, the discharge permit application, and the recent self-monitoring data.

The complete application, draft permit, and other information 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.

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 18
Monitoring Requirements:	Pages 3 through 7 of 18

IV. Permit Basis and Explanation of Effluent Limitation Derivation

Facility History

The Town of Manchester owns and operates the Manchester Wastewater Treatment Facility which was constructed in 1979. The facility provides secondary treatment of municipal wastewater and consists of a two cell aerated lagoon system followed by chlorine disinfection and dechlorination. There are two pump stations located within the collection system (Lincoln Ave P.S. and Riverside Heights P.S.). A 20-year engineering evaluation was completed on the facility in 1999.

Receiving Water

The segment of the Batten Kill downstream of the Manchester WWTF is classified as Class B and has been designated as Cold Water Fish Habitat (see Appendix A, Vermont Water Quality Standards). A 1.5 mile Waste Management Zone has been established below the Manchester WWTF outfall pursuant to 10 VSA; Section 1252. There are no permitted direct discharges above the Manchester WWTF.

The 7Q10 flow of the Batten Kill used for calculation purposes for this permit is 11.76 CFS resulting in an instream waste concentration (IWC) of 0.073. The low median monthly flow used for nutrient assessments is 60.4 cfs resulting in an IWC of 0.015. The design flow of the facility is 0.600 MGD. For purposes of certain metals calculations, a hardness of 55 mg/l for the Batten Kill was used.

In 2002 and 2008 VTDEC conducted biological assessments of the Batten Kill targeting the macroinvertebrate community above and below the Manchester WWTF outfall. Additionally NYSDEC conducted a similar biological assessment in 2001 (*Batten Kill Biological Assessment, 2001 Survey, NYSDEC*). All biological assessments indicated the biological condition of the Batten Kill below the Manchester WWTF meets Class B standards for aquatic biota and aquatic habitat uses.

Flow - The effluent flow limitation remains at 0.600 MGD, annual average, representing the facility's design flow. The facility maintains a continuous discharge.

Biochemical Oxygen Demand (BOD₅) - 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 (150 lbs/day, monthly average and 225 lbs/day, weekly average) are derived by multiplying the concentration limits by the permitted flow. The BOD monthly 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 and weekly averages (45 mg/l) reflect the minimum level of effluent quality equivalent to secondary treatment for waste stabilization ponds (aerated lagoons) pursuant to 40 CFR Part 133.105. 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 (225 lbs/day, monthly and weekly averages) are derived by multiplying the concentration limits by the permitted flow. The TSS monthly 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. 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.

Total Phosphorus and Total Nitrogen - Vermont DEC is currently in the process of proposing scientifically based nitrogen and phosphorus 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 and total phosphorus. The 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. (Also, see the **Biomonitoring and Water Quality Assessment** section below.)

***E. coli* Bacteria** - The *E. coli* limitation is 77/100 ml as specified in Section 3-04 B.3., Vermont Water Quality Standards. Monthly monitoring remains the same as in 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.G. 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.G. of the permit.

Total Residual Chlorine (TRC) - The TRC limit of 0.1 mg/l is based on meeting the instream water quality acute and chronic chlorine criteria (0.019 mg/l and 0.011 mg/l respectively) in the Vermont Water Quality Standards for the protection of aquatic biota. Daily monitoring is required.

Metals – As part of the permit renewal application the applicant conducted an effluent analysis for the metals listed in the Vermont Water Quality Standards (see Attachment A). The Departments calculations of in-stream metals concentration utilizing the effluent metals analysis, the design facility flows and 7Q10 in-stream flows demonstrates that the discharge does not have the reasonable potential to exceed the numeric water quality criteria for metals (see Attachment B).

