

**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 Erving
POTW # 3
In Care of Board of Selectmen
12 East Main Street
Erving, MA 01344**

is authorized to discharge from a facility located at

**Erving POTW # 3
Bridge Street
Erving, MA 01344**

to a receiving waters named

Millers River (MA35-05)

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


This permit shall become effective December 1, 2008.

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


This permit supersedes the permit issued on September 15, 2004 and expired September 30, 2007.

This permit consists of 11 pages in Part I including effluent limitations, monitoring requirements, Attachment A, (Summary of Required Report Submittals), and 25 pages in Part II including General Conditions and Definitions.

Signed this ^{29th} day of ^{September, 2009} ~~September~~, ²⁰⁰⁸ ~~2008~~ _{km}



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 I

A.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** to the Millers River. Such discharge shall be limited and monitored by the permittee as specified below.

<u>EFFLUENT CHARACTERISTIC</u>	<u>EFFLUENT LIMITS</u>						<u>MONITORING REQUIREMENTS</u>	
	Mass Limits			Concentration Limits			<u>MEASUREMENT FREQUENCY</u>	<u>SAMPLE TYPE²</u>
<u>PARAMETER</u>	<u>AVERAGE MONTHLY</u>	<u>AVERAGE WEEKLY</u>	<u>MAXIMUM DAILY</u>	<u>AVERAGE MONTHLY</u>	<u>AVERAGE WEEKLY</u>	<u>MAXIMUM DAILY</u>		
FLOW ¹	***	***	***	0.01 MGD	***	Report MGD	CONTINUOUS	RECORDER
FLOW ¹	***	***	***	Report MGD	***	Report MGD	CONTINUOUS	RECORDER
BOD ₅	2.5 lbs/Day	3.75 lbs/Day	Report	30 mg/l	45 mg/l	Report mg/l	1/WEEK	24-HOUR COMPOSITE
TSS	2.5 lbs/Day	3.75 lbs/Day	Report	30 mg/l	45 mg/l	Report mg/l	1/WEEK	24-HOUR COMPOSITE
pH RANGE ³	6.5 - 8.3 SU SEE PERMIT PAGE 5 OF 11, PARAGRAPH I.A.2.b.						1/DAY	GRAB
FECAL COLIFORM ^{3,4} (April 1- October 31)	***	***	***	200 cfu/100 ml	***	400 cfu/100 ml	1/WEEK	GRAB
<i>E. coli</i> ^{3,4} (April 1- October 31)	***	***	***	126 cfu/100 ml	***	409 cfu/100 ml	1/WEEK	GRAB
CHLORINE, TOTAL RESIDUAL ^{3,5} (April 1- October 31)	***	***	***	1.0 mg/l	***	1.0 mg/l	1/DAY (when in use)	GRAB

Continued on next page

Part I Continued

PARAMETER	AVERAGE MONTHLY	AVERAGE WEEKLY	MAXIMUM DAILY	AVERAGE MONTHLY	AVERAGE WEEKLY	MAXIMUM DAILY	MEASUREMENT FREQUENCY	SAMPLE TYPE ³
TOTAL NITROGEN ⁷	Report lbs/Day	***	Report lbs/Day	Report mg/l	***	Report mg/l	2/YEAR	24-HOUR COMPOSITE
TOTAL NITRITE + NITRATE	***	***	***	Report mg/l	***	Report mg/l	2/YEAR	24-HOUR COMPOSITE
TOTAL KJELDAHL NITROGEN	***	***	***	Report mg/l	***	Report mg/l	2/YEAR	24-HOUR COMPOSITE
TOTAL AMMONIA AS N	***	***	***	Report mg/l	***	Report mg/l	2/YEAR	24-HOUR COMPOSITE

Footnotes:

1. 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 will be calculated as the arithmetic mean of the monthly average flow for the reporting month and the monthly average flows of the previous eleven months.
2. **All required effluent samples shall be collected at the manhole prior to discharge.** A routine sampling program shall be developed in which samples are taken at the same location, same time and same days of the week each month. Occasional deviations from the routine sampling program are allowed, but the reason for the deviation shall be documented in correspondence appended to the applicable discharge monitoring report.

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. Any change in sampling location must be reviewed and approved in writing by EPA and MassDEP.

24-hour composite samples will 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.

3. Required for State Certification.
4. **The fecal coliform limits and monitoring requirements shall end one year after the effective date of this permit.**

The *E. coli* monitoring requirements (without limits) go into effect upon the effective date of the permit; *E. coli* limits shall go into effect one year after the effective date of this permit.

The average monthly limits for fecal coliform and *E. coli* are expressed as geometric means. Fecal coliform sampling and *E. coli* sampling shall be done concurrently. A total residual chlorine sample shall be taken at the same time as *E. coli* and fecal coliform samples.

5. Whenever more than one total residual chlorine grab sample is taken per day, the monthly DMR shall include an attachment documenting the individual grab sample results for that day, including the date and time of each sample, and a summary of any operational modifications implemented in response to sample results. All test results 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)).

Part I.A.2.

- 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 standard units at any time.
- c. The discharge shall not cause objectionable discoloration of the receiving waters.
- d. The effluent shall contain neither visible oil sheen, foam, nor floating solids at any time.
- e. 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.
- f. The results of sampling for any parameter done in accordance with EPA approved methods above its required frequency must also be reported.
- g. The permittee shall minimize the use of chlorine while maintaining adequate bacterial control.
- h. If the average annual flow in any calendar year exceeds 80% of the facility's design flow, the permittee shall submit a report to MassDEP by March 31 of the following calendar year describing plans for further flow increases and discuss how the permittee will remain in compliance with the effluent limitations in the permit.

3. All POTWs must provide adequate notice to the Director of the following:

- a. Any new introduction of pollutants into that POTW from an indirect discharger in a primary industry category 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.

4. Prohibitions Concerning Interference and Pass Through:

- a. Pollutants introduced into POTW's by a non-domestic source (user) shall not pass through the POTW or interfere with the operation or performance of the works.

5. 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.

6. 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.

PART 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. 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). [Note: SSO Reporting Form (which includes MassDEP Regional Office telephone numbers) for submittal of written report to MassDEP is available on-line at <http://www.mass.gov/dep/water/approvals/surffms.htm#sso>.]

PART 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:

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 implement a plan to control infiltration and inflow (I/I) to the separate sewer system. The updated plan shall be submitted to EPA and MassDEP **within six (6) 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 the MassDEP annually, by March 31. 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, 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. Alternate 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 §403.3(o))

PART D. 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 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:

- 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 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 E. MONITORING AND REPORTING

1. Reporting

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.**

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 Agencies are:

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

and

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

PART F. 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 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.

Summary of Required Report Submittals

This table is a summary of the reports required to be submitted under this NPDES permit as an aid to the permittee(s). If there are any discrepancies between the permit and this summary, the permittee(s) shall follow the permit requirements

1 Environmental Protection Agency Water Technical Unit (SEW) P.O. Box 8127 Boston, MA 02114	2 MassDEP Division of Watershed Management Surface Water Discharge Permit Program 627 Main Street, 2nd Floor Worcester, MA 01608
3 MassDEP Western Regional Office - Bureau of Resource Protection 436 Dwight Street Springfield, Massachusetts 01103	

Requirement	Due Date	Addressees
If the average annual flow in any calendar year exceeds 80% of the facility's design flow, the permittee shall submit a report to MassDEP. [Part I.A.2.h.]	By March 31 of the following calendar year	1, 2 and 3
Notification of Sanitary Sewer Overflows [Part I.B]	Within 24 hours of SSO event.	1, 2 and 3
Updated infiltration and inflow (I/I) to the separate sewer system. [Part I.C.3]	The updated plan shall be submitted to EPA and MassDEP within six (6) months of the effective date of this permit	1, 2, and 3
Annual I/I Summary Report [Part I.C.3]	Annually by March 31	1, 2, and 3
Annual Sludge Report [Part I.D.8]	Annually by February 19	1, 2, and 3
Monitoring results obtained during each calendar month shall be summarized and reported on Discharge Monitoring Report Form(s) [Part I.E]	Postmarked no later than the 15th day of the following month.	1, 2, and 3

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION I
ONE CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023**

FACT SHEET

**DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES**

NPDES PERMIT NO.: MA0102776

NAME AND ADDRESS OF APPLICANT:

**Town of Erving
POTW # 3
Board of Selectmen
12 East Main Street
Erving, MA 01344**

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

**Erving POTW # 3
Bridge Street
Erving, MA 01344**

**RECEIVING WATER: Upland ditch to the Millers River
Millers River Watershed - MA35-05**

CLASSIFICATION: B (warm water fishery)

I. PROPOSED ACTION

The above named applicant has applied to the U.S. Environmental Protection Agency for the re-issuance of its National Pollutant Discharge Elimination System (NPDES) permit to discharge into the designated receiving water. The current permit was signed and became effective on September 15, 2004. The permit expired September 30, 2007. A re-application was received by

EPA dated March 13, 2007. This draft permit, after it becomes effective, will expire five (5) years from the effective date of issuance.

