

**AUTHORIZATION TO DISCHARGE UNDER THE  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Federal Clean Water Act, as amended, (33 U.S.C. §1251 et seq.; the "CWA"),

**The Town of Sunapee, New Hampshire**

is authorized to discharge from the Wastewater Treatment Plant located at

**Treatment Plant Road (Route 11)  
Sunapee, NH 03782-0347**

to receiving waters named

**Sugar River (Hydrologic Code: 01080104)**

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein, including, but not limited to, conditions requiring the proper operation and maintenance of Sunapee's wastewater collection system.

The Town of New London is a co-permittee for activities required in Part I.B. (Unauthorized Discharges), Part I.C. (Operations and Maintenance of the Sewer System), and Part I.D (Alternate Power Source). The responsible municipal department is:

**New London Sewer Commission  
c/o Town of New London  
P.O. Box 240  
New London, NH 03257**

This permit shall become effective on the first day of the calendar month immediately following 60 days after signature.

This permit and the authorization to discharge expire at midnight, five (5) years from the last day of the month preceding the effective date.

This permit supersedes the permit issued on September 29, 1999.

This permit consists of 10 pages in Part I (including effluent limitations and monitoring requirements); Attachment A (Freshwater Acute Toxicity Test Procedure and Protocol, December 1995); Attachment B (Self Implementing Alternative Dilution Water Guidance); Attachment C (NPDES Permit Sludge Compliance Guidance, November 1999); and Part II (General Conditions and Definitions).

Signed this 21<sup>st</sup> day of February, 2007

/s/ SIGNATURE ON FILE

---

Stephen S. Perkins, Director  
Office of Ecosystem Protection  
U.S. Environmental Protection Agency (EPA)  
Region I  
Boston, Massachusetts

**PART I A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

1. During the period beginning on the effective date and lasting through expiration, the permittee is authorized to discharge from outfall serial number 001 to the Sugar River, treated domestic (household/sanitary/septage) and industrial wastewater effluent. Such discharges shall be limited and monitored by the permittee as specified below. Samples taken in compliance with the monitoring requirements specified below shall be taken at a location that provides a representative analysis of the effluent.

EFFLUENT CHARACTERISTIC	EFFLUENT LIMITS						MONITORING REQUIREMENTS	
	Mass Limits			Concentration Limits			MEASUREMENT FREQUENCY	SAMPLE TYPE <sup>2</sup>
PARAMETER	AVERAGE MONTHLY	AVERAGE WEEKLY	MAXIMUM DAILY	AVERAGE MONTHLY	AVERAGE WEEKLY	MAXIMUM DAILY		
Flow	***	***	***	Report MGD	***	Report MGD	CONTINUOUS	RECORDER <sup>1</sup>
BOD <sub>5</sub>	160 lbs/Day	240 lbs/Day	267 lbs/Day	30 mg/l	45 mg/l	50 mg/l	2/WEEK <sup>2</sup>	24-HOUR COMPOSITE
TSS	160 lbs/Day	240 lbs/Day	267 lbs/Day	30 mg/l	45 mg/l	50 mg/l	2/WEEK <sup>2</sup>	24-HOUR COMPOSITE
Oil and Grease <sup>3</sup>	***	***	***	***	***	15 mg/l	4/YEAR	
pH Range <sup>4</sup>	6.5 - 8.0 SU SEE PERMIT PAGE 10 OF 11, PARAGRAPH IE.1.a.						1/DAY	GRAB
<i>Escherichia Coli</i> , Colonies/100 ml <sup>4,5,6</sup>	***	***	***	126 col/100 ml	***	406 col/100 ml	3/WEEK	GRAB
Total Residual Chlorine <sup>7</sup>	***	***	***	0.082 mg/l	***	0.141 mg/l	1/DAY	GRAB
Ammonia Nitrogen as Nitrogen <sup>8</sup> (June 1-October 31)	***	***	***	Report	***	Report	2/MONTH	24-HOUR COMPOSITE
Total Phosphorus (April 1 – October 31)	***	***	***	0.75 mg/l	***	Report mg/l	1/WEEK	24-HOUR COMPOSITE
Total Phosphorus (November 1 – March 31)	***	***	***	1.0 mg/l	***	Report mg/l	1/WEEK	24-HOUR COMPOSITE
Total Recoverable Cadmium	***	***	***	6.2 ug/l	***	7.0 ug/l	2/MONTH	24-HOUR COMPOSITE
Total Recoverable Lead	***	***	***	4 ug/l	***	104 ug/l	2/MONTH	24-HOUR COMPOSITE

