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"),

Town of Lincoln, New Hampshire

is authorized to discharge from the facility located at

Lincoln Wastewater Treatment Plant
Recycle Road
Lincoln, New Hampshire 03251

to receiving water named

East Branch Pemigewasset River (Hydrologic Basin Code : 01070001)

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective (**See ** below**)
This permit and the authorization to discharge expires at midnight, five (5) years from the effective date.

This permit supersedes the permit issued on September 22, 1998.

This permit consists of 11 pages in Part I including effluent limitations, monitoring requirements, etc., Attachment A (Toxicity Protocol), Sludge Compliance Guidance and Part II, which includes General Conditions and Definitions.

Signed this day of

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

****** This permit will become effective on the date of signature if no comments are received during public notice. If comments are received during public notice, this permit will become effective no sooner than 30 days after signature.

PART I.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge treated wastewater effluent from Outfall Serial Number 001 into the East Branch Pemigewasset River. 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.

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Effluent Characteristic	Discharge Limitations					Monitoring Requirements		
	Average Monthly	Average Weekly	Maximum Daily	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
	(lbs/day)			(Units Specified)				
Flow (MGD)	----	----	----	Report	----	Report	Continuous	Recorder[1]
BOD_5	325	488	542[2]	30 mg/l	45 mg/l	50 mg/l	1/Week[3]	Grab
TSS	325	488	542[2]	30 mg/l	45 mg/l	50 mg/l	1/Week[3]	Grab.
pH Range (Std. Units)[2]	(6.5 to 8.0, unless altered by **PART I.G.5**)						1/Day	Grab
Escherichia coli Bacteria[4] (Colonies/100 ml)	----	----	----	126	----	406	2 /week	Grab
Total Residual Chlorine[5], mg/l	----	----	----	0.18	----	0.31	1/Day	Grab
Total Phosphorus , mg/l	----	----	----	Report	----	Report	2/Month	
Ammonia Nitrogen, as N, mg/l	----	----	----	Report	----	Report	1/Week	Grab
Total Recoverable Copper, [11], ug/l	----	----	----	46.7	----	62.3	2/Month	Grab.
Total Recoverable Lead, [11], ug/l	----	----	----	9.0	----	Report	2/Month	Grab
Total Recoverable Aluminum[11], mg/l	----	----	----	Report	----	Report	2/Month	Grab
Whole Effluent Toxicity								
LC50 [6,7,8,], percent effluent	----	----	----	----	----	100	1/Quarter	Grab.
C-NOEC [6,7,9] percent effluent	----	----	----	----	----	6.0	1/Quarter	Grab
Hardness[11]; mg/l	----	----	----	----	----	Report	1/Quarter	Grab
Ammonia Nitrogen, as N[101]; mg/l	----	----	----	----	----	Report	1/Quarter	Grab
Total Recoverable Aluminum[10]; mg/l	----	----	----	----	----	Report	1/Quarter	Grab
Total Recoverable Cadmium[10]; mg/l	----	----	----	----	----	Report	1/Quarter	Grab
Total Recoverable Chromium[10]; mg/l	----	----	----	----	----	Report	1/Quarter	Grab.
Total Recoverable Copper[10]; mg/l	----	----	----	----	----	Report	1/Quarter	Grab
Total Recoverable Nickel[10]; mg/l	----	----	----	----	----	Report	1/Quarter	Grab
Total Recoverable Lead[10]; mg/l	----	----	----	----	----	Report	1/Quarter	Grab
Total Recoverable Zinc[10]; mg/l	----	----	----	----	----	Report	1/Quarter	Grab

See pages 3 and 4 for footnotes

FOOTNOTES:

1. The effluent flow shall be continuously measured and recorded using a flow meter and totalizer.

2. State Certification Requirement.

3. The influent concentrations of both Five-Day Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TSS) shall be monitored twice per month (2/Month) preferably using a 24-hour composite sample

4. The average monthly value for Escherichia coli shall be determined by calculating the geometric mean. Escherichia coli shall be tested using a wastewater test method found in 40 CFR Part 136. This monitoring shall be conducted concurrently with the TRC sampling described below.

5. Any time, any form of chlorine is being added to the POTW as part of any treatment process, Total Residual Chlorine (TRC) shall be tested using methods as approved in 40 CFR Part 136.

6. The permittee shall conduct acute and chronic toxicity tests on effluent samples using two species, Daphnid (Ceriodaphnia dubia) and Fathead Minnow (Pimephales promelas) following the protocol in **Attachment A** (Freshwater Chronic Toxicity Test Procedure and Protocol dated December 1995). This test protocol includes the procedure to calculate an LC50 at the end of 48 hours for the two species.

   Toxicity test samples shall be collected and tests completed during the calendar quarters ending March 31st, June 30th, September 30th and December 31st each year. Toxicity test results are to be submitted by the 15th day of the month following the end of the quarter sampled. The chemical data for the alternate dilution water and the site water are to be submitted with the test results.

7. This permit shall be modified, or alternatively, revoked and reissued to incorporate additional requirements, including chemical specific limits, if results of these toxicity tests indicate the discharge causes an exceedance of any water-quality criterion, particularly a metal. Results from these toxicity tests are considered "New Information" and the permit may be modified as provided in 40 CFR §122.62(a)(2).