II. TYPE OF FACILITY AND DISCHARGE LOCATION

The facility is a municipal wastewater treatment facility which has a design flow of 10,000 gallons per day (gpd) and is engaged in the collection and treatment domestic wastewater. The facility location is shown in Attachment A

III DESCRIPTION OF DISCHARGE

The Erving # 3 plant came online in 1984. It serves approximately 80 people in the Village of Farley, located within the Town of Erving. Flow from the separate sanitary collection system first enters a 10,000 gallon septic tank. It then passes into a second 5,000 gallon septic tank. From the second tank, flow goes to a wet well where it is apportioned to one of two underground sand filters. The effluent from the sand filters flows into an effluent disinfection chamber where it is chlorinated (seasonally) with liquid sodium hypochlorite. The design flow of the facility is 10,000 gpd, with an annual average realized flow (year 2007) of 5,231 GPD and daily maximum flow of 8,460 gpd.

Final effluent is discharged to an upland ditch, which flows into the Millers River. The ditch originates as the intermittent groundwater overflow from a manmade concrete fire pond. The plant discharge joins the concrete fire pond overflow for approximately 200 feet before reaching the Millers River. The ditch is not considered a water of the Commonwealth or a water of the US. Water quality standards shall be applied where the discharge enters Millers River.

IV. LIMITATIONS AND CONDITIONS

The effluent limitations and monitoring requirements may be found in the draft NPDES permit.

V. PERMIT BASIS AND EXPLANATION OF EFFLUENT LIMITATION DERIVATION

1. General Regulatory Background

Congress enacted the Clean Water Act (CWA), "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." CWA §101(a). To achieve this objective, the CWA makes it unlawful for any person to discharge any pollutant into the waters of the United States from any point source, except as authorized by specified permitting sections of the CWA, one of which is Section 402.

See CWA §§ 301(a), 402(a). Section 402(a) establishes one of the CWA's principal permitting programs, the National Pollutant Discharge Elimination System (NPDES).

Under this section of the CWA, EPA may "issue a permit for the discharge of any pollutant, or combination of pollutants" in accordance with certain conditions. See CWA § 402(a). NPDES permits generally contain discharge limitations and establish related monitoring and reporting requirements. See CWA § 402(a)(1)-(2).

Section 301 of the CWA provides for two types of effluent limitations to be included in NPDES permits: "technology-based" limitations and "water quality-based" limitations. See CWA §§ 301, 304(b); 40 C.F.R. 122, 125, 131. Technology-based limitations, generally developed on an industry-by-industry basis, reflect a specified level of pollutant reducing technology available and economically achievable for the type of facility being permitted. See CWA § 301(b). As a class, POTW's must meet performance-based requirements based on available wastewater treatment technology. CWA § 301(b)(1)(B). The performance level for POTWs is referred to as "secondary treatment". Secondary treatment is comprised of technology-based requirements expressed in terms of BOD₅, TSS, and pH. 40 C.F.R. Part 133.

Water quality-based effluent limits are designed to ensure that State water quality standards are met regardless of the decision made with respect to technology and economics in establishing technology-based limitations. In particular, Section 301(b)(1)(C) requires achievement of, "any more stringent limitation, including those necessary to meet water quality standards...established pursuant to any State law or regulation..." See 40 C.F.R. §§ 122.4(d), 122.44(d)(1) (providing that a permit must contain effluent limits as necessary to protect State water quality standards, "including State narrative criteria for water quality") (emphasis added) and 122.44(d)(5) (providing in part that a permit incorporate any more stringent limits required by Section 301(b)(1)(C) of the CWA).

The CWA requires that States develop water quality standards for all water bodies within the State. CWA § 303. These standards have three parts: (1) one or more "designated uses" for each water body or water body segment in the state; (2) water quality "criteria", consisting of numeric concentration levels and/or narrative statements specifying the amounts of various pollutants that may be present in each water body without impairing the designated uses of that water body; and (3) an antidegradation provision, focused on protecting high quality waters and protecting and maintaining water quality necessary to protect existing uses. CWA §303(c)(2)(A), 40 C.F.R. § 131.12. The limits and conditions of the permit reflect the goal of the CWA and EPA to achieve and then to maintain water quality standards.

Receiving stream requirements are established according to numeric and narrative standards adopted under State law for each stream classification. When using chemical-specific numeric criteria from the State's water quality standards to develop permit limits, both the acute and chronic aquatic life criteria are used and expressed in terms of maximum allowable in stream pollutant concentrations. Acute aquatic life criteria are generally implemented through average monthly limits.

Where a State has not established a numeric water quality criterion for a specific chemical pollutant that is present in the effluent in a concentration that causes or has a reasonable potential to cause a violation of narrative water quality standards, the permitting authority must establish effluent limits in one of three ways: based on a "calculated numeric criterion for the pollutant which the permitting authority demonstrates will attain and maintain applicable narrative water quality criteria and fully protect the designated use"; on a "case-by-case basis" using CWA Section 304(a) recommended water quality criteria, supplemented as necessary by other relevant information; or, in certain circumstances, based on an indicator parameter. 40 C.F.R. § 122.44(d)(1)(vi)(A-C).

All statutory deadlines for meeting various treatment technology-based effluent limitations established pursuant to the CWA have expired. When technology-based effluent limits are included in a permit, compliance with those limitations is from the date the issued permit becomes effective. See 40 C.F.R. § 125.3(a)(1). Compliance schedules and deadlines not in accordance with the statutory provisions of the CWA cannot be authorized by an NPDES permit. The regulations governing EPA's NPDES permit program are generally found in 40 C.F.R. Parts 122, 124, 125, and 136.

The permit must limit any pollutant parameter (conventional, non-conventional, toxic, and whole effluent toxicity) that is or may be discharged at a level that causes or has "reasonable potential" to cause or contribute to an excursion above any water-quality criterion, see 40 C.F.R. §122.44(d)(1)(i). An excursion occurs if the projected or actual in-stream concentration exceeds the applicable criterion.

Reasonable Potential

In determining reasonable potential, EPA considers: 1) existing controls on point and non-point sources of pollution; 2) pollutant concentration and variability in the effluent and receiving water as determined from the permit's reissuance application, DMRs, and State and Federal Water Quality Reports; 3) sensitivity of the species to toxicity testing; 4) the statistical approach outlined in *Technical Support Document for Water Quality-Based Toxics Control*, March 1991, EPA/502/2-90-001 in Section 3; and, where appropriate, 5) dilution of the effluent in the receiving water.

Anti-Backsliding

Section 402(o) of the CWA generally provides that the effluent limitations of a renewed, reissued, or modified permit must be at least as stringent as the comparable effluent limitations in the previous permit. EPA has also promulgated anti-backsliding regulations which are found at 40 C.F.R. § 122.44(l). Unless applicable anti-backsliding requirements are met, the limits and conditions in the reissued permit must be at least as stringent as those in the previous permit.

State Certification

Section 401(a)(1) of the CWA requires all NPDES permit applicants to obtain a certification from the appropriate state agency stating that the permit will comply with all applicable federal effluent limitations and State water quality standards. See CWA § 4012(a)(1). The regulatory provisions pertaining to State certification provide that EPA may not issue a permit until a certification is granted or waived by the state in which the discharge originates. 40 C.F.R. §124.53(a). The regulations further provide that, “when certification is required...no final permit shall be issued...unless the final permit incorporates the requirements specified in the certification under § 124.53(e).” 40 C.F.R. § 124.55(a)(2). Section 124.53(e) in turn provides that the State certification shall include “any conditions more stringent than those in the draft permit which the State finds necessary” to assure compliance with, among other things, State water quality standards, see 40 C.F.R. § 124.53(e)(2), and shall also include “[a] statement of the extent to which each conditions of the draft permit can be made less stringent without violating the requirements of State law, including water quality standards”, see 40 C.F.R. § 124.53(e)(3).

However, when EPA reasonably believes that a State water quality standard requires a more stringent permit limitation than that reflected in a state certification, it has an independent duty under CWA § 301(b)(1)(C) to include more stringent permit limitations. See 40 C.F.R. §§122.44(d)(1) and (5). It should be noted that under CWA § 401, EPA’s duty to defer to considerations of state law is intended to prevent EPA from relaxing any requirements, limitations, or conditions imposed by State law. Therefore, “[a] State may not condition or deny a certification on the grounds that State law allows a less stringent permit condition.” 40 C.F.R. §124.55(c). In such an instance, the regulation provides that, “The Regional Administrator shall disregard any such certification conditions or denials as waivers of certification.” Id. EPA regulations pertaining to permit limits based upon water quality standards and state requirements are contained in 40 C.F.R. § 122.4(d) and 40 C.F.R. § 122.44(d).

