

**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),

Northfield Mount Hermon School

is authorized to discharge from the facility located at

**Main Road
Gill, Massachusetts 01262**

to the receiving water named

Connecticut River

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

This permit will become effective 60 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 April 24, 2002.

This permit consists of 9 pages in Part I including effluent limitations and monitoring requirements, 35 pages in Part II including General Conditions and Definitions, and Attachment A, the Freshwater Acute Toxicity Test Procedure and Protocol.

Signed this 30th day of September, 2005

/s/ SIGNATURE ON FILE

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

Part 1. A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge treated effluent from Outfall Serial Number **001**. Such discharges shall be limited and monitored by the permittee as specified below.

<u>Effluent Characteristics</u>	<u>Units</u>	<u>Discharge Limitations</u>		<u>Maximum Daily</u>	<u>Monitoring Requirements²</u>	
		<u>Average Monthly</u>	<u>Average Weekly</u>		<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow ¹	mgd	0.45	*****	*****	Continuous	Continuous
	mgd	Report	*****	*****	Continuous	Continuous
BOD ₅ ³	mg/l	30	45	*****	1/week	24-hour Composite ⁴
	lbs/day	113	169	*****	1/week	
Total Suspended Solids ³	mg/l	30	45	*****	1/week	24-hour Composite ⁴
	lbs/day	113	169	*****	1/week	
pH ⁵	SU		6.5 - 8.3		1/week	Grab
Fecal Coliform ^{5,6} (April 1 – October 31)	cfu/100ml	200	*****	400	1/week	Grab
Total Residual Chlorine ^{5,6} (April 1 – October 31)	mg/l	1.0	*****	1.0	Daily	Grab
Total Kjeldahl Nitrogen	mg/l	*****	*****	Report	2/year	24-hour Composite ⁴
Nitrite - Nitrate Nitrogen	mg/l	*****	*****	Report	2/year	24 Hour Composite ⁴
LC ₅₀ ^{7,8,9}	%	*****	*****	≥ 50	1/year	24 Hour Composite ⁴

Footnotes:

1. For flow, report maximum and minimum daily rates and total flow for each operating date. This is an annual average limit, which shall be reported as a rolling average. The first value will be calculated using the monthly average flow for the first full month ending after the effective date of the permit and the eleven previous monthly average flows. Each subsequent month's DMR will report the annual average flow that is calculated from that month and the previous 11 months. In addition, report the average monthly flow for the month.
2. All required effluent samples shall be collected at the outlet of the chlorine contact chamber. Any change in sampling location must be reviewed and approved in writing by EPA and MADEP. All samples shall be tested using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136. All samples shall be 24-hour composites unless specified as a grab sample in 40 CFR §136.
3. Sampling required for influent and effluent.
4. A 24-hour composite sample will consist of at least twenty four (24) grab samples taken during a consecutive 24-hour period (e.g. 7:00 am Monday to 7:00 am Tuesday) and combined proportional to flow.
5. Required for State Certification.
6. Monitoring for fecal coliform and total residual chlorine shall be only conducted from **April 1st through October 31st** to reflect the seasonal disinfection period. Fecal coliform discharges shall not exceed a monthly geometric mean of 200 colony forming units (cfu) per 100 ml, nor shall they exceed 400 cfu per 100 ml as a daily maximum. Samples for fecal coliform and total residual chlorine shall be taken at the same time.
7. The permittee shall conduct acute toxicity tests once per year. The permittee shall test the daphnid, Ceriodaphnia dubia, only. Toxicity test samples shall be collected **during the second week of September**. The tests must be performed in accordance with test procedures and protocols specified in **Attachment A** of this permit. Test results shall be submitted by **October 31st**.
8. The LC₅₀ is the concentration of effluent which causes mortality to 50% of the test organisms. Therefore, a 50% limit means that a sample of 50% effluent shall cause no more than a 50% mortality rate.
9. If toxicity test(s) using receiving water as diluent show the receiving water to be toxic or unreliable, the permittee shall follow procedures outlined in **Attachment A Section IV., DILUTION WATER** in order to obtain permission to use an alternate dilution water. In lieu of individual approvals for alternate dilution water required in **Attachment A**, the

permittee may obtain automatic approval of an alternate dilution water, including the appropriate species for use with that water, by following the procedure outlined in the "NPDES Permit Program Instructions for the Discharge Monitoring Report Forms (DMRs) Report Year 2004" (Attachment G, Common Pitfalls and Guidance, 14. **Dilution Water**). If this Guidance is revoked, the permittee shall revert to obtaining approval as outlined in **Attachment A**. The Instructions along with the annual set of DMRs are sent to all permittees separately and are not intended as a direct attachment to this permit. Any modification or revocation to this "Guidance Document" will be transmitted to the permittees as part of the annual DMR instruction package. However, at any time, the permittee may choose to contact EPA-New England directly using the approach outlined in **Attachment A**.

