VERMONT

**State of Vermont**
**Department of Environmental Conservation**
**Watershed Management Division**
One National Life Drive – Building Main 2
Montpelier VT 05620-3522
http://www.watershedmanagement.vt.gov/

*Agency of Natural Resources*

March 4, 2016

Mr. Frank Heald
Village of Ludlow
PO Box 307
Ludlow VT 05149

**SUBJECT: NPDES Discharge Permit 3-1208, Corrected Page**

Dear Mr. Heald:

Enclosed is a corrected Page 5 for the above referenced discharge permit. Condition C.3., has been revised to update the formulas used to properly calculate Total Nitrogen pounds and Total Nitrogen pounds per day, annual average.

Please replace the enclosed corrected page with the page you have on file. Thank you. If you have any questions regarding this correction, please contact Julia Butzler via e-mail at julia.butzler@vermont.gov or call 802-490-6182.

Respectfully,

Carole Fowler

Carole Fowler
Business Operations Support Services Section

Enclosure: 3-1208, Page 5

Cc: Charles Craig, Chief Operator, Village of Ludlow

VERMONT

**Vermont Department of Environmental Conservation**
Watershed Management Division
1 National Life Drive, Main-2
Montpelier VT 05620-3522

*Agency of Natural Resources*

[phone] 802-828-1535
[fax] 802-828-1544

January 21, 2015

Village of Ludlow
Attn: Frank Heald
PO Box 307
Ludlow, VT 05149

**RE: Discharge Permit No. 3-1208: Ludlow Wastewater Treatment Facility**

Dear Mr. Heald,

Enclosed is your copy of Discharge Permits No. 3-1208 which has been signed on behalf of the Commissioner of the Department of Environmental Conservation. This permit authorizes the discharge of treated and disinfected wastewater from the Ludlow Wastewater Treatment Facility to the Black River.

Please review the permit carefully and make note of the effluent limitations, monitoring requirements, and other special conditions. As proposed in the draft permit which was provided for comment, this permit contains several changes from the permit that currently authorizes your discharge. Specifically, the requirements of EPA's Long Island Sound Nitrogen TMDL are included in the permit (See Condition I.C). The TMDL requires the Town to monitor for Total Nitrogen, develop and implement a Nitrogen Optimization Plan, assess the adequacy of the Plan, and annually report the Total Nitrogen discharged from your facility. Also the permit includes requirements to conduct Whole Effluent Toxicity testing and chemical pollutant scans to confirm that this discharge does not have the potential to cause toxic impact in the river.

We did not receive any comments from the public on the draft permit during the notice period and with respect to the comments submitted by Aldrich + Elliott on behalf of the Village, we have the following responses

1. With respect to implementing the Total Nitrogen Optimization Plan (Condition I.C.1), the Agency is aware that additional design and construction could be necessary at wastewater treatment facilities to optimize the removal of nitrogen. The Agency considers this type of work the initial phases of a Total Nitrogen Optimization Plan and would expect the permittee to start to move forward with the first phase of this work, for example design, within 30 days of approval of the Plan.

2. While modifying the E.coli limitation of 65/100 ml to a seasonal limitation may have merit, it is the Agency's position that modifying this limitation is not a viable option. Specifically:

    i. Federal Regulations (40 CFR 122.44.l – "Anti-Backsliding") prohibit the relaxation of the effluent limitations during permit reissuance except under several specific conditions, none of which currently apply to the Ludlow Wastewater Treatment Facility and your request.

ii. In 2001, the permit authorizing this discharge was appealed to the Environmental Board. The 65/100 ml. E. coli effluent limitation was a contested issue in that appeal. The Environmental Board affirmed that permit and the current 65/100 ml E. coli effluent limitation and subsequently this permit decision has become precedence in Environmental Court.

3. The Agency agrees with this comment and the dates of the Whole Effluent Toxicity (WET) tests have been modified to provide the Village additional time to conduct these tests. The WET tests are now scheduled in 2017 and 2019.