In accordance with regulations found at 40 CFR Section 131.12, MassDEP has developed and adopted a statewide antidegradation policy to maintain and protect existing in-stream water quality. The Massachusetts Antidegradation Policy is found at Title 314 CMR 4.04. No lowering of water quality is allowed, except in accordance with the antidegradation policy. All existing uses of the Millers River must be protected.

This draft permit is being reissued with allowable discharge limits as, or more, stringent than those in the current permit and with the same parameter coverage. There is no change in outfall location. The public is invited to participate in the antidegradation finding through the permit public notice procedure.

Under Section 301(b)(1) of the Clean Water Act ("CWA"), publicly owned treatment works ("POTWs") must have achieved effluent limitations based upon Secondary Treatment by July 1, 1977.

The secondary treatment requirements are set forth at 40 C.F.R. Part 133.102. In addition, Section 301(b)(1)(C) of the CWA requires that effluent limitations based on water quality considerations be established for point source discharges when such limitations are necessary to meet state or federal water quality standards that are applicable to the designated receiving water.

Water Quality Standards and Designated Uses

The Erving POTW # 3 discharge to the Millers River is located in Reach MA 35-05. The Reach is a 9.2 mile segment of the Millers River from the Erving Paper Company in Erving Center and ending at the Millers River confluence with the Connecticut River. This segment is comparatively steeper in slope than the upper river segments, and has increased flow velocity including twelve sets of rapids. The river slows before entering the Connecticut River at Route 2 in Erving.

This Millers River segment has been designated as Class B water, warm water fishery. The Massachusetts Surface Water Quality Standards, 314 Code of Massachusetts Regulations ("CMR") 4.05(3) (b) states that Class B waters are designated as habitat for fish, other aquatic life and wildlife, and for primary and secondary contact recreation. They shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses. The waters should have consistently good aesthetic value.

A warm water fishery is defined in the Massachusetts Surface Water Quality Standards (314 CMR 4.02) as waters in which the maximum mean monthly temperature generally exceeds 20° Celsius during the summer months and are not capable of supporting a year-round population of cold water stenothermal aquatic life. Todd Richards of the Massachusetts Division of Fisheries and Wildlife states that: *From Route 32 in Athol to Millers Falls, this reach should be considered, at minimum, a seasonal cold water fishery habitat from April 1 to June 15 for salmon smolt outmigration. There is also information that stocked salmononids hold over through summer in these reaches.*

The objective of the Federal Clean Water Act (CWA) is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. To meet this goal the CWA requires states to develop information on the quality of their water resources and report this information to the U.S. Environmental Protection Agency (EPA), the U.S. Congress, and the public. To this end the EPA released guidance on November 19, 2001, for the preparation of an integrated "List of Waters" that could combine reporting elements of both §305 (b) and 303(d) of the CWA. The integrated list format allows the states to provide the status of all their assessed waters in one list. States choosing this option must list each water body or segment in one of the following five categories:

1) Unimpaired and not threatened for all designated uses; 2) Unimpaired waters for some uses and not assessed for others; 3) Insufficient information to make assessments for any uses; 4) Impaired or threatened for one or more uses but not requiring the calculation of a Total Maximum Daily Load (TMDL); and 5) impaired or threatened for one or more uses and requiring a TMDL.

The segment of the Millers River where the discharge occurs is classified in the State's 2006 Integrated List of Waters as Category 5, as not in attainment and requiring a TMDL. The listed impairments for this segment are priority organics and metals.

The report titled *Millers River Watershed 2002 Water Quality Assessment Report, Millers River (Segment MA35-05), MA DEP, Division of Watershed Management, Worcester, MA (Draft 4/2003)* provides a summary of current water quality data and information and assesses the status of the state's designated uses for the Millers River and its watershed. This report notes that elevated levels of PCBs and the presence of mercury in fish have caused the MA Department of Public Health to issue a fish consumption advisory. The Erving WWTF #3 discharge is not believed to have contributed to the elevated levels mercury.

Available Dilution

Water quality based limits are established with the use of a calculated available dilution. Title 314 CMR 4.03(3)(a) requires that effluent dilution be calculated based on the receiving water 7Q10. The 7Q10 is the lowest observed mean river flow for 7 consecutive days, occurring over a 10-year recurrence interval. Additionally, the facility design flow is used to calculate available effluent dilution (40 CFR §122.45(b)(i)).

The facility design flow is 0.01 million gallons per day (mgd) or 0.0155 cubic feet per second (cfs). The United States Geological Survey (USGS) stream flow gage point is located a few feet downstream of the discharge on the Millers River in Erving (Farley), MA (#01166500). Stream gage data is available from 1917-2007.

USGS Gage # 01166500 (1917-2007)	7Q10 at Gage	= 47.5 cfs
(Plant Q 0.01 mgd)(1.55 converts to cfs)		= 0.0155 cfs
$\frac{(7Q10) + 1}{(Plant Q)}$ = Dilution Factor =	$\frac{(47.5cfs) + 1}{(0.0155 cfs)}$	= 3129 DF

The July 1, 2004 Fact Sheet determined the 7Q10 flow at the point of discharge from the POTW to be 46.8 cfs and the dilution factor (DF) 3084. These values have been recalculated herein as 47.5 cfs and 3129. The following statistical tools and stream flow gage data provide a more accurate updated 7Q10 flow and dilution factor.

USGS gage flow data derived from the National Water Information System, Web Interface. <http://ma.water.usgs.gov/water/default.htm>

EPA's *DFLOW 3.1* (released March 2006) is a Windows-based tool developed to estimate user selected design stream flows for low flow analysis. DFLOW was used to convert raw gage flow data into the 7Q10.

Flow - The flow limit of 10,000 gpd is based on the annual average design flow of the treatment plant. Federal regulations found at 40 CFR §122.45(b)(i) require that effluent limitations be calculated based on design flow, which is found in the Permit Application Form 2A, Part A, Section a.6. The permittee shall report the annual average monthly flow using the annual rolling average method (See Permit Footnote 1). The average monthly and maximum daily flow for each month shall also be reported.

OUTFALL 001 - CONVENTIONAL POLLUTANTS

Biochemical Oxygen Demand (BOD₅) and Total Suspended Solids (TSS) - Publicly Owned Treatment Works (POTWs) are subject to the secondary treatment requirements set forth at 40 CFR §133. The secondary treatment limitations at 40 CFR §102 (a and b)(1), (2) include average monthly BOD₅ and TSS concentrations of 30 mg/l and average weekly concentrations of 45 mg/l. The effluent concentrations are in the draft permit.

Average monthly and average weekly BOD₅ and TSS mass (lbs per day) limits are based on 40 CFR 122.45(f) and are maintained in this draft permit. The mass limitations for BOD₅ and TSS are based on the 0.01 MGD design flow.

L = C x DF x 8.34 Where,
L = Maximum allowable load in lbs/day
C = Maximum allowable effluent concentration for reporting period in mg/l.
Reporting periods are average monthly and daily maximum.
DF = Design flow of facility in MGD.
8.34 = Factor to convert effluent concentration in mg/l and flow in MGD to lbs/day.

[30] x 0.01 x 8.34 = 2.5 lbs/day Average Monthly allowable load
[45] x 0.01 x 8.34 = 3.75 lbs/day Daily Maximum allowable load

40 CFR §133.102 requires that the 30 day average percent removal of both BOD₅ and TSS achieve a minimum of 85%. EPA's experience with municipal septic tank to sand filter systems has shown that there is currently no practical way to measure percent removal with such units.

The erratic influent loading and difficulty with access make representative (40 CFR §122.41(j)) influent and effluent sampling impractical. Furthermore, the percent removal requirements were incorporated into the secondary treatment regulations to address excessive infiltration and inflow (I/I). The draft permit requires that the POTW implement an I/I removal program with reporting requirements. For the stated reasons, both draft permit and previous permits do not include requirements for either, BOD₅ and TSS percent removal.

OUTFALL 001 – TOXIC POLLUTANTS

Total Residual Chlorine - (TRC) Chlorine and chlorine compounds produced by the chlorination of wastewater, can be extremely toxic to aquatic life. In its water quality standards, MassDEP has adopted the numeric criteria for chlorine that are recommended by EPA in *National Recommended Water Quality Criteria: 2002* published by EPA pursuant to Section 304(a) of the Clean Water Act (see 314 CMR 4.05(5)(e)). The criterion states that the average total residual chlorine in the receiving water (Millers River) should not exceed 11 ug/l for chronic toxicity protection, and 19 ug/l for acute toxicity protection. The following is a calculation of the chlorine water quality based effluent limitations:

Acute Chlorine WQC = 19 ug/l
Chronic Chlorine WQC = 11 ug/l
Daily Maximum Chlorine Limit = (3129)*(19 ug/l) = 59 mg/l
Average Monthly Chlorine Limit = (3129)*(11 ug/l) = 34 mg/l

The period of applicability for chlorine limitations is April 1 - October 31. The actual draft permit monthly average and daily maximum limits are set lower than the calculated water quality based limits to be consistent with *Massachusetts Implementation for the Control of Toxic Pollutants in Surface Waters*. This policy states that receiving waters shall be protected from unnecessary discharges of excess chlorine. In segments with dilution factors greater than 100, the maximum effluent concentration of chlorine shall not exceed 1.0 mg/l TRC. These limits remain the same as those found in the current permit.