**PART I A.1 (Continued)**

<u>EFFLUENT CHARACTERISTIC</u>	<u>EFFLUENT LIMITS</u>						<u>MONITORING REQUIREMENTS</u>	
	Mass Limits			Concentration Limits				
PARAMETER	AVERAGE MONTHLY	AVERAGE WEEKLY	MAXIMUM DAILY	AVERAGE MONTHLY	AVERAGE WEEKLY	MAXIMUM DAILY	MEASUREMENT FREQUENCY	SAMPLE TYPE <sup>2</sup>
Whole Effluent Toxicity <sup>9,10,11,12,13,14</sup>	Acute LC <sub>50</sub> ≥ 100% Chronic NOEC ≥ 13.4%						4/YEAR	24-HOUR COMPOSITE
Hardness <sup>14</sup>	***	***	***	***	***	Report	4/YEAR	24-HOUR COMPOSITE
Total Recoverable Cadmium <sup>14</sup>	***	***	***	***	***	Report	4/YEAR	24-HOUR COMPOSITE
Total Recoverable Lead <sup>14</sup>	***	***	***	***	***	Report	4/YEAR	24-HOUR COMPOSITE
Total Recoverable Copper <sup>14</sup>	***	***	***	***	***	Report	4/YEAR	24-HOUR COMPOSITE
Total Recoverable Aluminum <sup>14</sup>	***	***	***	***	***	Report	4/YEAR	24-HOUR COMPOSITE
Total Recoverable Chromium <sup>14</sup>	***	***	***	***	***	Report	4/YEAR	24-HOUR COMPOSITE
Total Recoverable Nickel <sup>14</sup>	***	***	***	***	***	Report	4/YEAR	24-HOUR COMPOSITE
Total Recoverable Zinc <sup>14</sup>	***	***	***	***	***	Report	4/YEAR	24-HOUR COMPOSITE

