

**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 Hillsborough

is authorized to discharge from the Wastewater Control Facility
located at

**40 Norton Drive
Hillsborough, New Hampshire 03244**

to receiving water named

**Contoocook River
(Hydrologic Code; 01070003)**

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

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

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

This permit supersedes the permit issued on May 1, 2001.

This permit consists of 16 pages in Part I including effluent
limitations and monitoring requirements: 9 pages of Freshwater
Acute Toxicity Test Procedure and Protocol; 25 pages of Part II
including General Conditions and Definitions; and 72 pages of
Sludge Compliance Guidance.

Signed this 1st day of May, 2007

/S/ SIGNATURE ON FILE

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

PART I.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date of the permit the Permittee is authorized to discharge treated waste waters from outfall Serial Number 001 (Hillsborough Wastewater Control Facility) into the Contoocook 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 the end of all processes, including disinfection and dechlorination or at an alternative representative location, approved by the EPA and NHDES.

Effluent Characteristic	Discharge Limitations						Monitoring Requirement	
	Average Monthly	Average Weekly	Maximum Daily	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Flow, MGD				Report		Report	Continuous	Recorder ¹
BOD ₅	119 lbs/day	178 lbs/day	198 lbs/day	30 mg/l	45 mg/l	50 mg/l	1/Week ²	Grab
TSS	119 lbs/day	178 lbs/day	198 lbs/day	30 mg/l	45 mg/l	50 mg/l	1/Week ²	Grab
pH ³	6.5-8.0 (See PART I.D.1.a.)						1/Day	Grab
<u>Escherichia coli</u> ⁴ (Colonies per 100 ml)				126		406	3/Week	Grab
Total Residual Chlorine ⁵ (mg/l)				0.43		0.74	1/Day	Grab

(Note: See pages 5 and 6 for footnotes.)

PART I.A.1. (Continued)

Effluent Characteristic	Discharge Limitations			Monitoring Requirement	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Whole Effluent Toxicity LC50 ^{6,7,8} ; in percent	100			1/Year	Grab
Ammonia Nitrogen as Nitrogen; mg/l ⁹	---	---	Report	1/Year	Grab
Hardness; mg/l ⁹	---	---	Report	1/Year	Grab
Total Recoverable Aluminum; mg/l ⁹	---	---	Report	1/Year	Grab
Total Recoverable Cadmium; mg/l ⁹	---	---	Report	1/Year	Grab
Total Recoverable Chromium; mg/l ⁹	---	---	Report	1/Year	Grab
Total Recoverable Copper; mg/l ⁹	---	---	Report	1/Year	Grab
Total Recoverable Nickel; mg/l ⁹	---	---	Report	1/Year	Grab
Total Recoverable Lead; mg/l ⁹	---	---	Report	1/Year	Grab
Total Recoverable Zinc; mg/l ⁹	---	---	Report	1/Year	Grab

(Note: See pages 5 and 6 for footnotes.)

PART I.A.1. (Continued)

Effluent Characteristic	Monitoring Requirement		
	Maximum Daily	Measurement Frequency	Sample Type
Hardness; mg/l ⁹	Report	1/Month	Grab
Total Recoverable Aluminum; mg/l ¹⁰	Report	1/Month	Grab
Total Recoverable Antimony mg/l ¹⁰	Report	1/Month	Grab
Total Recoverable Arsenic mg/l ¹⁰	Report	1/Month	Grab
Total Recoverable Beryllium mg/l ¹⁰	Report	1/Month	Grab
Total Recoverable Cadmium; mg/l ¹⁰	Report	1/Month	Grab
Total Recoverable Chromium; mg/l ¹⁰	Report	1/Month	Grab
Total Recoverable Copper; mg/l ¹⁰	Report	1/Month	Grab
Total Recoverable Lead; mg/l ¹⁰	Report	1/Month	Grab
Total Recoverable Mercury; mg/l ¹⁰	Report	1/Month	Grab
Total Recoverable Nickel; mg/l ¹⁰	Report	1/Month	Grab
Total Recoverable Selenium; mg/l ¹⁰	Report	1/Month	Grab
Total Recoverable Silver; mg/l ¹⁰	Report	1/Month	Grab
Total Recoverable Thallium; mg/l ¹⁰	Report	1/Month	Grab
Total Recoverable Cyanide; mg/l ¹⁰	Report	1/Month	Grab
Total Recoverable Zinc; mg/l ¹⁰	Report	1/Month	Grab

(Note: See pages 5 and 6 for footnotes.)