The permit requires the submission of the results to EPA of any additional testing done than that required in the permit, if it is conducted in accordance with EPA approved methods, consistent with the provisions of 40 CFR §122.41(l)(4)(ii).

VI. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM

The permit standard conditions for "Proper Operation and Maintenance" are found at 40 CFR 122.41(e). These require proper operation and maintenance of permitted wastewater systems and related facilities to achieve permit conditions. Similarly, the permittee has a "duty to mitigate" as stated in 40 CFR §122.41(d). This requires the permittee to take all reasonable steps to minimize or prevent any discharge in violation of the permit which has the reasonable likelihood of adversely affecting human health or the environment. EPA and MassDEP maintain that these programs are an integral component of ensuring permit compliance under both of these provisions.

The draft permit includes requirements for the permittee to control infiltration and inflow (I/I). Infiltration is groundwater that enters the collection system through physical defects such as cracked pipes, or deteriorated joints. Inflow is extraneous flow entering the collection system through point sources such as roof leaders, yard and area drains, sump pumps, manhole covers, tide gates, and cross connections from storm water systems.

Significant I/I in a collection system may displace sanitary flow reducing the capacity and the efficiency of the treatment works and may cause bypasses to secondary treatment. It greatly increases the potential for sanitary sewer overflows (SSO) in separate systems.

I/I in the collection system is significant in the spring, causing plant flows to almost double. The Town has an ongoing I/I removal program.

The permittee shall maintain an I/I removal program for its separate sewers commensurate with the severity of the I/I in the collection system. Where portions of the collection system have little I/I, the control program will logically be scaled down.

This requires the permittee to take all reasonable steps to minimize or prevent any discharge in violation of the permit which has a reasonable likelihood of adversely affecting human health or the environment. EPA and MassDEP maintain that an I/I removal program is an integral component to insuring permit compliance under both of these provisions.

The MassDEP has stated that inclusion of the I/I conditions in the draft permit shall be a standard State Certification requirement under Section 401 of the Clean Water Act and 40 CFR §124.55(b).

VII. SLUDGE INFORMATION AND REQUIREMENTS

Section 405(d) of the Clean Water Act requires that sludge conditions be included in all POTW permits. Sludge from the Erving No. 3 POTW is currently trucked off-site to the Erving No. 1 POTW. If the ultimate sludge disposal method changes, the permittee must notify EPA and MassDEP and the requirements pertaining to sludge monitoring and other conditions would change accordingly (See Attached Sludge Guidance document).

VIII. Nitrogen Monitoring

In December 2000, the Connecticut Department of Environmental Protection (CT DEP) completed a Total Maximum Daily Load (TMDL) for addressing nitrogen-driven eutrophication impacts in Long Island Sound. The TMDL included a Waste Load Allocation (WLA) for point sources and a Load Allocation (LA) for non-point sources. The point source WLA for out-of-basin sources (Massachusetts, New Hampshire and Vermont wastewater facilities discharging to the Connecticut, Housatonic and Thames River watersheds) requires an aggregate 25% reduction from the baseline total nitrogen loading estimated in the TMDL.

The baseline total nitrogen point source loadings estimated for the Connecticut, Housatonic, and Thames River watersheds were 21,672 lbs/day, 3,286 lbs/day, and 1,253 lbs/day respectively (see table below). The estimated current point source total nitrogen loadings for the Connecticut, Housatonic, and Thames Rivers respectively are 13,836 lbs/day, 2,151 lbs/day, and 1,015 lbs/day, based on recent information and including all POTWs in the watershed. The following table summarizes the estimated baseline loadings, TMDL target loadings, and estimated current loadings:

Basin	Baseline Loading ¹ lbs/day	TMDL Target ² lbs/day	Current Loading ³ lbs/day
Connecticut River	21,672	16,254	13,836
Housatonic River	3,286	2,464	2,151
Thames River	1,253	939	1,015
Totals	26,211	19,657	17,002

1. Estimated loading from TMDL, (see Appendix 3 to CT DEP "Report on Nitrogen Loads to Long Island Sound", April 1998)
2. Reduction of 25% from baseline loading
3. Estimated current loading from 2004 – 2005 DMR data – detailed summary attached as Exhibit A.

The TMDL target of a 25 percent aggregate reduction from baseline loadings is currently being met, and the overall loading from MA, NH and VT wastewater treatment plants discharging to the Connecticut River watershed has been reduced by about 36 percent.

The permit also requires nitrogen monitoring to ensure that there is no increase in total nitrogen compared to the existing average daily load. The annual average total nitrogen load from this facility (2004 – 2005) is estimated to be 1.6 lbs/day.

The agencies will annually update the estimate of all out-of-basin total nitrogen loads and may incorporate total nitrogen limits in future permit modifications or reissuances as may be necessary to address increases in discharge loads, a revised TMDL, or other new information that may warrant the incorporation of numeric permit limits.

There have been significant efforts by the New England Interstate Water Pollution Control Commission (NEIWPCC) work group and others since completion of the 2000 TMDL, which are anticipated to result in revised wasteload allocations for in-basin and out-of-basin facilities. Although not a permit requirement, it is strongly recommended that any facilities planning that might be conducted for this facility should consider alternatives for further enhancing nitrogen reduction.

The POTW design limits what may be done operationally to reduce the discharge of nitrogen. The permittee must monitor the effluent twice per year for the discharge of nitrogen to the Millers River, which is tributary to the Connecticut River. The sample results will be used to quantify the point source load of nitrogen to Long Island Sound.

IX. ESSENTIAL FISH HABITAT

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. §1801 et seq. (1998)), EPA is required to consult with the National Fisheries Services (NOAA Fisheries) if EPA's action or proposed action that it funds, permits, or undertakes, may adversely impact any essential fish habitat (EFH). The Amendments broadly define essential fish habitat as: waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (16 U.S.C. § 1802 (10)). Adversely impact means any impact which reduces the quality and/or quantity of EFH (50 C.F.R. § 600.910 (a)). Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

Essential fish habitat is only designated for species for which federal fisheries management plans exist (16 U.S.C. § 1855 (b) (1)(A)). EFH designations for New England were approved by the U.S. Department of Commerce on March 3, 1999.

Anadromous Atlantic salmon (*Salmo salar*) is the only managed species believed to be present during one or more life stages within the area which encompasses the discharge site. No "habitat areas of particular concern", as defined under §600.815(a)(9) of the Magnuson-Stevens Act, have been designated for this site.

It is EPA's opinion that the operation of this facility, as governed by this permit action, is not likely to adversely affect the species of concern or its habitat for the following reasons:

- All permitted limits in the draft permit are as or more stringent than those in the current permit.
- The discharge is to a riffled segment of the river where dissolved oxygen (DO) concentrations are naturally high and where the small amount of biochemical oxygen demand (BOD5) in the effluent will cause minimal depression in the DO.
- Total suspended solids (TSS) are in low concentrations and are not likely to concentrate or settle in the swift moving water.
- The draft permit includes pH limitations of 6.5-8.3 standard units which are protective state water quality standards found at 314 CMR 4.05.b.3. The pH limits are carried forward from the current permit.
- The draft permit includes both *Escherichia coli* (*E. coli*) and fecal coliform bacteria limits. Based on recently modified water quality standards, found at 314 CMR 4.05.b.4. *E. coli* will replace fecal coliform bacteria.
- The permit contains requirements to comply with all state water quality standards for the protection of fish and fish habitat.

EPA believes that the draft permit limits adequately protect Atlantic salmon EFH, and therefore additional mitigation is not warranted. If adverse impacts to EFH are detected as a result of this permit action, or if new information is received that changes the basis for our conclusion, NOAA Fisheries will be notified and an EFH consultation will be reinitiated.

X. ENDANGERED SPECIES ACT (ESA)

Section 7(a) of the Endangered Species Act of 1973, as amended (ESA) grants authority to and imposes requirements upon Federal agencies regarding endangered or threatened species of fish, wildlife, or plants ("listed species") and habitat of such species that has been designated as critical (a "critical habitat").

The ESA requires every Federal agency, in consultation with and with the assistance of the Secretary of Interior, to insure that any action it authorizes, funds, or carries out, in the United States or upon the high seas, is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat. The United States Fish and Wildlife Service (USFWS) administers Section 7 consultations for freshwater species, where as the NOAA Fisheries administers Section 7 consultations for marine species and anadromous fish.