See pages 4 and 5 for explanation of footnotes

**EXPLANATION OF FOOTNOTES TO PART I.A.1 on page 2.**

- (1) The effluent flow shall be continuously measured and recorded using a flow meter and totalizer.
- (2) To monitor the 85 percent removal of BOD<sub>5</sub> and TSS required in Part I.A.4, the influent concentration of both BOD<sub>5</sub> and TSS shall be monitored twice per month (2/Month) using 24-Hour Composite sample and the results reported as average monthly values.
- (3) Oil and Grease shall be tested in Outfall 001 using EPA Method 1664, Revision A. Sampling frequency remains as quarterly. However, Sunapee shall conduct weekly visual observations of the clarifiers, and shall take a grab sample whenever the weekly visual observation detects an oil sheen on the surface of the water between the “v” notch and the baffles at a clarifier.
- (4) State certification requirement.
- (5) Monitoring for *Escherichia coli* bacteria as described in footnote (6) below shall be conducted concurrently with the daily monitoring for Total Residual Chlorine (TRC) as described in footnote (7) below.
- (6) The average monthly value for *Escherichia coli* shall be determined by calculating the geometric mean and the result reported. *Escherichia coli* shall be tested using test method 1103.1 found in *Escherichia coli (E. coli) in Water by Membrane Filtration Using membrane-Thermotolerant Escherichia coli Agar (mTec)*, EPA-821-R-02-020.
- (7) Total residual chlorine shall be measured using any one of the following three methods listed in a. through c. below:
  - a. DPD spectrophotometric (colorimetric): EPA No. 330.5 or *Standard Methods* [18<sup>th</sup> or subsequent edition(s)] as published in 40 C.F.R. Part 136, No. 4500-C1 G.
  - b. DPD titrimetric (ferrous titrimetric): EPA No.330.4 or *Standard Methods* [18<sup>th</sup> or subsequent edition(s)] as published in 40 C.F.R. Part 136, No. 4500-C1 F.
  - c. Amperometric titration: EPA No. 330.1 or *Standard Methods* [18<sup>th</sup> or subsequent edition(s)] as published in 40 C.F.R. Part 136, No. 4500-C1 D or ASTM No. D1253-86(92).
- (8) Testing requirements for ammonia apply from June 1 through October 31 of each year.
- (9) LC50 (lethal concentration 50 percent) is the concentration of wastewater (effluent) causing mortality to 50 percent (%) of the test organisms. The "100 % limit" is defined as a sample which is composed of 100 percent effluent. Therefore, a 100 % limit means that a sample of 100 % effluent (no dilution) shall cause no greater than a 50 % mortality rate in that effluent sample. The limit is considered to be a maximum daily limit.
- (10) The permittee shall conduct (and modified acute) survival and reproduction, and survival and growth WET tests on effluent samples using two species, Daphnid (*Ceriodaphnia dubia*) and Fathead Minnow (*Pimephales promelas*) respectively, following the protocol listed in Attachment A (Freshwater Chronic and Modified Acute Toxicity Test Procedure and Protocol dated December 1995). Toxicity test samples shall be collected and tests completed four (4) times per year during the calendar quarters ending March 31st, June 30th, September 30th and December

31st. Toxicity test results are to be postmarked by the 15th day of the month following the end of the quarter sampled.

- (11) This permit shall be modified, or alternatively, revoked and reissued to incorporate additional toxicity testing requirements, including chemical specific limits such as for metals, if the results of the toxicity tests indicate the discharge causes an exceedance of any State water quality criterion. Results from these toxicity tests are considered “New Information” and the permit may be modified as provided in 40 CFR Section 122.62(a)(2).
- (12) C-NOEC (Chronic-No Observed Effect Concentration) is defined as the **highest** concentration of toxicant or effluent to which organisms are exposed in a life-cycle or partial life-cycle test. This concentration should cause no adverse effect on growth survival, or reproduction at a specific time of observation as determined from hypothesis testing where the test results (growth, survival, and/or reproduction) exhibit a linear dose-response relationship. However, where the test results do not exhibit a linear dose-response relationship, report the lowest concentration where there is no observable effect. See **Attachment A** (VII. Toxicity Test Data Analysis) on page A-9, for additional clarification.
- (13) The (13.4 percent equal to or greater than limit” is defined as a sample which is composed of 13.4% (or greater) effluent, the remainder being dilution water. This is the minimum percentage of effluent at which no acute or chronic effects will be observed.
- (14) For each Whole Effluent Toxicity test the permittee shall report on the appropriate Discharge Monitoring Report, (DMR), the concentrations of the Hardness, Ammonia Nitrogen as Nitrogen, Total Recoverable Cadmium, Chromium, Copper, Lead, Aluminum, Nickel, and Zinc found in the 100 percent effluent sample. All these aforementioned chemical parameters shall be determined to at least the Minimum Quantification Level shown in **Attachment A** on page A-7, or as amended. Also the permittee should note that all chemical parameter results must still be reported in the appropriate toxicity report.