FOOTNOTES TO PART I.A.1 ON PAGES 3 AND 4

- (1) The effluent flow shall be continuously measured and recorded using a flow meter and totalizer.
- (2) The influent concentrations of both BOD5 and TSS shall be monitored twice per month (2/Month) using a 24-Hour Composite sample and the results reported as average monthly values.
- (3) State Certification requirement.
- (4) The average monthly value for Escherichia coli shall be determined by calculating the geometric mean. Escherichia coli shall be tested using test method 9221B.1 or 9221F as found in Standard Methods for the Examination of Water and Wastewater, 18th or subsequent Edition(s) as approved in 40 CFR Part 136. Escherichia coli monitoring shall be conducted concurrently with a total residual chlorine sample.
- (5) Total Residual Chlorine shall be measured using any one of the following three methods listed:
 - a. Standard Methods [18th or subsequent Edition(s) as approved in 40 CFR Part 136], No. 4500-C1 G.
 - b. Standard Methods [18th or subsequent Edition(s) as approved in 40 CFR Part 136], No. 4500-C1 F.
 - c. Standard Methods [18th or subsequent Edition(s) as approved in 40 CFR Part 136], No. 4500-C1 D

The limit at which compliance/noncompliance determinations for Total Residual Chlorine (TRC) will be based, is the chemical Minimum Quantification Level (ML). For this permit, the ML for Total Residual Chlorine is 0.020 mg/l (20.0 ug/l). This value may be reduced by permit modification as more sensitive test methods are approved by the EPA and the NHDES-WD. Any Total Residual Chlorine value below 0.020 mg/l will be reported as zero (non-detect).

- (6) LC50 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% effluent (See A.1.a. of Part 1 and Attachment A of Part 1). Therefore, a 100% limit means that a sample of 100% effluent shall cause no greater than a 50% mortality rate in that effluent sample. The limit is considered to be a maximum daily limit.

(7) The Permittee shall conduct a 48-hour static acute survival toxicity test using the Daphnid (Ceriodaphnia dubia) and the Fathead Minnow (Pimephales promelas) on effluent samples following the protocol in Attachment A (Freshwater Acute Toxicity Test Procedure and Protocol dated December 1995). Dilution water is to be prepared according to conditions set forth in Attachment A, Section IV. DILUTION WATER on page A-2. Toxicity test samples shall be collected and the test completed during the calendar quarter ending September 30th. Toxicity test results are to be submitted by October 15th.

(8) This permit shall be modified, or alternatively, revoked and reissued to incorporate additional toxicity testing requirements, including chemical specific limits, if the results of the WET tests indicate the discharge exceeds 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).

(9) For each WET test, the Permittee shall report on the appropriate Discharge Monitoring Report (DMR) the concentrations of 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-7, or as amended. The Permittee should also note that all chemical parameter results must still be reported in the appropriate WET test toxicity report.

(10) Starting on the effective date of this permit, the Permittee shall sample for the prescribed effluent characteristic for twelve consecutive months. The results of that sampling shall be reported on the monthly DMR. At the end of the twelve-month period, the Permittee may stop sampling for the prescribed effluent characteristics unless directed in writing to continue by the EPA or NHDES.

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 BOD5 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 three (3) consecutive months exceeds 80 percent of the 0.475 MGD design flow (0.38 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. A User may not introduce into any Publicly Owned Treatment Works (POTWs) any pollutant(s) which cause Pass Through or cause an Interference with the operation or performance of the POTW. The terms User, Pass Through and Interference are defined in 40 CFR §403.3.

