

**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 Lenox
Department of Public Works
275 Main St.
Lenox, MA 01240**

is authorized to discharge from the facility located at

**Lenox Wastewater Treatment Plant
239 Crystal Street
Lenox Dale, MA 01242**

to receiving water named **Housatonic River**

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

This permit shall become effective on November 1, 2007.

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 November 28, 2001, which became effective on January 28, 2002.

This permit consists of 12 pages in Part I including effluent limitations, monitoring requirements, **Attachment A (Freshwater Chronic Toxicity Test Procedure and Protocol), and Attachment B (Sludge Compliance Guidance)**; and Part II Standard Conditions.

Signed this **12th day of September, 2007**

/S/ SIGNATURE ON FILE

Stephen S. Perkins
Director
Office of Ecosystem Protection
Environmental Protection Agency
Boston, MA

Glenn Haas
Director
Division of Watershed Management
Department of Environmental Protection
Boston, MA

Part I

| A. Effluent Limitations and Monitoring Requirements | | | | | | |
|---|--------------------------------|-----------------------------|----------------|----------------|--|---------------------------------|
| 1. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge from outfall serial number 001 , treated effluent to the Housatonic River. Samples shall be collected prior to discharging to the Housatonic River at a location that provides a representative analysis of the effluent (See Part I.A.1.g.). | | | | | | |
| <u>Effluent Characteristics</u> | <u>Units</u> | <u>Discharge Limitation</u> | | | <u>Monitoring Requirements</u> ^{*3} | |
| Parameter | | Average Monthly | Average Weekly | Maximum Daily | Measurement Frequency | Sample Type |
| Flow ^{*2} Flow ^{*2} | MGD MGD | 1.19 Report | **** **** | **** Report | Continuous Continuous | Recorder Recorder |
| BOD ₅ ^{*4} BOD ₅ ^{*4} | mg/l lbs/day | 30 300 | 45 450 | Report | 1/Week | 24-Hour Composite ^{*5} |
| TSS ^{*4} TSS ^{*4} | mg/l lbs/day | 30 300 | 45 450 | Report | 1/Week | 24-Hour Composite ^{*5} |
| pH Range ^{*1} | 6.5-8.3 SU (See Part I.A.1.c.) | | | | 1/Day | Grab |
| <i>E. coli</i> ^{*1,*6} (April 1 st -Oct. 31 st) | cfu/100ml | 126 | **** | 409 | 1/Week | Grab |
| Fecal Coliform Bacteria ^{*6} (April 1 st -October 31 st) | cfu/100 ml | 200 | **** | 400 | 1/Week | Grab |
| Total Residual Chlorine ^{*1,*7,*8} (April 1 st -Oct. 31 st) | mg/l | 0.23 | **** | 0.40 | 1/Day | Grab |

Part I. A.1. Continued

| <u>Effluent Characteristics</u> | <u>Units</u> | <u>Discharge Limitation</u> | | | <u>Monitoring Requirements</u> ^{*3} | |
|--|--------------|---------------------------------|-----------------------|----------------------|--|---------------------------------|
| | | <u>Average Monthly</u> | <u>Average Weekly</u> | <u>Maximum Daily</u> | <u>Measurement Frequency</u> | <u>Sample Type</u> |
| Total Ammonia Nitrogen | mg/l | Report | **** | **** | 1/Month | 24-Hour Composite ^{*5} |
| Total Kjeldahl Nitrogen | mg/l | Report | **** | **** | 1/Month | 24-Hour Composite ^{*5} |
| Total Nitrate Nitrogen | mg/l | Report | **** | **** | 1/Month | 24-Hour Composite ^{*5} |
| Total Nitrite Nitrogen | mg/l | Report | **** | **** | 1/Month | 24-Hour Composite ^{*5} |
| Phosphorus, Total ^{*13} | mg/l | 1.0 | **** | **** | 1/Week | 24-Hour Composite ^{*5} |
| Ortho-Phosphorus, dissolved ^{*12} (Nov. 1 st -March 31 st) | mg/l | Report | **** | **** | 1/Week | 24-Hour Composite ^{*5} |
| Ortho-Phosphorus, dissolved ^{*12} (Nov. 1 st -March 31 st) | lbs/day | Report | | | | |
| Whole Effluent Toxicity (WET) ^{*9,*10,*11} | % | Acute - LC ₅₀ ≥ 100% | | | 2/Year | 24-Hour Composite ^{*5} |

- *1 Required for State Certification.
- *2 Report annual average, monthly average, and the maximum daily flow. The limit is an annual average, which shall be reported as a rolling average. The value shall be calculated as the arithmetic mean of the monthly average flow for the reporting month and the monthly average flows of the eleven previous months.
- *3 All required effluent samples shall be collected at the point specified in Part I.A.1.g. of this permit. Any change in sampling location must be reviewed and approved in writing by EPA and MassDEP.