#### **Part A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)**

2. The discharge shall not cause a violation of the water quality standards of the receiving water.
3. The permittee shall not discharge into the receiving water any pollutant or combination of pollutants in toxic amounts.
4. The discharge shall be adequately treated to insure that the surface water remains free from pollutants in concentrations or combinations that settle to form harmful deposits, float as foam, debris, scum or other visible pollutants. It shall be adequately treated to insure that the surface waters remain free from pollutants which produce odor, color, taste or turbidity in the receiving waters which is not naturally occurring and would render it unsuitable for its designated uses.
5. The permittee's treatment facility shall maintain a minimum of 85 percent removal of both BOD<sub>5</sub> and TSS. The percent removal shall be based on a comparison of average monthly influent versus effluent concentrations.
6. When the effluent discharged for a period of 3 consecutive months exceeds 80 percent of the 0.64 MGD design flow (0.51 MGD), the permittee shall submit to the permitting authorities a projection of loadings up to the time when the design capacity of the treatment facility will be reached, and a

program for maintaining satisfactory treatment levels consistent with approved water quality management plans. Before the design flow will be reached, or whenever treatment necessary to achieve permit limits cannot be assured, the permittee may be required to submit plans for facility improvements.

7. All POTWs must provide adequate notice to both EPA-New England and the New Hampshire Department of Environmental Services, Water Division (NHDES-WD) of the following.
  - a. Any new introduction of pollutants into the POTW from an indirect discharger in a primary industry category (see 40 CFR §122 Appendix A as amended) discharging process water; and
  - b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
  - c. For purposes of this paragraph, adequate notice shall include information on:
    - (1.) the quantity and quality of effluent introduced into the facility; and
    - (2.) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the facility.
8. Limitations for Industrial Users
  - a. Pollutants discharge to the Wastewater Treatment Plant by a non-domestic source (user) shall not Pass Through the Treatment Plant or Interfere with the operation or performance of the Treatment Plant.

## **B. UNAUTHORIZED DISCHARGES**

The permit only authorizes discharges in accordance with the terms and conditions of this permit and only from the outfall listed in Part I A.1. of this permit. Discharges of wastewater from any other point sources, including sanitary sewer overflows (SSOs) are not authorized by this permit and shall be reported in accordance with Part II, Section D.1.e. (1) of the General Requirements of this permit (Twenty-four hour reporting).

## **C. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM**

Operation and maintenance of the sewer system shall be in compliance with the General Requirements of Part II and the following terms and conditions. The permittee is required to complete the following activities for the collection system which it owns:

1. Maintenance Staff

The permittee shall provide an adequate staff to carry out the operation, maintenance, repair, and testing functions required to ensure compliance with the terms and conditions of this permit.

2. Preventative Maintenance Program

The permittee shall maintain an ongoing preventative maintenance program to prevent overflows and bypasses caused by malfunctions or failures of the sewer system infrastructure. The program shall include an inspection program designed to identify all potential and actual unauthorized discharges.

3. Infiltration/Inflow

The permittee shall control infiltration and inflow into their sewer systems as necessary to prevent high flow-related unauthorized discharges from their collection systems and high flow-related violations of the wastewater treatment plant's effluent limitations.

The permittee shall each submit a summary report of all actions taken to minimize I/I during the previous calendar year to EPA and the NHDES by **February 28<sup>th</sup> of each year**. The report shall also include a summary of unauthorized discharges during the previous calendar year which were caused by inadequate sewer system capacity, excessive I/I and operational/maintenance problems, including a status of action items necessary to eliminate the discharges. The information reported shall include the date, location, duration and volume of discharge as well as the cause of the overflow and the receiving water.

**D. ALTERNATE POWER SOURCE**

In order to maintain compliance with the terms and conditions of this permit, the permittee and co-permittees shall provide an alternate power source with which to sufficiently operate its publicly owned treatment works, as defined at 40 CFR §122.2, which references the definition at 40 CFR 403.3(o).

**E. SLUDGE CONDITIONS**

1. The permittee shall comply with all existing federal & state laws and regulations that apply to sewage sludge use and disposal practices and with the CWA Section 405(d) technical standards.

2. The permittee shall comply with the more stringent of either the state (Env-Ws 800) or federal (40 CFR Part 503) requirements.

3. The requirements and technical standards of 40 CFR Part 503 apply to facilities which perform one or more of the following use or disposal practices.

a. Land application - the use of sewage sludge to condition or fertilize the soil.

b. Surface disposal - the placement of sewage sludge in a sludge only landfill.

c. Placement of sludge in a municipal solid waste landfill (See 40 CFR Section 503.4).

d. Sewage sludge incineration in a sludge only incinerator.