8. All 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 §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.

9. The Permittee shall submit to EPA and NHDES-WD the name of any Industrial User (IU) who commences discharge to the POTW after the effective date of this permit:

a. That are subject to Categorical Pretreatment Standards (see list in 40 CFR §403 Appendix C as amended) pursuant 40 CFR Part 406.3 and 40 CFR Chapter I, Subchapter N

b. 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).

c. That contributes a process wastewater which makes up five (5) percent or more of the average dry weather hydraulic or organic capacity of the POTW.

d. That is designated as an IU by the Control Authority as defined in 40 CFR §403.12(a) on the basis that the industrial user has a reasonable potential to adversely affect the waste water treatment facility's operation, or violate any pretreatment standard or requirement in accordance with 40 CFR §403.8(f)(6).

10. 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.

11. 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.

12. The Permittee shall secure a NHDES sewer connection permit for any new wastewater connection to the municipal sewer system. Individual family dwellings on existing lots are excepted.

B. UNAUTHORIZED DISCHARGES

The Permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfall listed in Part I A.1 of this permit. Discharge of pollutants from any other point sources, including sanitary sewer overflows (SSOs), are not authorized by this permit and shall be reported in accordance with 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 three (3) years 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 pipe rim 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 Clean Water Act (CWA) Section 405(d) technical standards.

2. The Permittee shall comply with the more stringent of either State (Env-Ws 800) or Federal (40 CFR Part 503) requirements.

3. The technical standards (Part 503 regulations) 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. Fired in a sewage sludge incinerator.

4. The 40 CFR Part 503 conditions do not apply to facilities that place sludge within a municipal solid waste landfill (MSWLF). Part 503 relies on 40 Part 248 criteria, which regulates landfill disposal, for sewage sludge disposed in a MSWLF. These conditions, also, 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 Part 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 the addresses (EPA and NHDES WD) contained in the reporting section of the permit.

6. Sludge monitoring is not required by the Permittee when the Permittee is not responsible for the ultimate sludge use or disposal or when the sludge is deposited in a MSWLF. The Permittee must be assured that any third party contractor is in compliance with appropriate regulatory requirements. In such cases, the Permittee is required only to submit an annual report

by February 19th of each year containing the following information:

- a. Name and address of the contractor responsible for sludge use and disposal.
- b. Quantity of sludge in dry metric tons removed from the facility.

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 or notifications 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

Duplicate signed copies (original signature) of all written reports or notifications required herein or in Part II shall be submitted to the State at:

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

All verbal reports or notifications shall be made to both EPA and NHDES

G. STATE PERMIT CONDITIONS

1. 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).

2. 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.

3. 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.

4. 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.

5. 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:

a. That the range should be widened due to naturally occurring conditions in the receiving water; or

b. 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).

6. Pursuant to 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). The

municipality shall not accept any additional wastewater related to these items into its POTW (including sewers and interceptors) until they have received approval from NHDES-WD.

a. An "Application for Sewer Connection Permit" for any proposal to construct or modify of the following:

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

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

(3) Any wastewater connection or other discharge to a wastewater treatment facility operating in excess of 80 percent of its permitted flow for 3 consecutive months;

(4) Any proposed industrial wastewater connection or a change in the quantity or quality of an approved existing connection regardless of quality or quantity; or

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

7. Pursuant to New Hampshire Code of Administrative Rules, Env-Ws 904.10, an "Industrial Wastewater Discharge Request Application" shall be submitted to NHDES-WD for any new wastewater connection or a change in the volume or quality of an existing discharge of industrial wastewater into the POTW.

8. 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.

9. Local Limits shall be re-evaluated and revised as necessary no less than every 5 years from adoption in accordance with Env-Ws 904.05.

10. Within 120 days of the effective date of this permit, the Permittee shall submit a report to the Pretreatment Coordinator of the NHDES-WD including each of the following items as required by Env-Ws 904.17:

a. A copy of its current sewer use ordinance if it has been revised since any previous submittal to the department, or a certification that no changes have been made;

b. A current list of all significant indirect dischargers (as defined in Env-Ws 904.03(r)) 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.

11. 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
29 Hazen Drive, P.O. Box 95
Concord, New Hampshire 03302-0095

H. SPECIAL CONDITION

1. 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 letter containing an original signature (no copies). The State's approval 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.