If there are any questions regarding this permit please contact Randy Bean at our office.

Sincerely,

Ernest F. Kelley, Manager
Wastewater Management Program

attachments
cc.
Charles Craig, Village of Ludlow WWTF
Jeff Fehrs, VT DEC WSMD
Jennie Auster, Aldrich + Elliott

AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
WATERSHED MANAGEMENT DIVISION
ONE NATIONAL LIFE DRIVE, MAIN BUILDING, 2nd FLOOR
MONTPELIER, VT 05620-3522

Permit No.: 3-1208
PIN: NS84-0014
NPDES No.: VT0100145

Name of Applicant: Village of Ludlow
PO Box 37
Ludlow, VT 05149

Expiration Date: December 31, 2019

# DISCHARGE PERMIT

In compliance with the provisions of the Vermont Water Pollution Control Act as amended (10 V.S.A. chapter 47), the Vermont Water Pollution Control Permit Regulations as amended, and the federal Clean Water Act as amended (33 U.S.C. §1251 *et seq*), the Village of Ludlow, Vermont (hereinafter referred to as the "Permittee") is authorized by the Secretary of Natural Resources (Secretary) to discharge from the Ludlow Wastewater Treatment Facility to the Black River in accordance with the following conditions.

This permit shall become effective on the date of signing.

David K. Mears, Commissioner
Department of Environmental Conservation

By: Ernest F. Kelley 1/21/15
Ernest F. Kelley, Manager
Wastewater Management Program

# I. SPECIAL CONDITIONS

## A. EFFLUENT LIMITS

1. From the date of signing through December 31, 2019 the permittee is authorized to discharge from S/N 001 - outfall, the Ludlow Wastewater Treatment Facility, to the Black River, an effluent for which the characteristics shall not exceed the values listed below **during the period of June 1 through September 30:**

| DISCHARGE LIMITATIONS | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Effluent Characteristic** | **Monthly Average** | **Weekly Average** | **Maximum Day** | **Monthly Average** | **Weekly Average** | **Maximum Day** | **Instantaneous Maximum** |
| | ..... (lbs / day) ..... | | | ..... (Concentration) ..... | | | |
| Flow (Annual Avg) | | | | 1.05 MGD | | | |
| Ultimate Oxygen Demand (1,2) | | | 850 | | | | |
| Biochemical Oxygen Demand, 5-day, 20°C (2,3) | 175 | 263 | | 30 mg/l | 45 mg/l | 50 mg/l | |
| Total Suspended Solids (3) | 175 | 263 | | 30 mg/l | 45 mg/l | 50 mg/l | |
| Total Phosphorus (4) | 7.0 | | | | | | |
| Total Nitrogen (5,6) | See Condition I.C below | | | | | | |
| Total Kjeldahl Nitrogen (TKN) | | | | | | Monitor only (mg/l) | |
| Nitrate/Nitrite Nitrogen (NOx) | | | | | | Monitor only (mg/l) | |
| Settleable Solids | | | | | | | 1.0 ml/l |
| Total Residual Chlorine | | | | | | | 0.1 mg/l |
| Escherichia coli Bacteria | | | | | | | 65/100 ml |
| pH | | | | Between 6.0 and 8.5 Standard Units | | | |

1. UOD shall be calculated by the following equation: UOD (lbs/day) = ([BOD (lbs/day) * 1.43] + [TKN (lbs/day) * 4.57])
2. The quantity of BOD and TKN discharged shall be limited so as not to exceed the UOD limitation or the BOD limitation, whichever is more restrictive.
3. The permittee shall operate the facility to meet the pounds limitation or the concentration limitation, whichever is more restrictive.
4. The phosphorus limitation shall apply from the period of May 1 through October 31.
5. Total Nitrogen = Total Kjeldahl Nitrogen (TKN) + Nitrate/Nitrite Nitrogen (NOx).
6. See Total Nitrogen monitoring report form WR43-TN.