4. The 40 CFR Part 503 conditions do not apply to facilities which place sludge within a municipal solid waste landfill. These conditions do not apply to facilities which do not dispose of sewage sludge during the life of the permit, but rather treat the sludge (lagoons, reed beds), or are otherwise excluded under 40 CFR Section 503.6.

5. The permittee shall use and comply with the NPDES Permit Sludge Compliance Guidance, November 1999, (Attachment D) to determine appropriate conditions. Appropriate conditions contain the following elements.

General requirements

Pollutant limitations

Operational Standards (pathogen reduction requirements and vector attraction reduction requirements)

Management practices

Record keeping

Monitoring

Reporting

Depending upon the quality of material produced by a facility all conditions may not apply to the facility.

6. The permittee shall monitor the pollutant concentrations, pathogen reduction and vector attraction reduction for the permittee's chosen sewage sludge use or disposal practices at the following frequency. This frequency is based upon the volume of sewage sludge generated at the facility in dry metric tons per year.

less than 290 1/Year

290 to less than 1,500 1/Quarter

1,500 to less than 15,000 6/Year

15,000 plus 1/Month

7. The permittee shall sample the sewage sludge using the procedures detailed in 40 CFR Section 503.8.

8. The permittee shall submit an annual report containing the information specified in the attached Sludge Compliance Guidance document. Reports are **due annually by February 19th**. Reports shall be submitted to both addresses (EPA-New England and NHDES-WD) contained in the reporting section of the permit.

## **F. SPECIAL CONDITIONS**

### WET Test Frequency Adjustment

The permittee may submit a written request to the EPA-New England requesting a reduction in the frequency (to not less than once per year) of required toxicity testing, after completion of a minimum of the most recent four (4) successive toxicity tests of effluent, all of which must be valid tests and demonstrate compliance with the permit limits for whole effluent toxicity. Until written notice is received by certified mail from the EPA-New England indicating that the WET testing requirement has been changed, the permittee is required to continue testing at the frequency specified in the respective permit.

### pH Limit Adjustment

The permittee may submit a written request to the EPA-New England requesting a change in the permitted pH limit range to be not less restrictive than 6.0 to 9.0 Standard Units found in the applicable National Effluent Limitation Guideline (Secondary Treatment Regulations in 40 CFR Part 133) for this facility. The permittee's written request must include the State's approval letter containing an original signature (no copies). The State's letter shall state that the permittee has demonstrated to the State's satisfaction that as long as discharges to the receiving water from a specific outfall are within a specific numeric pH range the naturally occurring receiving water pH will be unaltered. That letter must specify for each outfall the associated numeric pH limit range. Until written notice is received by certified mail

from the EPA-New England indicating the pH limit range has been changed, the permittee is required to meet the permitted pH limit range in the respective permit.

Notification Requirements to Public and Private Water Systems Drawing Water From the Sugar River in the Event of a Bypass or Upset at the Treatment Works

The notification requirement shown below in italics was taken verbatim from the New Hampshire Statutes RSA Title 50 Chapter 485-A:13,I.(c) and interpreted as described below.

*“Any person responsible for a bypass or upset at a wastewater facility shall give immediate notice of the bypass or upset to all public or privately owned water systems drawing water from the same receiving water and located within 20 river miles downstream of the point of discharge. The permittee shall maintain a list of persons, and their telephone numbers, who are to be notified immediately by telephone. In addition, written notification, which shall be postmarked within 3 days of the bypass or upset, shall be sent to such persons.”*

For the purpose of this permit, EPA-New England is interpreting the italicized phrase “*water systems drawing water from the same receiving water and located within 20 miles downstream of the point of discharge*” to mean “located within 20 **river** miles downstream of the point of discharge regardless of whether or not it is on the same receiving water or on the stream to which the receiving water discharges” which for the Sunapee POTW means any intake structure on the Sugar River downstream of the POTW.