As the federal agency charged with authorizing the discharges from this facility, EPA has reviewed available habitat information developed by the Services to see if one or more of the federal endangered or threatened species of fish, wildlife, or plants may be present within the influence of the discharge. Federally listed endangered species that may be in the vicinity of the discharge is the shortnose sturgeon (*Acipenser brevirostrum*). Currently, NOAA Fisheries has authority over the shortnose sturgeon under Section 4(a)(2) of the ESA, 16 U.S.C. Section 1533 (a)(2).

Millers River discharges to the CT above the Turners Falls Dam. While there is fish passage at Turners Falls (shad, herring, salmon etc.) there is no passage for shortnose sturgeon and we think the Falls mark the natural upstream limit of shortnose in the system...so there are no shortnose above Turners Falls and no potential for shortnose in The Millers River. [Julie Crocker-NOAA in 04/22/2008 e-mail to John Nagle-EPA]

EPA concludes that the limits and conditions contained in this draft permit insure that its reissuance is not likely to adversely affect the species of concern for the reasons stated in the previous section concerning essential fish habitat.

EPA believes the authorized discharge from this facility is not likely to adversely affect any federally-listed species or their habitats. This preliminary determination is based on the location of the outfall, and the reasons provided above. EPA is seeking concurrence with this opinion from NOAA Fisheries and USFWS through the ESA consultation process.

XI. 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. Discharges of wastewater from any other point sources, including sanitary sewer overflows (SSOs), are not authorized by the permit and shall be reported in accordance with Section D.1.e.(1) of the General Requirements of the permit (Twenty-four hour reporting).

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

XII. MONITORING AND REPORTING

The permittee is required to monitor and report sampling results to EPA and the MassDEP within the time specified in the permit. The effluent monitoring requirements have been established to yield data representative of the discharge by the authority under Section 308(a) of the CWA in accordance with 40 CFR, 122.44, and 122.48.

XIII. STATE PERMIT CONDITIONS

The NPDES Permit is issued jointly by the U. S. Environmental Protection Agency and the Massachusetts Department of Environmental Protection under federal and state law, respectively. As such, all the terms and conditions of the permit are, therefore, incorporated into and constitute a discharge permit issued by the MassDEP Commissioner.

XIV. GENERAL CONDITIONS

The general conditions of the permit are based primarily on the NPDES regulations 40 CFR 122 through 125 and consist primarily of management requirements common to all permits.

XV. STATE CERTIFICATION REQUIREMENTS

EPA may not issue a permit unless the Massachusetts Department of Environmental Protection with jurisdiction over the receiving waters certifies that the effluent limitations contained in the permit are stringent enough to assure that the discharge will not cause the receiving water to violate State Water Quality Standards. The staff of the Massachusetts Department of Environmental Protection has reviewed the draft permit. EPA has requested permit certification by the state pursuant to 40 CFR 124.53 and expects that the draft permit will be certified.

XVI. COMMENT PERIOD, HEARING REQUESTS, and PROCEDURES FOR FINAL DECISIONS

All persons, including applicants, who believe any condition of the Draft Permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to Doug Corb, U.S. EPA, Office of Ecosystem Protection, Municipal Permits Branch, 1 Congress Street, Suite 1100-Mail Code CMP, Boston, Massachusetts 02114-2023. Any person, prior to such date, may submit a request in writing for a public hearing to consider the Draft Permit to EPA and the State Agency. Such requests shall state the nature of the issues proposed to be raised in the hearing.

A public hearing may be held if the criteria stated in 40 C.F.R. § 124.12 are satisfied. In reaching a final decision on the Draft Permit, the EPA will respond to all significant comments and make these responses available to the public at EPA's Boston office.

Following the close of the comment period, and after any public hearings, if such hearings are held, the EPA will issue a Final Permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Within 30 days following the notice of the Final Permit decision, any interested person may submit a petition for review of the permit to EPA's Environmental Appeals Board consistent with 40 C.F.R. § 124.19.

XVII. EPA CONTACT

Additional information concerning the draft permit may be obtained between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays from:

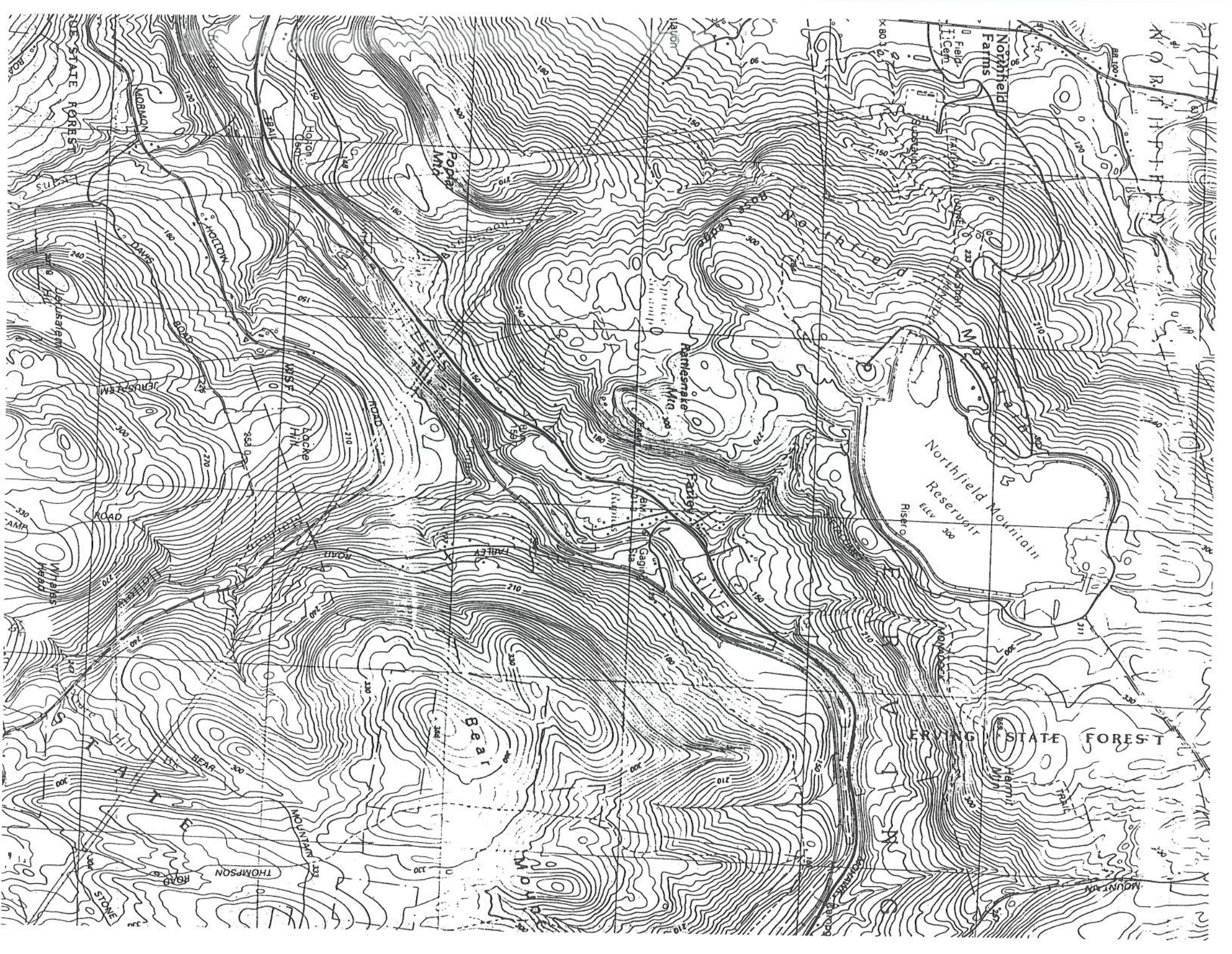
Doug Corb
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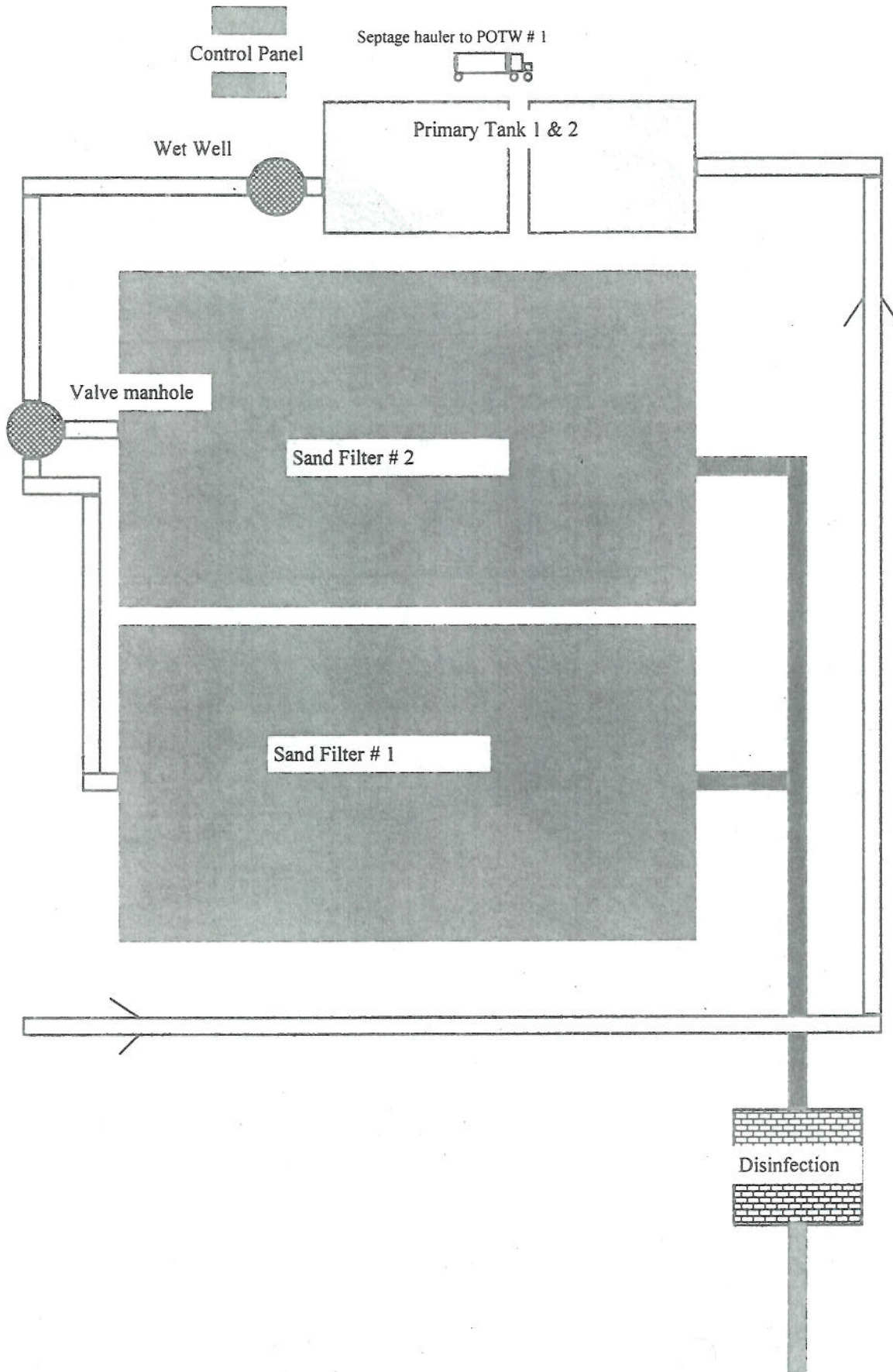
Date: July 23, 2008