2. From the date of signing through December 31, 2019 the permittee is authorized to discharge from S/N 001 - outfall, the Ludlow Wastewater Treatment Facility, to the Black River, an effluent for which the characteristics shall not exceed the values listed below **during the period of October 1 through May 31:**

| DISCHARGE LIMITATIONS | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Effluent Characteristic** | **Monthly Average** | **Weekly Average** | **Maximum Day** | **Monthly Average** | **Weekly Average** | **Maximum Day** | **Instantaneous Maximum** |
| | ..... (lbs / day) ..... | | | ..... (Concentration) ..... | | | |
| Flow (Annual Avg) | | | | 1.05 MGD | | | |
| Biochemical Oxygen Demand, 5-day, 20°C (1) | 175 | 263 | | 30 mg/l | 45 mg/l | 50 mg/l | |
| Total Suspended Solids (1) | 175 | 263 | | 30 mg/l | 45 mg/l | 50 mg/l | |
| Total Phosphorus (2) | 7.0 | | | | | | |
| Total Nitrogen (3,4) | See Condition I.C below | | | | | | |
| Total Kjeldahl Nitrogen (TKN) | | | | | | Monitor only (mg/l) | |
| Nitrate/Nitrite Nitrogen (NOx) | | | | | | Monitor only (mg/l) | |
| Settleable Solids | | | | | | | 1.0 ml/l |
| Total Residual Chlorine | | | | | | | 0.1 mg/l |
| Escherichia coli Bacteria | | | | | | | 65/100 ml |
| pH | | | | Between 6.0 and 8.5 Standard Units | | | |

**1.** The permittee shall operate the facility to meet the pounds limitation or the concentration limitation, whichever is more restrictive.
**2.** The phosphorus limitation shall apply from the period of May 1 through October 31.
**3.** Total Nitrogen = Total Kjeldahl Nitrogen (TKN) + Nitrate/Nitrite Nitrogen (NOx).
**4.** See Total Nitrogen monitoring report form WR43-TN.

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 Vermont Water Quality Standards.

3. The effluent shall not cause visible discoloration of the receiving waters.

4. The monthly average concentrations of Biochemical Oxygen Demand ($BOD_5$) and Total Suspended Solids (TSS) in the effluent shall not exceed 15 percent of the monthly average concentrations of BOD5 and TSS 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 effluent and the influent shall be taken with appropriate allowance for detention times.

5. If the effluent discharged for a period of 90 consecutive days exceeds 80 percent of the permitted flow limitation, the Permittee shall submit to the Department 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 Ludlow Wastewater Treatment Facility in the Black downstream 5.6 miles.

## C. TOTAL NITROGEN

### 1. Optimization Plan

**By June 30, 2015**, the permittee shall develop and submit to the Department for review and approval a Nitrogen Removal Optimization Evaluation Plan (the Plan) for the evaluation of alternative methods of operating the existing wastewater treatment facility to optimize the removal of nitrogen. The methods to be evaluated include, but are not limited to: operational, process, or equipment changes designed to enhance nitrification and denitrification (seasonal and year-round); incorporation of anoxic zones; septage receiving policies and procedures; and side stream management. The Permittee shall implement these recommended operational changes to produce a mass discharge of total nitrogen (TN) lower than the existing mass loading of TN. The baseline annual average daily total nitrogen load discharge from this facility is estimated to be **approximately 54 lbs/day**.

This Plan shall be developed by a qualified professional with experience in the operation and/or design of municipal wastewater treatment facilities in conjunction with the Chief Operator of the facility.

This Plan shall be provided to the Agency for review and approval prior to implementation and shall be revised upon the Agency's request or by the Permittee to address equipment or operational changes.

Implementation of the Plan shall commence within 30 days of its approval by the Agency.