Toxicity 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. The intent of the WET testing is to confirm the results of the WET testing conducted by the Town in July 2004. Those results indicated that this discharge did not have the potential to cause an instream toxic impact. Confirmation that those findings are still valid is required by the Vermont Toxic Discharge Control Strategy at permit renewal. If the results of this test indicate a reasonable potential to cause an instream toxic impact,

the Department may require additional WET testing, establish a WET limit, or require a Toxicity Reduction Evaluation.

The proposed permit includes one two-species acute WET test in August or September 2013 and two toxic pollutant scans (one taken during the winter period and one in the summer) with the results of all testing due by *December 31, 2013*. The list of parameters for the pollutant scans is included in the Code of Federal Regulations (40 CFR Part 122, Appendix J, Table 2).

Biomonitoring and Water Quality Assessment – The permit (Condition I.C.) contains a condition to complete an assessment of the water quality (nutrients) and macroinvertebrate assemblages of the Batten Kill in the vicinity of the Manchester WWTF in order to assess the impact of the discharge. The biomonitoring assessment is structured to take place in summers 2012 and 2014. Monthly monitoring for total phosphorus and total nitrogen is required both upstream and downstream of the discharge during the summer months (June through October). Instream phosphorus and nitrogen monitoring shall occur over a period of three years beginning in 2012 through 2014.

The need for additional biomonitoring is based on the results of the biological assessment (*A Comparative Assessment of the Water Quality and Macroinvertebrate Assemblage Characteristics of the Batten Kill with Several Other Wild Trout Streams in Vermont*, August 2003) which indicated mild nutrient enrichment below the outfall. However, the data suggests that the downstream site location (i.e. 120 meters below the WWTF) may not be fully mixed. As a result, a different sample location (RM 47.0) which is located 1300 meters below the WWTF outfall is designated as the downstream monitoring location. (The Biomonitoring and Aquatic Studies Section has established this site for biological and chemical assessments and it represents a fully mixed condition.) The upstream location is designated to be immediately upstream of the WWTF's outfall.

The collection and analysis of the data shall comply with procedures established by the Department's Water Quality Division, Biomonitoring and Aquatic Studies Section as described in the *Water Quality Division Field Methods Manual, April 2006*. Specifically, General Water Sample Collection Methods in Section 4, and Lotic Semi-Quantitative Benthic Surveys in Section 6.4.1. Sections 6.4.2, 6.4.3 and 6.6 provide additional information on documenting physical characteristics and processing samples. See: http://www.anr.state.vt.us/dec/waterq/bass/docs/bs_fieldmethodsmanual.pdf

The document, *Biocriteria for Fish and Macroinvertebrate Assemblages in Vermont Wadeable Streams and Rivers, 2004*, also provides information on Macroinvertebrate Community Methods in Attachments B and C. (pp. 36-69) See: http://www.anr.state.vt.us/dec/waterq/bass/docs/bs_wadeablestream2.pdf

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.G.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 for approximately 1.5 miles in the Batten Kill.

Electric Power Failure - Within 30 days of the effective date of the permit, the permittee must submit to the Department, documentation addressing how the discharge will be handled in the event of an electric power outage. The effluent must receive a minimum of primary treatment (or in the case of ultraviolet light disinfection systems, not less than secondary treatment) plus disinfection.

Operation, Management, and Emergency Response Plans - As required by the revisions to 10 V.S.A. Section 1278, promulgated in the 2006 legislative session, Condition I.I. has been included in the proposed permit. This condition requires that the permittee implement the Operation, Management and Emergency Response Plan, as approved by the Agency, for the wastewater treatment facility, collection system, sewage pump/ejector stations, and stream crossings.

V. Procedures for Formulation of Final Determinations

The public comment period for receiving comments on this draft permit is from September 13 through October 13, 2010 during which time interested persons may submit their written views on the draft permit. All written comments received by 4:30 PM on October 13, 2010 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 or submitted by e-mail using the e-mail comment provisions included at <http://www.anr.state.vt.us/dec/www/Drafts.htm> .