Part 1.A.1. (Continued)

- a. The discharge shall not cause a violation of the water quality standards of the receiving waters.
- b. The discharge shall not cause objectionable discoloration of the receiving waters.
- c. The effluent shall not contain a visible oil sheen, foam, or floating solids at any time.
- d. The permittee's treatment facility shall maintain a minimum of 85 percent removal of both total suspended solids and biochemical oxygen demand. The percent removal shall be based on monthly average values.
- e. When the effluent discharged for a period of 90 consecutive days exceeds 80 percent of the designed 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.
- f. The permittee shall minimize the discharge of chlorine through the outfall.
- g. Sample results using EPA approved methods for any parameter above its required frequency must also be reported.

PART 1. B.

1. The WWTP must provide notice to the Director as soon as possible of the following:
 - a. Any substantial change in the volume or character of pollutants being introduced into that WWTP by a source introducing pollutants into the WWTP at the time of issuance of the permit.

b. For purposes of this paragraph, notice shall include information on

(i) the quantity and quality of effluent introduced into the WWTP; and

(ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the WWTP.

2. Toxics Control

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

b. Any toxic components 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 information or 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.

PART 1. C. UNAUTHORIZED DISCHARGES

1. 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. 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 Section D.1.e. (1) of the General Requirements of this permit (Twenty-four hour reporting).

PART 1. D. 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:

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 Control

By the anniversary date of the effective date of this permit the permittee shall submit an annual summary report of all actions taken to minimize I/I during the previous calendar year. The summary report shall, at a minimum, include:

- i) A map and a description of inspection and maintenance activities conducted and corrective actions taken during the previous year.
- ii) Expenditures for any infiltration/inflow related maintenance activities and corrective actions taken during the previous year.
- iii) A map with areas identified for I/I-related investigation/action in the coming year.
- iv) A calculation of the annual average I/I, the maximum month I/I for the reporting year.
- v) A report of any infiltration/inflow related corrective actions taken as a result of unauthorized discharges reported pursuant to 314 CMR 3.19(20) and reported pursuant to **PART 1. C. Unauthorized Discharges** of this permit.

4. Alternative Power Source

In order to maintain compliance with the terms and conditions of this permit, the permittee shall continue to provide an alternative power source with which to sufficiently operate its treatment works (as defined at 40 CFR §122.2).

PART 1. 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 or federal (40 CFR part 503), requirements.

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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. 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 also do not apply to facilities which do not dispose of sewage sludge during the life of the permit but rather treat the sludge (e.g. lagoons- reed beds), or are otherwise excluded under 40 CFR 503.6.
5. The permittee shall use and comply with the attached compliance guidance document to determine appropriate conditions. Appropriate conditions contain the following elements:
 - a) General requirements
 - b) Pollutant limitations
 - c) Operational Standards (pathogen reduction requirements and vector attraction reduction requirements)
 - d) Management practices
 - e) Record keeping
 - f) Monitoring
 - g) 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 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 1500	1 /quarter
1500 to less than 15000	6 /year
15000 +	1 /month

7. The permittee shall sample the sewage sludge using the procedures detailed in 40 CFR 503.8.
8. The permittee shall submit an annual report containing the information specified in the guidance by **February 19**. Reports shall be submitted to the address contained in the reporting section of the permit. Sludge monitoring is not required by the permittee when the permittee is not responsible for the ultimate sludge disposal. The permittee must be

assured that any third party contractor is in compliance with appropriate regulatory requirements. In such case, the permittee is required only to submit an annual report by February 19 containing the following information:

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

PART 1. F. MONITORING AND REPORTING

1. Reporting

a. Monitoring results obtained during each calendar month shall be summarized and reported on Discharge Monitoring Report Form(s) postmarked **no later than the 15th day of the following month.**

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

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

c. Signed and dated originals of these and all other reports required herein, excluding toxicity test reports, shall be submitted to the State at the following address:

Massachusetts Department of Environmental Protection
Bureau of Resource Protection
Western Regional Office
436 Dwight Street
Springfield, MA 01103

d. Signed and dated Discharge Monitoring Report Forms and toxicity test reports required by this permit shall also be submitted to the State at the following address:

Massachusetts Department of Environmental Protection
Division of Watershed Management
Surface Water Discharge Permit Program
627 Main Street, 2nd Floor
Worcester, Massachusetts 01608

PART 1. G. STATE PERMIT CONDITIONS

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1. This Discharge Permit is issued jointly by the U. S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (DEP) 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.