**G. MONITORING AND REPORTING**

Monitoring results shall be summarized for each calendar month and reported on separate Discharge Monitoring Report Form(s) (DMRs) postmarked no later than the 15th day of the month following the completed reporting period.

1. Signed and dated original DMRs and all other reports required herein or in **Part II**, shall be submitted to the Director at the following address:

U.S. Environmental Protection Agency  
Water Technical Unit (SEW)  
P.O. Box 8127  
Boston, Massachusetts 02114-8127

2. Duplicate signed copies of all reports required in Section 1. immediately above shall be submitted to the State at:

New Hampshire Department of Environmental Services  
Water Division  
Wastewater Engineering Bureau  
29 Hazen Drive, P.O. Box 95  
Concord, New Hampshire 03302-0095

All verbal reports required in **Parts I** and **II** of this permit shall be made to both EPA-New England and to NHDES-WD.

**H. STATE PERMIT CONDITIONS**

1. The permittee shall comply with the following conditions which are included as State Certification requirements.

- a. The pH range of 6.5 to 8.0 Standard Units (S.U.) must be achieved in the final effluent unless the permittee can demonstrate to NHDES-WD: (1) that the range should be widened due to naturally occurring conditions in the receiving water or (2) that the naturally occurring receiving water pH is not significantly altered by the permittee's discharge. The scope of any demonstration project must receive prior approval from NHDES-WD. In no case, shall the above procedure result in pH limits outside of the range of 6.0 to 9.0 S.U., which is the federal effluent limitation guideline regulation for pH for secondary treatment and is found in 40 CFR §133.102(c).
- b. Pursuant to State Law NH RSA 485-A:13 and the New Hampshire Code of Administrative Rules, Env-Wq 703.07(a) and Env-Ws 904.10 the following submissions shall be made to the NHDES-WD by a municipality proposing to accept into its POTW (including sewers and interceptors):
  - (1) An "Application for Sewer Connection Permit" for any proposal to construct or modify any of the following:
    - (a) Any extension of a collector or interceptor, whether public or private, regardless of flow;
    - (b) Any wastewater connection or other discharge in excess of 5,000 gpd;
    - (c) Any wastewater connection or other discharge to a wastewater treatment facility operating in excess of 80 percent design flow capacity for 3 consecutive months;
    - (d) Any industrial wastewater connection or change in existing discharge of industrial wastewater, regardless of quality or quantity; and
    - (e) Any sewage pumping station greater than 50 gpm or serving more than one building.
  - (2) An "Industrial Wastewater Discharge Request Application" for new or increased loadings of industrial waste, in accordance with Env-Ws 904.10.
- c. The permittee shall not at any time, either alone or in conjunction with any person or persons, cause directly or indirectly the discharge of waste into the said receiving water unless it has been treated in such a manner as will not lower the legislated water quality classification or interfere with the uses assigned to said water by the New Hampshire Legislature (RSA 485-A:12).
- d. Any modifications of the Permittee's Sewer Use Ordinance, including local limitations on pollutant concentrations, shall be submitted to the NHDES-WD for approval prior to adoption by the permittee.
- e. Within 90 days of the effective date of this permit, the permittee shall submit to NHDES-WD a copy of its current sewer use ordinance if it has been revised since any previously approved submittal.

- f. Within 120 days of the effective date of this permit, the permittee shall submit to NHDES-WD a current list of all industries discharging industrial waste to the municipal wastewater treatment plant. As a minimum, the list shall indicate the name and address of each industry, along with the following information: telephone number, contact person, products manufactured, industrial processes used, existing level of pretreatment, and list of existing industrial discharge permits with effective dates.
2. This NPDES Discharge Permit is issued by the EPA-New England under Federal and State law. Upon final issuance by the EPA-New England, the NHDES-WD may adopt this permit, including all terms and conditions, as a State permit pursuant to RSA 485-A:13.

Each Agency shall have the independent right to enforce the terms and conditions of this Permit. Any modification, suspension or revocation of this Permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of the Permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation.