MA0039853

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", and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§26-53),

Town of Wayland

is authorized to discharge from a facility located at

430 Boston Post Road
Wayland, MA 01778

to receiving waters named

Wetland to the Sudbury River

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

This permit shall become effective thirty (30) days after the date of signature.

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

This permit consists of 9 pages and Attachment A in Part I, including effluent limitations, monitoring requirements, etc., and 35 pages in Part II including General Conditions and Definitions.

Signed this 4th day of September, 1998

Linda M. Murphy
Director
Office of Ecosystem Protection
Environmental Protection Agency
Boston, MA

Director, Division of Watershed Management
Department of Environmental Protection
Commonwealth of Massachusetts
Boston, MA

This Permit is transferred to the Town of Wayland

Signed this 5th day of November, 1999

Linda M. Murphy
Linda M. Murphy, Director
Office of Ecosystem Protection

Glenn Haas, Director
MA Department of Environmental Protection

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 sanitary wastewater from outfall serial number 001. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			Monitoring Requirement	
	Average Monthly	Average Weekly	Maximum Daily	Measurement Frequency	Sample Type
Flow, GPD[1]	52,000	----	65,000	Continuous	Recorder[2]
TSS, mg/l	30	----	50	1/Week	24-hr comp[3]
BOD_5, mg/l	30	----	50	1/Week	24-hr comp[3]
pH[3], S.U.		See I.A.1.b.		1/Week	Grab
Fecal Coliform[4], #/100 ml	200	----	400	1/Week	Grab
Phosphorus, mg/l	0.5	----	----	1/Week	Grab
Aluminum, Total, mg/l	----	----	Report	1/Month	Grab
Whole Effluent Toxicity Testing					
LC_{50}[5],	----	----	$\geq$ 100%	1/Year[5,6]	24-hr comp[3]

- Effluent samples shall be taken after the UV disinfection system.

-- Footnotes are listed on Page 3 --

a. The discharge shall not cause a violation of the water quality standards of the receiving waters.

b. The pH of the effluent shall not be less than 6.5 nor greater than 8.3 at any time, unless these values are exceeded due to natural causes or as a result of any approved treatment process(es).

c. The discharge shall not cause objectionable discoloration of the receiving waters.

d. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.

e. When the effluent discharged for a period of 90 consecutive days exceeds 80 percent of the design flow, 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.

Footnotes:

1. The flow limit of 65,000 GPD is required if the "Sewer Connection Option", as described later, is pursued. For this option, a minimum of 4,740 GPD shall be tie-ins from existing, failing septic systems. The rest of the flow from Town sewering may come from the tie-ins of existing, failing or inadequate septic systems. If the alternative plan to achieve phosphorus reduction within the Watershed, as described in Section I.A.4.c., is submitted to EPA and MADEP and approved, then the maximum daily flow limit shall be 45,000 GPD.

2. For flow, report maximum and minimum daily rates and total flow for each operating day.

3. A 24 hour composite sample will be flow and time weighted and will consist of at least twenty four (24) grab samples taken at equal time intervals throughout the period.

4. These are also State certification requirements.

5. The LC_{50} is the concentration of effluent which causes mortality to 50% of the test organisms. Therefore, a 100% limit means that a sample of 100% effluent (no dilution) shall cause no more than a 50% mortality rate.

6. The permittee shall conduct one acute toxicity test per year. The test will be conducted annually in October and the results will be submitted by December 15th. The permittee shall test the fathead minnow, Pimephales promelas and the daphnid, Ceriodaphnia. See Permit Attachment A, Toxicity Test Procedure and Protocol.

2. **Toxics Control**

a. The permittee shall not discharge any pollutant or combination of pollutants in toxic amounts.

b. Any toxic component of the effluent shall not result in any demonstrable harm to aquatic life or violate any state or federal water quality standard which has been or may be promulgated. Upon promulgation of any such standard, this permit may be revised or amended in accordance with such standards.

3. **Numerical Effluent Limitations for Toxicants**

EPA or DEP may use the results of the toxicity tests and chemical analyses conducted pursuant to this permit, as well as national water quality criteria developed pursuant to Section 304(a)(1) of the Clean Water Act (CWA), state water quality criteria, and any other appropriate data, to develop numerical effluent limitations for any pollutants, including but not limited to those pollutants listed in Appendix D of 40 CFR Part 122.

4. Watershed Based Phosphorus Loading Reduction

This permit requires that the permittee plan and implement watershed based trading to reduce phosphorus loadings to the Sudbury River and its tributaries, (the "Watershed"), as shown in Fact Sheet Attachment A. Since this plan will involve trading with nonpoint sources, the permittee shall use a factor of 3:1 for such a trade. In other words, and as is discussed below, for every pound of phosphorus which the permittee discharges, it shall eliminate at least three (3) pounds of phosphorus from one or more nonpoint sources in the Watershed. Thus, the permittee shall achieve a phosphorus reduction of at least 0.375 pounds per day of phosphorus that would have otherwise been released to the Watershed, to offset the 0.125 lbs/day to be discharged.

The permittee shall first participate in an effort to implement such phosphorus trading by working with the Town of Wayland to enable the Town to connect to the permittee's wastewater treatment plant a number of existing, failing septic systems in the Watershed("Sewer Connection Option").

Within three (3) months after the effective date of the permit, the permittee shall submit to EPA and MADEP for their approval, the following:

a. A preliminary draft plan to achieve nonpoint source reduction of at least 0.375 lbs/day of phosphorus within the Watershed, based upon the Sewer Connection Option. If the permittee discharges more than an average of 30,000 gallons per day (GPD), not including flows from the tie-ins of failing septic systems, then the amount of nonpoint source phosphorus to be removed to meet the 3:1 trade shall be increased proportionately.

b. In order to provide EPA and MADEP reasonable assurance that the phosphorus reduction shall be achieved under the "Sewer Connection Option", a description of the mechanism (e.g. contract, memorandum of agreement) by which the town of Wayland will acquire at least 4,740 GPD capacity in the permittee's wastewater treatment plant and connect to that plant existing, failing septic systems in the Watershed to utilize that capacity.

The permittee shall respond to all written comments by EPA and MADEP and shall make all changes to the preliminary draft plan required by EPA and MADEP for their approval.

Within twelve (12) months of the effective date of the permit, the permittee shall submit to EPA and MADEP, for their approval, the following:

c. A final draft plan to achieve phosphorus reduction consistent with the plan described in Section I.A.4.a. above, or amendments thereof. However, if the permittee determines that such plan is not sufficiently assured, it shall instead submit an alternative plan to achieve a phosphorus reduction of at least 0.375 pounds per day within the Watershed by means of any one or a combination of the following:

i. Payment to public or private parties of a sum, which the permittee estimates will not exceed $150,000, to implement repairs, upgrades or modifications to failing septic systems within the Watershed; and/or

ii. harvesting of nuisance plants or other phosphorus-releasing materials visibly present in the Watershed; and/or

iii. storm water management or other proposals.

The plan shall describe and evaluate how each plan component will reduce phosphorus loadings to the Watershed. If the permittee proposes alternative Part I.A.4.c.i., the plan shall also include a description of the mechanism by which there is reasonable assurance that the funds will be spent to implement the phosphorus reduction. Although the selection of the plan component(s) and the proportions of each shall be determined by the permittee, the evaluation of how the plan component(s) will reduce phosphorus loadings and the calculations used to demonstrate the required reduction of at least 0.375 pounds per day shall be subject to EPA and MADEP approval.

d. A schedule for implementation for the phosphorus reduction plan described in Section I.A.4.c. above.

The permittee shall respond to all written comments by EPA and MADEP and shall make all changes to the final draft plan and schedule required by EPA and MADEP for their approval.

Unless otherwise notified by EPA or MADEP, the permittee shall initiate implementation of the plan within sixty (60) days of the final plan approval.

The final plan and implementation schedule approved by EPA and MADEP shall become an enforceable part of this permit. The reduction of at least 0.375 pounds per day in nonpoint source phosphorus loadings to the Watershed required by this permit shall be achieved no later than two (2) years after the effective date of this permit.

Within six (6) months of the final plan approval by EPA or MADEP, the permittee shall enter into an agreement with necessary public or private parties for implementation of the plan and submit such executed agreement to EPA and the MADEP. This agreement and related documents shall:

Outline each party's roles and responsibilities for plant ownership/operation of the phosphorus reduction plan; describe the status of plan implementation; and include provisions for annual reporting.

These annual reports shall be submitted on May 15th of each year and shall discuss compliance with permit requirements and scheduled milestones relating to phosphorus trading. The reports shall also describe efforts to be conducted during the following year to reduce phosphorus loading within the Watershed to the extent required by the permit.

5. **Optimization Study**

The permittee shall conduct an optimization study of its wastewater treatment plant which will evaluate and recommend plant operation, maintenance and/or modifications to maximize phosphorus removals through the plant. A study plan and implementation report shall be submitted within two (2) years after the effective date of the permit. Upon submittal of the plan, the plant shall be operated in accordance with the findings of this study in order to maximize phosphorus removal for the duration of the permit. These submittals shall be made to the addressees on Page 8 and 9.

6. **Instream Monitoring Program**

The permittee shall initiate an instream monitoring program to determine the existing condition and the post-discharge condition of the Sudbury River from two sampling locations. Beginning in 1998, and continuing annually thereafter, this sampling shall be conducted monthly from May to November and focus on nutrients. The permittee shall conduct sampling for the listed parameters below at nearby points upstream and downstream of the proposed discharge, subject to review and approval by the EPA and the MADEP. All samples shall be analyzed for the following parameters: nitrate and nitrite nitrogen, phosphorus, chlorophyll A, and pH. Dissolved oxygen shall also be monitored upstream and downstream of this discharge for the months of June, July and August only. This sampling shall be done three times per week. For each of these three days, there shall be two samples taken each day, one in the early morning and the other in late afternoon. Results of this monitoring shall be reported in accordance with Section C. of the permit. In addition, the annual reports described in Section 4 above shall include a summary of any water quality monitoring results obtained during the previous 12 months.

B. SLUDGE CONDITIONS

1. GENERAL CONDITIONS

   a. 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. If an applicable management practice or numerical limitation for pollutants in sewage sludge more stringent than existing federal and state regulations is promulgated under Section 405(d) of the CWA, this permit shall be modified or revoked and reissued to conform to the promulgated regulations.

   b. The permittee shall give **prior notice** to the Director of any change(s) planned in the permittee's sludge use or disposal practice.

   c. A change in the permittee's sludge use or disposal practice is a cause for modification of this permit. It is a cause for revocation and reissuance of this permit if the permittee requests or agrees.

2. For sewage sludge which is to be landfilled, the permittee must dispose of this sludge in a landfill which is in compliance with 40 CFR Part 258.

3. Sewage sludge disposed of in a municipal solid waste land fill shall not be hazardous. The Toxicity Characterization Leachate Protocol (TCLP) shall be used as demonstration that the sludge is non-hazardous.

C. MONITORING AND REPORTING

1. Reporting

   Monitoring results obtained during the previous month shall be summarized for each month and reported on separate Discharge Monitoring Report Form(s) postmarked no later than the 15th day of the month following the effective date of the permit.

   Signed and dated originals of these, and all other reports required herein, shall be submitted to the Director and the State at the following addresses:

   U.S. Environmental Protection Agency
   Planning and Administration (SPA)
   P.O. Box 8127
   Boston, Massachusetts 02114

The State Agency is:

Massachusetts Department of Environmental Protection
Northeast Regional Office
10 Commerce Way
Woburn, MA 01801

Reports related to Section I.A.4. of the permit shall also be submitted to:

U.S. Environmental Protection Agency
Massachusetts State Director (CMA)
Office of Ecosystem Protection
JFK Federal Building
Boston, MA 02203

Only signed copies of all toxicity test reports required by this permit shall be submitted to the State at:

Massachusetts Department of Environmental Protection
Division of Watershed Management
Watershed Planning and Permitting Section
627 Main Street
Worcester, Massachusetts 01608

D. STATE PERMIT CONDITIONS

1. This Discharge Permit is issued jointly by the U. S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection under Federal and State law, respectively. As such, all the terms and conditions of this permit are hereby incorporated into and constitute a discharge permit issued by the Commissioner of the MA DEP pursuant to M.G.L. Chap. 21, §43.

2. 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 this Permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this Permit is declared, invalid, illegal or otherwise issued in violation of State law such permit shall remain in full force and effect under Federal law as an NPDES Permit issued by the U.S. Environmental Protection Agency. In the event this Permit is declared invalid, illegal or otherwise issued in violation of Federal law, this Permit shall remain in full force and effect under State law as a Permit issued by the Commonwealth of Massachusetts.