**2. Plan Evaluation**

Within one year following the implementation of the Plan, the permitee shall evaluate the effectiveness of the Plan. The evaluation shall be conducted by a qualified professional with experience in the operation and/or design of municipal wastewater treatment facilities in conjunction with the Chief Operator of the facility. The results of the Evaluation shall be submitted to the Agency for review and approval within 60 days of its completion and shall be revised at the Agency's request. Actions to implement the approved nitrogen removal optimization practices, if any, shall be initiated within 90 days of the Department's approval.

**3. Reporting**

**Annually, beginning in January 2016**, the permittee shall submit, a report to the Agency, as an attachment to the December Discharge Monitoring Report form (WR-43), that documents the annual average daily Total Nitrogen discharged (in pounds per day) from the facility, summarizes nitrogen removal optimization and efficiencies, and tracks trends relative to the previous year.

Total Nitrogen (TN) = Total Kjeldahl Nitrogen (TKN) + Nitrite/Nitrate ($NO_x$).

TN pounds per day, annual average, shall be calculated as follows:

1. Calculate the pounds of TN discharged on each sample date:

**TN (lbs) = TN (mg/L) × volume discharged (million gallons) on day of sample × 8.34**

2. Calculate the TN, pounds per day, annual average:

**TN (lbs/day, annual average) = (Sum of all TN [lbs])/(count of TN samples)**

**4. Wasteload Allocation**

This permit does not establish a formal Waste Load Allocation for the facility nor does it convey any right to ownership of the facility's estimated baseline annual average total nitrogen load.

The Agency reserves the right to reopen and amend this permit to include an alternate Total Nitrogen limitation and/or additional monitoring requirements based on the monitoring data, the results of nitrogen optimization activities, or a formal Waste Load Allocation promulgated under Vermont's Waste Load Allocation Rule for Total Nitrogen in the Connecticut River Watershed based on the Long Island Sound Total Nitrogen TMDL.

## C. 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: June 30, 2019.

## D. 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.

## E. TOXICITY TESTING

**1.** The permittee shall conduct and submit the results of two specie (Pimephales promelas) and (Ceriodaphnia dubia), 48 hour acute Whole Effluent Toxicity (WET) tests to the Agency as specified below.

a. In August or September 2017, the Permittee shall conduct a two specie (Pimephales promelas and Ceriodaphnia dubia) acute WET test on S/N 001 and the results shall be submitted to the Agency by November 15, 2017.

b. In January or February 2019, the Permittee shall conduct a two specie (Pimephales promelas and Ceriodaphnia dubia)) acute WET test on S/N 001 and the results shall be submitted to the Agency by April 15, 2019

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

d. The whole effluent toxicity tests shall be conducted according to the procedures and guidelines specified in: Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (most recent edition) USEPA document.

**2.** **By December 31, 2016, December 31, 2017 and September 30, 2018**, the permittee shall conduct an effluent analysis of S/N 001 for the pollutants included in Appendix J, Table 2 of 40 CFR Part 122 (see Attachment A) and submit the results to the Agency.

## 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).

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 Ludlow Wastewater Treatment Facility, according to the following schedule and other provisions: until December 31, 2019

**During the period of June 1 through September 30.**

| PARAMETER | MINIMUM FREQUENCY OF ANALYSIS | SAMPLE TYPE |
|---|---|---|
| Flow | Continuous | Daily Total, Max., Min. |
| UOD | 1 x week | Calculated (1) |
| $BOD_5$ | 1 x week | 8 hour composite (2) |
| TSS | 1 x week | 8 hour composite (2) |
| Total Phosphorus | 1 x week | 8 hour composite (2,3) |
| Total Nitrogen | 1 x week | Calculated (4) |
| Total Kjeldahl Nitrogen (TKN) | 1 x week | 8 hour composite (2) |
| Nitrate/Nitrite Nitrogen (NOx) | 1 x week | 8 hour composite (2) |
| Settleable Solids | 1 x daily | grab (5) |
| Escherichia coli Bacteria | 1 x week | grab (6) |
| Total Residual Chlorine | 1 x daily | grab (6) |
| pH | 1 x daily | Grab |

(1) UOD (lbs/day) = ([$BOD_5$ (lbs/day) * 1.43] + [TKN (lbs/day) * 4.57])

(2) Composite samples for $BOD_5$, TSS, TP, TKN, and NOx 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.

(3) Total phosphorus monitoring is only required from May 1 through October 31.

(4) Total Nitrogen = Total Kjeldahl Nitrogen (TKN) + Nitrate/Nitrite Nitrogen (NOx).

(5) Settleable Solids samples shall be collected between 10:00 a.m. and 2:00 p.m. or during the period of peak flow.

(6) 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. Samples shall be collected between the hours of 6:00 a.m. to 6:00 p.m..

**During the period of October 1 through May 31.**

| PARAMETER | MINIMUM FREQUENCY OF ANALYSIS | SAMPLE TYPE |
|---|---|---|
| Flow | Continuous | Daily Total, Max., Min. |
| $BOD_5$ | 1 x week | 8 hour composite (1) |
| TSS | 1x week | 8 hour composite (1) |
| Total Phosphorus (TP) | 2 x month | 8 hour composite (1,2) |
| Total Nitrogen | 2 x month | Calculated (3) |
| Total Kjeldahl Nitrogen (TKN) | 2 x month | 8 hour composite (1) |
| Nitrate/Nitrite Nitrogen (NOx) | 2 x month | 8 hour composite (1) |
| Settleable Solids | 1 x daily | grab (4) |
| Escherichia coli Bacteria | 1 x week | grab (5) |
| Total Residual Chlorine | 1 x daily | grab (5) |
| pH | 1 x daily | grab |

(1) Composite samples for $BOD_5$, TSS, TP, TKN and NOx 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) Total phosphorus monitoring is only required from May 1 through October 31.

(3) Total Nitrogen = Total Kjeldahl Nitrogen (TKN) + Nitrate/Nitrite Nitrogen (NOx).

(4) Settleable Solids samples shall be collected between 10:00 a.m. and 2:00 p.m. or during the period of peak flow.

(5) 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. Samples shall be collected between the hours of 6:00 a.m. to 6:00 p.m..

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 |
| Oil & Grease | Total Dissolved Solids | |

Grab samples shall be used for temperature, ammonia, dissolved oxygen, and oil & grease. Total Dissolved Solids (TDS) shall be a composite sample. 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) |
| Total Nitrogen (TN) | 1 x quarterly | Calculated (2,3) |
| Total Kjeldahl Nitrogen (TKN) | 1 x quarterly | 8 - hour composite, minimum (2,3) |
| Nitrate/Nitrite Nitrogen (NOx) | 1 x quarterly | 8 - hour composite, minimum (2,3) |

(1) Composite samples for $BOD_5$ TSS, TKN and NOx 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.

(2) $TN = TKN + NO_x$

(3) The influent TN (TKN & $NO_x$) sample shall be collected on the same day as an effluent TN (TKN & $NO_x$) sample.

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
Watershed Management Division
One National Life Drive, Main Building, 2nd Floor
Montpelier VT 05620-3522

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. 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.

## H. OPERATION, MANAGEMENT, AND EMERGENCY RESPONSE PLANS

1. The permittee shall implement the Operation, Management, and Emergency Response Plan for the wastewater treatment facility, pump stations, and stream crossings as approved by the Agency on March 16, 2010. The Permittee shall revise this Plan upon the Agency's request or on its own motion to reflect equipment or operational changes.

2. The permittee shall implement the Operation, Management, and Emergency Response Plan for the wastewater collection system as approved by the Agency on September 22, 2010. The Permittee shall revise this Plan upon the Agency's request or on its own motion to reflect equipment or operational changes.

## I. EMERGENCY ACTION - ELECTRIC POWER FAILURE

The permittee shall implement the Electrical Power Failure Plan approved by the Agency on May, 29, 2013.

The Permittee shall revise this Plan upon the Agency's request or on its own motion to reflect equipment or operational changes. The Plan shall document 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 Watershed Management Division upon completion.

## J. 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 pursuant to 10 V.S.A. Chapters 47, 201, and/or 211. 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 ± 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 t 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, One National Life Drive, Main Building, 2nd Floor, Montpelier VT 05620-3522.

## 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 as a minimum:

a. A properly completed application form 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 and criminal penalties for non-compliance are provided for in 10 V.S.A. Chapters 47, 201, and 211.

**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. §§1258 and 1259 of the Vermont Water Pollution Control Act, the Vermont Water Pollution Control Permit Regulation, and Section 402 of the Clean Water Act, as amended. 10 V.S.A. §1259 states: "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".

## 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
Watershed Management Division
One National Life Drive, Main Building, 2nd Floor
Montpelier VT 05620-3522

**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.

# APPENDIX A

## NPDES Permit Testing Requirements for POTWs
## 40 CFR 122.21 - Appendix J, Table 2

Hardness (of receiving water, upstream of WWTF outfall)

*Metals (total recoverable), cyanide and total phenols:*

| | | |
|---|---|---|
| Antimony | Arsenic | Beryllium |
| Cadmium | Copper | Lead |
| Mercury | Nickel | Selenium |
| Silver | Thallium | Zinc |
| Cyanide | | |
| Total phenolic compounds | | |

*Volatile organic compounds:*

| | | |
|---|---|---|
| Acrolein | acrylonitrile | benzene |
| Bromoform | carbon tetrachloride | chlorobenzene |
| Chlorodibromomethane | chloroethane | 2-chloroethylvinyl ether |
| Chloroform | dichlorobromomethane | 1,1-dichloroethane |
| 1,2-dichloroethane | Trans-1,2-dichloroethylene | 1,1-dichloroethylene |
| 1,2-dichloropropane | 1,3-dichloropropylene | ethylbenzene |
| methyl bromide | methyl chloride | methylene chloride |
| 1,1,2,2-tetrachloroethane | tetrachloroethylene | toluene |
| 1,1,1-trichloroethane | 1,1,2-trichloroethane | trichloroethylene |
| vinyl chloride | | |

*Acid-extractable compounds:*

| | | |
|---|---|---|
| p-chloro-m-cresol | 2-chlorophenol | 2,4-dichlorophenol |
| 2,4-dimethylphenol | 4,6-dinitro-o-cresol | 2,4-dinitrophenol |
| 2-nitrophenol | 4-nitrophenol | pentachlorophenol |
| phenol | 2,4,6-trichlorophenol | |

*Base-neutral compounds:*

| | | |
|---|---|---|
| Acenaphthene | acenaphthylene | anthracene |
| Benzidine | benzo(a)anthracene | benzo(a)pyrene |
| 3,4-benzofluoranthene | benzo(ghi)perylene | benzo(k)fluoranthene |
| bis(2-chloroethoxy)methane | bis(2-chloroethyl)ether | bis(2-chloroisopropyl)ether |
| bis(2-ethylhexyl)phthalate | 4-bromophenyl phenyl ether | butyl benzyl phthalate |
| 2-chloronaphthalene | 4-chlorophenyl phenyl ether | chrysene |
| di-n-butyl phthalate | di-n-octyl phthalate | dibenzo(a,h)anthracene |
| 1,2-dichlorobenzene | 1,3-dichlorobenzene | 1,4-dichlorobenzene |
| 3,3'-dichlorobenzidine | diethyl phthalate | dimethyl phthalate |
| 2,4-dinitrotoluene | 2,6-dinitrotoluene | 1,2-diphenylhydrazine |
| fluroranthene | fluorine | hexachlorobenzene |
| hexachlorobutadiene | hexachlorocyclo-pentadiene | hexachloroethane |
| indeno(1,2,3-cd)pyrene | isophorone | napthalene |
| nitrobenzene | N-nitrosodi-n-propylamine | N-nitrosodimethylamine |
| N-nitrosodiphenylamine | phenanthrene | pyrene |
| 1,2,4-trichlorobenzene | | |