Stephen S. Perkins, Director*
Office of Ecosystem Protection
U.S. Environmental Protection Agency

*Please address all comments to Doug Corb and Paul Hogan at the addresses above



Erving POTW # 3



MA0102776 ERVING POTW #3

001A

00310 - BOD, 5-day, 20 deg. C (f

2.5 lb/d 3.75 lb/d 30 mg/L 45 mg/L

MP Date	NODI	MO AVG	WKLY AVG	MO AVG	WKLY AVG
1/31/2006		0.23	0.35	4.3	5
2/28/2006		0.2	0.23	4.6	5
3/31/2006		0.53	1.08	11	23
4/30/2006		0.31	0.56	7.9	12
5/31/2006		0.25	0.41	5.3	7
6/30/2006		0.42	1.12	9.2	19
7/31/2006		0.29	0.64	8.8	18
8/31/2006		0.33	0.81	10	17
9/30/2006		0.22	0.3	6	9.7
10/31/2006		0.3	0.56	8.5	16
11/30/2006		0.39	0.47	8.5	11
12/31/2006		0.54	0.92	9.5	13
1/31/2007		0.28	0.71	6.3	15
2/28/2007		0.28	0.47	6	10
3/31/2007		0.17	0.21	3.6	4.4
4/30/2007		0.17	0.3	4.3	6.4
5/31/2007		0.53	0.88	16	25
6/30/2007		0.39	0.52	12	22
7/31/2007		0.46	0.75	13	22
8/31/2007		0.54	1.08	16	24
9/30/2007		0.45	0.71	13	15
10/31/2007		0.51	0.78	16	24
11/30/2007		0.39	0.39	7.3	9
12/31/2007		0.73	0.73	19.9	33
1/31/2008		0.45	0.6	0.3	28
2/29/2008					
3/31/2008					
4/30/2008					
5/31/2008		0.72	1.8	10.2	23

00530 - Solids, total suspended (SNC G

2.5 lb/d 3.75 lb/d 30 mg/L 45 mg/L

MP Date	NODI	MO AVG	WKLY AVG	MO AVG	WKLY AVG
1/31/2006		0.17	0.22	3.1	4.2
2/28/2006		0.12	0.19	2.6	4
3/31/2006		0.27	0.67	4.9	8.1
4/30/2006		0.15	0.24	4	6.7
5/31/2006		0.23	0.39	5.4	7.5
6/30/2006		0.26	0.5	6.1	10
7/31/2006		0.23	0.42	6.8	12
8/31/2006		0.18	0.29	5.4	8.3
9/30/2006		0.28	0.78	5.9	13
10/31/2006		0.16	0.26	4.7	11
11/30/2006		0.32	0.45	7.1	12
12/31/2006		0.31	0.45	5.5	6.4
1/31/2007		0.14	0.31	3.2	6.6
2/28/2007		0.27	0.39	5	7
3/31/2007		0.07	0.08	1.6	2.1
4/30/2007		0.05	0.07	1.3	1.9
5/31/2007		0.35	1.02	10	29
6/30/2007		0.32	0.49	9	14
7/31/2007		0.23	0.33	9	14
8/31/2007		0.16	0.3	4.8	6.4
9/30/2007		0.16	0.19	5	6
10/31/2007		0.12	0.14	3.6	4.7
11/30/2007		0.24	0.37	5	6
12/31/2007		0.82	2	20.9	44
1/31/2008		0.15	0.17	5.8	7.2
2/29/2008					
3/31/2008					
4/30/2008					
5/31/2008		0.31	0.5	7.8	12.9

50060 - Chlorine, total residual

1 mg/L 1 mg/L

MP Date	NODI	MO AVG	DAILY MX
4/30/2006		0.45	0.94
5/31/2006		0.32	0.95
6/30/2006		0.32	0.98
7/31/2006		0.24	0.72
8/31/2006		0.34	0.81
9/30/2006		0.17	0.47
10/31/2006		0.16	0.54
4/30/2007		0.23	0.75
5/31/2007		0.39	1
6/30/2007		0.14	0.48
7/31/2007		0.41	0.82
8/31/2007		0.29	0.55
9/30/2007		0.21	0.52
10/31/2007		0.19	0.7
4/30/2008			
5/31/2008		0.2	0.47

74055 - Coliform, fecal general

200 #/100mL 00 #/100mL

MP Date	NODI	MO GEO	DAILY MX
4/30/2006		10	10
5/31/2006		10	10
6/30/2006		54	54
7/31/2006		10	
8/31/2006		15	25
9/30/2006		10	10
10/31/2006		10	10
4/30/2007		13	13
5/31/2007		0	12
6/30/2007		10	28
7/31/2007		10	28
8/31/2007		2	20
9/30/2007		11	142
10/31/2007		8	90
4/30/2008			
5/31/2008		10	10

50050 - Flow, in conduit or thru

		.01 Mgal/d
MP Date	NODI	MO AVG
1/31/2006		0.006
2/28/2006		0.005
3/31/2006		0.005
4/30/2006		0.005
5/31/2006		0.006
6/30/2006		0.005
7/31/2006		0.005
8/31/2006		0.005
9/30/2006		0.005
10/31/2006		0.005
11/30/2006		0.005
12/31/2006		0.006
1/31/2007		0.005
2/28/2007		0.005
3/31/2007		0.005
4/30/2007		0.005
5/31/2007		0.004
6/30/2007		0.004
7/31/2007		0.004
8/31/2007		0.004
9/30/2007		0.004
10/31/2007		0.004
11/30/2007		0.004
12/31/2007		0.004
1/31/2008		0.004
2/29/2008		
3/31/2008		
4/30/2008		
5/31/2008		0.005

00400 - pH

		6.5 SU	8.3 SU
MP Date	NODI	MINIMUM	MAXIMUM
1/31/2006		6.6	7
2/28/2006		6.5	7.2
3/31/2006		6.5	7.1
4/30/2006		6.5	7.8
5/31/2006		6.5	6.9
6/30/2006		6.5	7.4
7/31/2006		6.5	7.6
8/31/2006		6.5	7.3
9/30/2006		6.6	7.2
10/31/2006		6.5	6.9
11/30/2006		6.5	7.8
12/31/2006		6.6	7.5
1/31/2007		6.6	7.5
2/28/2007		6.6	7.1
3/31/2007		6.5	7.5
4/30/2007		5.4	7.1
5/31/2007		6.5	7.5
6/30/2007		6.5	7
7/31/2007		6.5	6.8
8/31/2007		6.4	6.9
9/30/2007		6.6	7.1
10/31/2007		6.5	7
11/30/2007		6.6	6.9
12/31/2007		6.6	6.8
1/31/2008		6.5	7
2/29/2008			
3/31/2008			
4/30/2008			
5/31/2008		6.5	7.5

00610 - Nitrogen, ammonia total

Req. Mon. lbq. Mon. mg/L

MP Date	NODI	MO AVG	DAILY MX
1/31/2006		11	11
7/31/2006		18	
7/31/2006			
1/31/2007		0.05	
1/31/2007			
7/31/2007		15	15
1/31/2008		0.5	0.5

51087 - Nitrogen, Kjeldahl, total (TKN

Req. Mon. mg/L

MP Date	NODI	DAILY MX
1/31/2006		9.9
7/31/2006		30
1/31/2007		11
7/31/2007		12
1/31/2008		1

00620 - Nitrogen, nitrate total (a:

Req. Mon. lbq. Mon. mg/L

MP Date	NODI	MO AVG	DAILY MX
1/31/2006		13	13
7/31/2006		7.8	7.8
1/31/2007		0.8	17
7/31/2007		32	32
1/31/2008		0.05	0.05

00615 - Nitrogen, nitrite total (as N) (:

Req. Mon. lb/cj. Mon. mg/L

MP Date	NODI	MO AVG	DAILY MX
1/31/2006		0.032	0.032
7/31/2006		3.5	3.5
1/31/2007		0.0008	0.018
7/31/2007		0	0
1/31/2008		0.1	0.1

Exhibit A
Nitrogen Loads

NH, VT, MA Discharges to Connecticut River Watershed

FACILITY NAME	PERMIT NUMBER	DESIGN FLOW (MGD) ¹	AVERAGE FLOW (MGD) ²	TOTAL NITROGEN (mg/l) ³	TOTAL NITROGEN - Existing Flow(lbs/day) ⁴
NEW HAMPSHIRE					
Bethlehem Village District	NH0100501	0.340	0.220	19.600	35.962
Charlestown WWTF	NH0100765	1.100	0.360	19.600	58.847
Claremont WWTF	NH0101257	3.890	1.610	14.060	188.789
Colebrook WWTF	NH0100315	0.450	0.230	19.600	37.597
Groveton WWTF	NH0100226	0.370	0.290	19.600	47.405
Hanover WWTF	NH0100099	2.300	1.440	30.000	360.288
Hinsdale WWTF	NH0100382	0.300	0.300	19.600	49.039
Keene WWTF	NH0100790	6.000	3.910	12.700	414.139
Lancaster POTW	NH0100145	1.200	1.080	8.860	79.804
Lebanon WWTF	NH0100366	3.180	1.980	19.060	314.742
Lisbon WWTF	NH0100421	0.320	0.146	19.600	23.866
Littleton WWTF	NH0100153	1.500	0.880	10.060	73.832
Newport WWTF	NH0100200	1.300	0.700	19.600	114.425
Northumberland Village WPCF	NH0101206	0.060	0.060	19.600	9.808
Sunapee WPCF	NH0100544	0.640	0.380	15.500	49.123
Swanzey WWTP	NH0101150	0.167	0.090	19.600	14.712
Troy WWTF	NH0101052	0.265	0.060	19.600	9.808
Wasau Paper (industrial facility)	NH0001562		5.300	4.400	194.489
Whitefield WWTF	NH0100510	0.185	0.140	19.600	22.885
Winchester WWTP	NH0100404	0.280	0.240	19.600	39.231
Woodsville Fire District	NH0100978	0.330	0.230	16.060	30.806
New Hampshire Total		24.177	19.646		2169.596

VERMONT					
Bellows Falls	VT0100013	1.405	0.610	21.060	107.141
Bethel	VT0100048	0.125	0.120	19.600	19.616
Bradford	VT0100803	0.145	0.140	19.600	22.885
Brattleboro	VT0100064	3.005	1.640	20.060	274.373
Bridgewater	VT0100846	0.045	0.040	19.600	6.539
Canaan	VT0100625	0.185	0.180	19.600	29.424
Cavendish	VT0100862	0.155	0.150	19.600	24.520
Chelsea	VT0100943	0.065	0.060	19.600	9.808
Chester	VT0100081	0.185	0.180	19.600	29.424
Danville	VT0100633	0.065	0.060	19.600	9.808
Lunenburg	VT0101061	0.085	0.080	19.600	13.077
Hartford	VT0100978	0.305	0.300	19.600	49.039
Ludlow	VT0100145	0.705	0.360	15.500	46.537
Lyndon	VT0100595	0.755	0.750	19.600	122.598
Putney	VT0100277	0.085	0.080	19.600	13.077
Randolph	VT0100285	0.405	0.400	19.600	65.386
Readsboro	VT0100731	0.755	0.750	19.600	122.598
Royalton	VT0100854	0.075	0.070	19.600	11.442

St. Johnsbury	VT0100579	1.600	1.140	12.060	114.662
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NH, VT, MA Discharges to Connecticut River Watershed

FACILITY NAME	PERMIT NUMBER	DESIGN FLOW (MGD) ¹	AVERAGE FLOW (MGD) ²	TOTAL NITROGEN (mg/l) ³	TOTAL NITROGEN - Existing Flow(lbs/day) ⁴
Saxtons River	VT0100609	0.105	0.100	19.600	16.346
Sherburne Fire Dist.	VT0101141	0.305	0.300	19.600	49.039
Woodstock WWTP	VT0100749	0.055	0.050	19.600	8.173
Springfield	VT0100374	2.200	1.250	12.060	125.726
Hartford	VT0101010	1.225	0.970	30.060	243.179
Whitingham	VT0101109	0.015	0.010	19.600	1.635
Whitingham Jacksonville	VT0101044	0.055	0.050	19.600	8.173
Cold Brook Fire Dist.	VT0101214	0.055	0.050	19.600	8.173
Wilmington	VT0100706	0.145	0.140	19.600	22.885
Windsor	VT0100919	1.135	0.450	19.600	73.559
Windsor-Weston	VT0100447	0.025	0.020	19.600	3.269
Woodstock WTP	VT0100757	0.455	0.450	19.600	73.559
Woodstock-Taftsville	VT0100765	0.015	0.010	19.600	1.635
Vermont Totals		15.940	10.960		1727.302

MASSACHUSETTS					
Amherst	MA0100218	7.100	4.280	14.100	503.302
Athol	MA0100005	1.750	1.390	17.200	199.393
Barre	MA0103152	0.300	0.290	26.400	63.851
Belchertown	MA0102148	1.000	0.410	12.700	43.426
Charlemont	MA0103101	0.050	0.030	19.600	4.904
Chicopee	MA0101508	15.500	10.000	19.400	1617.960
Easthampton	MA0101478	3.800	3.020	19.600	493.661
Erving #1	MA0101516	1.020	0.320	29.300	78.196
Erving #2	MA0101052	2.700	1.800	3.200	48.038
Erving #3	MA0102776	0.010	0.010	19.600	1.635
Gardner	MA0100994	5.000	3.700	14.600	450.527
Greenfield	MA0101214	3.200	3.770	13.600	427.608
Hadley	MA0100099	0.540	0.320	25.900	69.122
Hardwick G	MA0100102	0.230	0.140	14.600	17.047
Hardwick W	MA0102431	0.040	0.010	12.300	1.026
Hatfield	MA0101290	0.500	0.220	15.600	28.623
Holyoke	MA0101630	17.500	9.700	8.600	695.723
Huntington	MA0101265	0.200	0.120	19.600	19.616
Monroe	MA0100188	0.020	0.010	19.600	1.635
Montague	MA0100137	1.830	1.600	12.900	172.138
N Brookfield	MA0101061	0.760	0.620	23.100	119.445
Northampton	MA0101818	8.600	4.400	22.100	810.982
Northfield	MA0100200	0.280	0.240	16.800	33.627
Northfield School	MA0032573	0.450	0.100	19.600	16.346
Old Deerfield	MA0101940	0.250	0.180	9.200	13.811
Orange	MA0101257	1.100	1.200	8.600	86.069
Palmer	MA0101168	5.600	2.400	18.800	376.301
Royalston	MA0100161	0.040	0.070	19.600	11.442
Russell	MA0100960	0.240	0.160	19.600	26.154
Shelburne Falls	MA0101044	0.250	0.220	16.900	31.008
South Deerfield	MA0101648	0.850	0.700	7.900	46.120
South Hadley	MA0100455	4.200	3.300	28.800	792.634
Spencer	MA0100919	1.080	0.560	13.600	63.517
Springfield	MA0103331	67.000	45.400	4.300	1628.135