Any interested person or groups of persons may request or petition for a public hearing with respect to this draft permit. Any such request or petition for a public hearing shall be filed within the public comment period described above and shall indicate the interest of the party filing such request and the reasons why a hearing is warranted.

The Department will hold a hearing if there is significant public interest in holding such a hearing. Any public hearing brought in response to such a request or petition will be held in the geographical area of the proposed discharge or other appropriate area, at the discretion of the Department and may, as appropriate, consider related groups of draft permits. Any person may submit oral or written statements and data concerning the draft permit at the public hearing. The Department may establish reasonable limits on the time allowed for oral statements and may require the submission of statements in writing. All statements, comments, and data presented at the public hearing will be retained by the Department and considered in the formulation of the final determination to issue, deny, or modify the draft permit.

Comments were received from the Town of Manchester during the public notice period.




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Home page: <http://www.dufresneassociates.com>

FIG 1
WASTEWATER TREATMENT
FACILITY OUTFALL
MANCHESTER, VERMONT

PROJECT NO. 316003.1
PROJECT MJR. NRJ
SCALE 1"=500'
DATE SEPT 2008
DRAWING NO. 316003.1_Collection S

Laboratory Report

DATE REPORTED: 04/02/2010

CLIENT: Manchester, Town of
PROJECT: CompositeWORK ORDER: 1003-03315
DATE RECEIVED 03/19/2010

001

Site: S/N 001 Effluent Composite

Date Sampled: 3/18/10 Time: 13:00

Parameter	Result	Units	Method	Analysis Date/Time	Lab/Tech	NELAC	Qual.
Cyanide, Total	< 0.01	mg/L	EPA 335.4	3/29/10	N CAL	A	
Arsenic, Total	< 0.001	mg/L	SM19 3113B	3/29/10	W MGT	A	
Cadmium, Total	< 0.002	mg/L	EPA 200.7	3/26/10	W ATH	A	
Chromium, Hexavalent	< 0.05	mg/L	EPA 7196A	3/19/10	W ATH	N	
Chromium, Total	< 0.005	mg/L	EPA 200.7	3/26/10	W ATH	A	
Copper, Total	< 0.020	mg/L	EPA 200.7	3/26/10	W ATH	A	
Iron, Total	0.16	mg/L	EPA 200.7	3/26/10	W ATH	A	
Lead, Total	< 0.001	mg/L	SM19 3113B	4/1/10	W MGT	A	
Mercury, Total	< 0.0002	mg/L	EPA 245.1	3/23/10	W CM	A	
Nickel, Total	< 0.005	mg/L	EPA 200.7	3/26/10	W ATH	A	
Selenium, Total	< 0.002	mg/L	SM19 3113B	3/31/10	W MGT	A	
Silver, Total	< 0.020	mg/L	EPA 200.7	3/30/10	W ATH	A	
Zinc, Total	0.026	mg/L	EPA 200.7	3/26/10	W ATH	A	

APR 13 2010

ATTACHMENT B

Water Quality Metals Criteria Calculation			
Discharge:	<i>Manchester WWTF</i>		
Receiving Water:	<i>Battenkill</i>		
Instream Hardness	<i>55.000</i>		
Calculated Instream Water Quality Standard ug/l			
		Acute	Chronic
Cadmium		2.00	0.71
Chromium (III)		1064.23	126.85
Copper		10.09	7.09
Lead		38.14	1.49
Nickel		855.09	95.08
Silver		1.45	na
Zinc		70.51	63.87
Stream Flow CFS 7Q10			<i>11.76</i>
Effluent Flow MGD		(Design)	<i>0.600</i>
Instream Waste Concentration			<i>0.073</i>
Permitted Discharge Concentration ug/l			
		Acute	Chronic
Cadmium		27.30	9.69
Chromium		14539.07	1732.97
Copper		137.87	96.92
Lead		521.09	20.31
Nickel		11681.86	1298.93
Silver		19.83	na
Zinc		963.34	872.53
Permitted Discharge in Mass (lbs/day)			
		Acute	Chronic
Cadmium		0.14	0.05
Chromium		72.75	8.67
Copper		0.69	0.48
Lead		2.61	0.10
Nickel		58.46	6.50
Silver		0.10	na
Zinc		4.82	4.37