A routine sampling program shall be developed in which samples are taken at the same location, same time and same days of every month. Any deviations from the routine sampling program shall be documented in correspondence appended to the applicable discharge monitoring report (DMR) that is submitted to EPA.

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.

- *4 Sampling required for the influent and effluent.
- *5 A 24-hour composite sample shall consist of at least twenty-four (24) grab samples taken during one consecutive 24-hour period, either collected at equal intervals and combined proportional to flow or continuously collected proportionally to flow.
- *6 *E. coli* and fecal coliform bacteria limitations and monitoring requirements are seasonal (April 1st through October 31st). The monthly average limits are expressed as geometric means. The fecal coliform limitations and monitoring requirements shall expire one year from the effective date of this permit. The *E. coli* limitations and monitoring requirements shall be report-only for the first year that this permit is in effect, and the limitations shall become effective one year from the effective date of this permit. *E. coli* and fecal coliform bacteria samples shall be collected concurrently. Weekly bacteria samples shall also be collected concurrently with one of the total residual chlorine samples.
- *7 Total residual chlorine (TRC) limitations and monitoring requirements are in effect from April 1st through October 31st. The permittee is not authorized to discharge chlorine from November 1st through March 31st. One of the daily total residual chlorine samples shall be collected at the same time as the weekly *E. coli* and fecal coliform bacteria samples. The minimum detection level (ML) for total residual chlorine is defined as 20 µg/l. This value is the minimum detection level for chlorine using EPA approved methods found in Standard Methods for the Examination of Water and Wastewater, 20th Edition, Method 4500CL-E and G. One of these methods must be used to determine total residual chlorine. For effluent limitations less than 20

µg/l, compliance/non-compliance shall be determined based on the ML. Sample results of 20 µg/l or less shall be reported as zero on the discharge monitoring report.

For every day that more than one TRC sample is analyzed, the monthly DMR shall include an attachment documenting the individual grab sample results for that day, the date and time each sample was collected, the analytical method used, and a summary of any operational modifications implemented in response to the sample results. This requirement applies to all samples taken, including screening level and process control samples. All test results using an EPA-approved analytical method shall be used in the calculation and reporting of the monthly average and maximum daily data submitted on the DMR (see Part II Section D.1.d.(2)).

- *8 The chlorination system shall include an alarm system within **180 days** of the effective date of the permit for indicating system interruptions or malfunctions. Any interruption or malfunction of the chlorine dosing system that may have resulted in levels of chlorine that were inadequate for achieving effective disinfection shall be reported with the monthly DMRs. The report shall include the date and time of the interruption or malfunction, the nature of the problem, and the estimated amount of time that the reduced levels of chlorine addition occurred.
- *9 The LC₅₀ 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.
- *10 The permittee shall conduct an acute toxicity test two times per year. The permittee shall test the daphnid, *Ceriodaphnia dubia* (*C. dubia*), only. Toxicity test samples shall be collected during the second week of the months of July and October. The test results shall be submitted by the last day of the month following the completion of the test. The results are due August 31st and November 30th, respectively. The tests must be performed in accordance with the test procedures and protocols specified in **Attachment A** of this permit.

| Test Dates: Second Week in: | Submit Results By: | Test Species | Acute Limit (LC ₅₀) |
|-----------------------------------|---|---|------------------------------------|
| July October | August 31 st November 30 th | <i>Ceriodaphnia dubia</i> (daphnid) See Attachment A | ≥ 100% |

- *11 If toxicity tests 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, EPA-New England has developed a Self-Implementing Alternative Dilution Water Guidance document (called “Guidance Document”) which may be used to obtain automatic approval of an alternate dilution water, including the appropriate species for use with that water. If this Guidance Document is revoked, the permittee shall revert to obtaining approval as outlined in **Attachment A**. The “Guidance Document” has been sent to all permittees with their annual set of DMRs and Revised Updated Instructions for Completing EPA’s Pre-Printed NPDES Discharge Monitoring Report (DMR) Form 3320-1 and is 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**. If the permittee uses alternative dilution water, the ambient water will still need to be tested.

*12 The maximum daily concentration and loading values reported for dissolved ortho-phosphorus shall be the values from the same day that the maximum daily total phosphorus concentrations and loading values were measured from November 1st through March 31st.