8. LC50 (Lethal Concentration 50 Percent) is the concentration of wastewater causing mortality to 50 percent of the test organisms at a specified time of observations. The "100 %" is defined as a sample which is composed of 100 percent effluent (See A.1.a. on Page 2 of **PART I** and Attachment A of **PART I**). Therefore, a 100 % limit means that a sample of 100 % effluent (no dilution) shall cause no greater that a 50 % mortality rate in that effluent sample. The limit is considered to be a maximum daily limit.

9. C-NOEC (Chronic-No Observed Effect Concentration) is defined as the **highest** concentration of an effluent to which aquatic test organisms are exposed in a life cycle or partial life cycle test, which causes 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. The

"6 %" is defined as a sample which is composed of 6 percent effluent. Therefore, a 6 % limit means that a sample of 6 % effluent shall cause no adverse effect on growth, survival or reproduction in that effluent sample. The limit is considered to be a maximum daily limit.

10. For each Whole Effluent Toxicity (WET) test the permittee shall report on the appropriate Discharge Monitoring Report DMR), the concentrations of the Ammonia Nitrogen as nitrogen, Hardness, and Total Recoverable Aluminum, Cadmium, Chromium, Copper, Lead, 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 (MLs) shown in **Attachment A** on page A-8, or as amended. Also, the permittee should note that all chemical parameter results must still be reported on the appropriate toxicity report. The permittee may use results from the WET test's chemical analysis for Total Recoverable Copper, Total Recoverable Lead, and Ammonia Nitrogen as Nitrogen (N) in partial fulfillment of this limited and/or monitored parameter

11. Total recoverable aluminum, copper and lead shall be tested using methods listed in 40 CFR Part 136 dated May 7, 2007.

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 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.

4. The permittee's treatment facility shall maintain a minimum of 85 percent removal of both BOD_5 and TSS. The percent removal shall be calculated using the average monthly influent and effluent concentrations.

5. When the effluent discharged for a period of 3 consecutive months exceeds 80 percent of the 1.3 MGD design flow (1.04 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.

6. All Publicly Owned Treatment Works (POTWs) must provide adequate notice to both EPA 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 Part 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 POTW; and

(2) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW

7. Limitations for Industrial Users:

A user may not introduce into any publicly owned Treatment Works (POTW) any pollutant(s) which cause Pass Through or Interference. The terms User, Pass Through and Interference are defined in 40 CFR 403.3

The permittee shall submit to EPA and NHDES-WD the name of any Industrial User (IU) subject to categorical Pretreatment Standards (see list in 40 CFR §403 Appendix C as amended) pursuant to 40 CFR §403.6 and 40 CFR Chapter I, Subchapter N **who commences discharge to the POTW after the effective date of this permit**. This reporting requirement also applies to any other IU that discharges an average of 25,000 gallons per day or more of process wastewater into the POTW (excluding sanitary, non-contact cooling and boiler blow-down wastewater) or contributes a process wastewater which makes up five (5) percent or more of the average dry weather hydraulic or organic capacity of the POTW, or is designated as such by the Approval Authority as defined in 40 CFR 403.12(a) on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40CFR 403.8(f)(6)).

In the event that the permittee receives reports (baseline monitoring reports, 90-day compliance reports, periodic reports on continued compliance, etc.) from Categorical Industrial Facilities (see list in 40 CFR §403 Appendix C as amended), the permittee shall forward all copies of these reports within ninety (90) days of their receipt to EPA and NHDES-WD."

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. Collection System Mapping. Within 30 months of the effective date of the permit, the Permittee shall prepare a map of the sewer collection system it owns. The map shall be on a street map of the community, with sufficient detail and at a scale to allow easy interpretation. The collection system information shown on the map shall be based on current conditions. Such map(s) shall include, but not be limited to:

   a. All sanitary sewer lines and related manholes;

   b. All combined sewer lines and related manholes;

   c. All combined sewer regulators and any known or suspected connections between the sanitary sewer and storm drain system, e.g., combined manholes;

   d. All outfalls, including the treatment plant outfall(s), Combined Sewer Overflows (CSO), combined manholes, and any known or suspected Storm Sewer Overflows (SSO);

   e. All pump stations and force mains;

   f. The wastewater treatment facility(ies);

   g. All surface waters (labeled);

   h. Other major appurtenances such as inverted siphons and air release valves;

   i. A numbering system which uniquely identifies overflow points, regulators and outfalls;

   j. The scale and a north arrow; and

   k. The pipe diameter, age and type of pipe, the length of pipe between manholes, the direction of flow, and invert elevations.