RESPONSE SUMMARY FOR
DRAFT DISCHARGE PERMIT No. 3-1153
Proposed NPDES Discharge Permit
For
Town of Manchester WWTF

The above referenced draft permit was placed on public notice for comment from the period of September 13 through October 13, 2010. The draft permit proposed to renew the authorization for the discharge of treated municipal wastewater to the Batten Kill.

Comments were received during the public notice period from the Town of Manchester. The following is a summary of the comments received on this draft discharge permit, and the Agency's responses to these comments.

1. **Comment:** The draft permit contains requirements to complete an assessment of water quality and macroinvertebrate assemblage characteristics of the Batten Kill. The Town has neither the equipment, the expertise, nor the budget to perform the biomonitoring. As the 2003 report (*A Comparative Assessment of the Macroinvertebrate Assemblage Characteristics of the Batten Kill with Several Other Wild Trout Streams in Vermont*) concluded, the WWTF discharge is not negatively impacting the stream, the Town should not be responsible for continued assessment. We suggest that the biomonitoring and water quality testing be funded and completed by the DEC Biomonitoring Section.

Response: While the 2003 report did indicate that the water quality below the Manchester Wastewater Treatment Facility met the Class B standards in the Vermont Water Quality Standards (WQS) at that time, it also indicated that phosphorus and nitrogen concentrations were elevated below the WWTF. The Department notes that the previous biomonitoring studies were conducted while the Manchester WWTF was operating considerably below its design capacity. The Department believes it is both reasonable and necessary to require periodic biomonitoring assessments of the Batten Kill as the flow from the Manchester WWTF approaches its design/ permitted capacity. This information would then be used by the Department in its evaluation of the next permit renewal application.

The Department recognizes that the Town does not have the expertise to conduct the required biomonitoring assessments. It will be necessary for the Town to hire a consultant with expertise in biomonitoring assessments. The Department can provide a list of consultants in Vermont/New England who perform these assessments.

With respect to budgeting for such assessments the Department made a conscious decision to try to stagger permitted monitoring requirements such that no one year contains an undue burden of monitoring. In addition, due to the delays in issuing the final permit, the Department has extended the dates for conducting the biomonitoring assessments to 2012 and 2014 in order to give the Town additional time to budget for the assessments.

2. **Comment:** The draft permit contains additional testing requirements Total Phosphorus, Total Nitrogen, Toxic Pollutants, and seven additional parameters on a quarterly basis. The cost for sampling and analysis is unexpected and will need to be incorporated in the Town's budget. We have not estimated the expense of the biomonitoring; however since the required

- DEC testing method includes utilizing staff with a minimum of two years experience in macroinvertebrate sample processing, it would be more practical and economical if the biomonitoring was completed by DEC employees.

Response: As explained in the fact sheet to the permit the Department is currently in the process of proposing scientifically based nitrogen and phosphorus 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 and total phosphorus. The 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 for toxic pollutants is required twice, one in the summer and one in the winter, prior to December 31, 2012. As explained in the fact sheet, 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. As a result, testing for toxic pollutants, as well as whole effluent toxicity testing, is being required.

The seven additional parameters - Temperature, Ammonia, Dissolved Oxygen, Nitrate/Nitrite, Total Kjeldahl Nitrogen, Oil & Grease, and Total Dissolved Solids – are required under 40 CFR §122.21(j), *Application for a Permit*. All municipal facilities ≥ 0.1 MGD, are required to complete this testing as part of the permit application. Rather than requiring the results as part of the application package the Department has been including this requirement as a permit condition.

This condition, Part I.G.3., requires monitoring for these parameters annually, not quarterly as referred to in the Town's comment.