*13 See Part I.B. of this permit, Schedule of Compliance.

Part I.A.1. (Continued)

- b. The discharge shall not cause a violation of the water quality standards of the receiving waters.
- c. The pH of the effluent shall not be less than 6.5 nor greater than 8.3 at any time.
- d. The discharge shall not cause objectionable discoloration of the receiving waters.
- e. The effluent shall contain neither visible oil sheen, foam, nor floating solids at any time.
- f. 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.
- g. Samples taken in compliance with the monitoring requirements stated above shall be taken at a point prior to mixing with other streams and shall be representative of the discharge.
- h. If the average annual flow in any calendar year exceeds 80 percent of the facility’s design flow, the permittee shall submit a report to MassDEP by March 31st of the following calendar year describing their plans for further

flow increases and how they will maintain compliance with the flow limit and all other effluent limitations and conditions.

2. All POTWs must provide adequate notice to the Director of the following:
 - a. Any new introduction of pollutants into the POTW from an indirect discharger in a primary industry category.
 - b. Any substantial change in the volume or character of pollutants being introduced into the 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.
3. Prohibitions Concerning Interference and Pass Through:
 - a. Pollutants introduced into POTWs by a non-domestic source (user) shall not pass through the POTW or interfere with the operation or performance of the works.
4. 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.
5. Numerical Effluent Limitations for Toxicants

EPA or MassDEP 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.

B. SCHEDULE OF COMPLIANCE

The phosphorus limit for the winter period (November 1st through April 30th) shall become effective one year from the effective date of the permit. Specifically, the permittee shall report the total phosphorus concentrations for the first winter period following the effective date of the permit while working towards meeting this new limitation.

C. 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.a. of this permit (outfall 001). 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 (24-hour reporting).

Notification of SSOs to MassDEP shall be made on its SSO Reporting Form (which includes MassDEP Regional Office telephone numbers). The reporting form and instructions for its completion can be found on-line at: <http://www.mass.gov/dep/water/approvals/surffms.htm#sso>

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 of this permit 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 Plan:

The permittee shall develop and implement a plan to control infiltration and inflow (I/I) to the separate sewer system. The plan shall be submitted to EPA and MassDEP within **six months of the effective date** of this permit (see page 1 of this permit for the effective date) and shall describe the permittee's program for preventing infiltration/inflow-related effluent limit violations, and all unauthorized discharges of wastewater, including overflows and by-passes due to excessive infiltration/inflow.

The plan shall include:

- An ongoing program to identify and remove sources of infiltration and inflow. The program shall include the necessary funding level and the source(s) of funding.
- An inflow identification and control program that focuses on the disconnection and redirection of illegal sump pumps and roof down spouts. Priority should be given to removal of public and private inflow sources that are upstream from, and potentially contribute to, known areas of sewer system backups and/or overflows.
- Identification and prioritization of areas that will provide increased aquifer recharge as the result of reduction/elimination of infiltration and inflow to the system.
- An educational public outreach program for all aspects of I/I control, particularly private inflow.

Reporting Requirements:

A summary report of all actions taken to minimize I/I during the previous calendar year shall be submitted to EPA and MassDEP annually, by the anniversary date of the effective date of this permit. The summary report shall, at a minimum, include:

- A map and a description of inspection and maintenance activities conducted and corrective actions taken during the previous year.
- Expenditures for any infiltration/inflow-related maintenance activities and corrective actions taken during the previous year.
- A map with areas identified for I/I-related investigation/action in the coming year.
- A calculation of the annual average I/I and the maximum month I/I for the reporting year.
- 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 the Unauthorized Discharges section 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).

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.
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 Part 503.6.
5. The permittee shall use and comply with the attached compliance guidance document (**Attachment B**) 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 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 (see **Attachment B**). Reports are due annually by **February 19th**. 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 on **February 19th** 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

F. MONITORING AND REPORTING

1. Reporting

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

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:

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

The State Agency is:

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

Signed and dated Discharge Monitoring Report forms and toxicity test reports required by this permit shall also be submitted to the State at:

Massachusetts Department of Environmental Protection
Division of Watershed Management
627 Main Street, 2nd Floor
Worcester, Massachusetts 01608

G. STATE PERMIT CONDITIONS

This discharge permit is issued jointly by the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) 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 MassDEP pursuant to M.G.L. Chap. 21, § 43.

Each Agency will have the independent right to enforce the terms and conditions of this permit. Any modification, suspension or revocation of this permit will be effective only with respect to the Agency taking such action, and will 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 will 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 will remain in full force and effect under State law as a permit issued by the Commonwealth of Massachusetts.