2. Collection System O&M Plan. The Permittee shall develop and implement a collection system operation and maintenance plan. The plan shall be submitted to EPA and NHDES within six months of the effective date of this permit (see page 1 of this permit for the effective date). The plan shall describe the Permittee's program for preventing Inflow/Infiltration (I/I) related effluent limit violations and all unauthorized discharges of wastewater, including overflows and by-passes. The plan shall include:

   a. A description of the overall condition of the collection system including a list of recent studies and construction activities.

   b. A preventive maintenance and monitoring program for the collection system.

   c. Recommended staffing to properly operate and maintain the sanitary sewer collection system.

   d. The necessary funding level, the source(s) of funding, for implementing the plan

   e. identification of known and suspected overflows, including combined manholes. A description of the cause of the identified overflows, and a plan for addressing the overflows consistent with the requirements of this permit.

   f. An ongoing program to identify and remove sources of I/I. The program shall include an inflow identification and control program that focuses on the disconnection and redirection of illegal sump pumps and roof down spouts.

g. An educational public outreach program for all aspects of I/I control, particularly private inflow.

For each of the above activities that are not completed and implemented as of the submittal date, the plan shall provide a schedule for its completion.

3. Annual Reporting Requirement. The Permittee shall submit a summary report of activities related to the implementation of its Collection System O&M plan during the previous calendar year. The report shall be submitted to EPA and the NHDES annually by March 31**.** The summary report shall, at a minimum, include:

a. A description of the staffing levels maintained during the year.

b. A map and a description of inspection and maintenance activities conducted and corrective actions taken during the previous year.

c. Expenditures for any collection system maintenance activities and corrective actions taken during the previous year.

d. A map with areas identified for investigation/action in the coming year.

e. A calculation of the annual average infiltration, the annual average inflow, the maximum month infiltration and the maximum month inflow for the reporting year.

f. A report of any corrective actions taken as a result of unauthorized discharges reported pursuant to the Unauthorized Discharges section of this permit.

D. ALTERNATE POWER SOURCE

In order to maintain compliance with the terms and conditions of this permit, the Permittee 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 and 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 applying to facilities which place sludge within a municipal solid waste landfill stipulate that the sewage sludge meets the requirements of 40 CFR Part 258 concerning the quality of materials disposed in a municipal 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 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. 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.

Signed and Dated original DMRs and all other reports required herein, 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

Duplicate signed copies of all reports required herein 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

G. STATE PERMIT CONDITIONS

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).

1. This NPDES Discharge Permit is issued by EPA under Federal and State law. Upon final issuance by EPA, the New Hampshire Department of Environmental Services-Water Division (NHDES-WD) may adopt this permit, including all terms and conditions, as a State permit pursuant to RSA 485-A:13.

2. EPA shall have the right to enforce the terms and conditions of this Permit pursuant to federal law and NHDES-WD shall have the right to enforce the Permit pursuant to state law, if the Permit is adopted. 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.

3. Pursuant to New Hampshire Statute RSA 485-A:13,I(c), any person responsible for a bypass or upset at a wastewater treatment facility shall give immediate notice of a bypass or upset to all public or privately owned water systems drawing water from the same receiving water and located within 20 miles downstream of the point of discharge regardless of whether or not it is on the same receiving water or on another surface water to which the receiving water is a tributary. 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.

4. 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 the range of 6.0 – 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).

5. Pursuant to New Hampshire Code of Administrative Rules, Env-Wq 703.07(a):

   (a) Any person proposing to construct or modify any of the following shall submit an application for a sewer connection permit to the department:

   (1) Any extension of a collector or interceptor, whether public or private, regardless of flow;

   (2) Any wastewater connection or other discharge in excess of 5,000 gpd;

   (3) Any wastewater connection or other discharge to a WWTP operating in excess of 80 percent design flow capacity based on actual average flow for 3 consecutive months;

(4) Any industrial wastewater connection or change in existing discharge of industrial wastewater, regardless of quality or quantity; and

(5) Any sewage pumping station greater than 50 gpm or serving more than one building.

7. For each new or increased discharge of industrial waste to the POTW, the permittee shall submit, in accordance with Env-Ws 904.14(e) an "Industrial Wastewater Discharge Request Application" approved by the permittee in accordance with 904.13(a). The "Industrial Wastewater Discharge Request Application" shall be prepared in accordance with Env-Ws 904.10.

8. Pursuant to Env-Ws 904.17, at a frequency no less than every five years, permittees are required to submit:

   a. A copy of its current sewer use ordinance. The sewer use ordinance shall include local limits pursuant to Env-Ws 904.04 (a).

   b. A current list of all significant indirect discharger to the POTW. As a minimum, the list shall include for each industry, its name and address, the name and daytime telephone number of a contact person, products manufactured, industrial processes used, existing pretreatment processes, and discharge permit status.

   c. A list of all permitted indirect dischargers; and

   d. A certification that the municipality is strictly enforcing its sewer use ordinance and all discharge permits it has issued.

9. In addition to submitting DMRs, monitoring results shall also be summarized for each calendar month and reported on separate Monthly Operating Report Form(s) (MORs) postmarked no later than the 15th day of the month following the completed reporting period.
   Signed and dated MORs shall be submitted to:

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

H. SPECIAL CONDITIONS

Whole Effluent Toxicity Test Frequency Adjustment

The permittee may submit a written request to the EPA 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 indicating that the Whole Effluent 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 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 indicating the pH limit range has been changed, the permittee is required to meet the permitted pH limit range in the respective permit.