Sunderland	MA0101079	0.500	0.190	8.700	13.786
Templeton	MA0100340	2.800	0.400	26.400	88.070

NH, VT, MA Discharges to Connecticut River Watershed

FACILITY NAME	PERMIT NUMBER	DESIGN FLOW (MGD) ¹	AVERAGE FLOW (MGD) ²	TOTAL NITROGEN (mg/l) ³	TOTAL NITROGEN - Existing Flow(lbs/day) ⁴
Ware	MA0100889	1.000	0.740	9.400	58.013
Warren	MA0101567	1.500	0.530	14.100	62.325
Westfield	MA0101800	6.100	3.780	20.400	643.114
Winchendon	MA0100862	1.100	0.610	15.500	78.855
Woronoco Village	MA0103233	0.020	0.010	19.600	1.635
Massachusetts Totals		166.010	106.950		9938.820

1. Design flow – typically included as a permit limit in MA and VT but not in NH.
2. Average discharge flow for 2004 – 2005. If no data in PCS, average flow was assumed to equal design flow.
3. Total nitrogen value based on effluent monitoring data. If no effluent monitoring data, total nitrogen value assumed to equal average of MA secondary treatment facilities (19.6 mg/l), average of MA seasonal nitrification facilities (15.5 mg/l), or average of MA year round nitrification facilities (12.7 mg/l). Average total nitrogen values based on a review of 27 MA facilities with effluent monitoring data. Facility is assumed to be a secondary treatment facility unless ammonia data is available and indicates some level of nitrification.
4. Current total nitrogen load.

Total Nitrogen Load = 13,836 lbs/day
MA (41 facilities) = 9,939 lbs/day (72%)
VT (32 facilities) = 1,727 lbs/day (12%)
NH (21 facilities) = 2170 lbs/day (16%)
TMDL Baseline Load = 21,672 lbs/day

TMDL Allocation = 16,254 lbs/day (25% reduction)

MA Discharges to Housatonic River Watershed

FACILITY NAME	PERMIT NUMBER	DESIGN FLOW (MGD) ¹	AVERAGE FLOW (MGD) ²	TOTAL NITROGEN (mg/l) ³	TOTAL NITROGEN - Existing Flow(lbs/day) ⁴
MASSACHUSETTS					
Crane	MA0000671		3.100	8.200	212.003
Great Barrington	MA0101524	3.200	2.600	17.000	368.628
Lee	MA0100153	1.000	0.870	14.500	105.209
Lenox	MA0100935	1.190	0.790	11.800	77.745
Mead Laurel Mill	MA0001716		1.500	6.400	80.064
Mead Willow Mill	MA0001848		1.100	4.600	42.200
Pittsfield	MA0101681	17.000	12.000	12.400	1240.992
Stockbridge	MA0101087	0.300	0.240	11.100	22.218
West Stockbridge	MA0103110	0.076	0.018	15.500	2.327
Massachusetts Totals			22.218		2151.386

1. Design flow – typically included as a permit limit in MA and VT but not in NH.
2. Average discharge flow for 2004 – 2005. If no data in PCS, average flow was assumed to equal design flow.
3. Total nitrogen value based on effluent monitoring data. If no effluent monitoring data, total nitrogen value assumed to equal average of MA secondary treatment facilities (19.6 mg/l), average of MA seasonal nitrification facilities (15.5 mg/l), or average of MA year round nitrification facilities (12.7 mg/l). Average total nitrogen values based on a review of 27 MA facilities with effluent monitoring data. Facility is assumed to be a secondary treatment facility unless ammonia data is available and indicates some level of nitrification.
4. Current total nitrogen load.

Total Nitrogen Load = 2151.386 lbs/day

TMDL Baseline Load = 3,286 lbs/day

TMDL Allocation = 2,464 lbs/day (25% reduction)

MA Discharges to Thames River Watershed

FACILITY NAME	PERMIT NUMBER	DESIGN FLOW (MGD) ¹	AVERAGE FLOW (MGD) ²	TOTAL NITROGEN (mg/l) ³	TOTAL NITROGEN - Existing Flow(lbs/day) ⁴
MASSACHUSETTS					
Charlton	MA0101141	0.450	0.200	12.700	21.184
Leicester	MA0101796	0.350	0.290	15.500	37.488
Oxford	MA0100170	0.500	0.230	15.500	29.732
Southbridge	MA0100901	3.770	2.900	15.500	374.883
Sturbridge	MA0100421	0.750	0.600	10.400	52.042
Webster	MA0100439	6.000	3.440	17.400	499.199
Massachusetts Totals		11.820	7.660		1014.528

1. Design flow – typically included as a permit limit in MA and VT but not in NH.
2. Average discharge flow for 2004 – 2005. If no data in PCS, average flow was assumed to equal design flow.
3. Total nitrogen value based on effluent monitoring data. If no effluent monitoring data, total nitrogen value assumed to equal average of MA secondary treatment facilities (19.6 mg/l), average of MA seasonal nitrification facilities (15.5 mg/l), or average of MA year round nitrification facilities (12.7 mg/l). Average total nitrogen values based on a review of 27 MA facilities with effluent monitoring data. Facility is assumed to be a secondary treatment facility unless ammonia data is available and indicates some level of nitrification.
4. Current total nitrogen load.

Total Nitrogen Load = 1014.528 lbs/day

TMDL Baseline Load = 1,253 lbs/day

TMDL Allocation = 939 lbs/day (25% reduction)

RESPONSE TO PUBLIC COMMENTS
Erving POTW #3 Wastewater Treatment Plant Permit
National Pollutant Discharge Elimination System (NPDES), No. MA0102776

The U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) are issuing a final National Pollutant Discharge Elimination System (NPDES) permit for POTW #3 in the Village of Farley, in Erving, Massachusetts. The Final Permit authorizes the Town of Erving to discharge wastewater to the Millers River in accordance with the requirements of the Federal Clean Water Act (CWA), 33 U.S.C. §§ 1251 *et. seq.*, and the Massachusetts Clean Waters Act, M.G.L. Ch. 21, §26-53.

The Draft Permit public comment period began August 12, 2008, and ended on September 10, 2008. Andrea F. Donlon, River Steward, with Connecticut River Watershed Council submitted the only comments received in a letter dated September 9, 2008.

The comment letter received by EPA is part of the administrative record. To obtain a copy of these comments and/or the Final Permit, please write or call Doug Corb, EPA Massachusetts Municipal NPDES Permits Program (CMP), 1 Congress Street, Suite 1100, Boston, MA 02114-2023; telephone: (617) 918-1565.

This document presents EPA's responses to public comments on the Draft Permit, in accordance with the provisions of 40 C.F.R. 124.17. No changes were made from the Draft Permit to the Final Permit.

Andrea F. Donlon, M.S., River Steward, Connecticut River Watershed Council (CRWC).

All three facilities discharge to the Millers River, one of the major tributaries to the Connecticut River. CRWC is particularly interested in improving water quality in the Connecticut River watershed so that its rivers can support existing primary and secondary contact uses, even during wet weather. Our comments are below.

Comment #1: The protection of existing uses is required under 40 CFR 131.12(a)(1). Below is our understanding of existing uses on the Millers River in the vicinity of the outfalls.

- Between Erving Center and Millers Falls, the Millers River is occasionally used by skilled whitewater paddlers who are willing to brave rough conditions and the occasional broken dam and scattered mill remnants. In lower flow conditions, this section of river is also used by fly fishermen.

- Downstream, at the confluence of the Millers and Connecticut Rivers, there is a sandy beach that is frequently used for swimming. The Connecticut River at this point is heavily used for boating and paddling.

Response: EPA recognizes that boating and primary contact recreation in and on the water are existing uses for this segment of the Millers River. The final permit has new *E. coli* bacteria limits which EPA and MassDEP have found to be a better indicator of the presence of human disease causing pathogens. The MassDEP has issued a Clean Water Act Section 401 certification that the NPDES permit as written will be protective of all Massachusetts water quality standards for both designated and existing uses.

Comment #2: The proposed maximum daily limit for *E. coli* bacteria in all three permits is 409 cfu/100 ml. This limit is not consistent with the Massachusetts Surface Water Quality Standards, 314 CMR 4.00, which states that no single sample shall exceed 235 colonies/100 ml. Nothing in the Fact Sheets explains the rationale for the maximum of 409 colonies/100ml.

Response: The MassDEP revised its surface water criteria for bacteria in the revisions to the Massachusetts Surface Water Quality Standards (SWQS) 314 CMR 4.00 (December 29, 2006). EPA approved the changes to the bacteria criteria on September 19, 2007.

For fresh waters, the SWQS criteria were revised from fecal coliform bacteria to either enterococci (for bathing beaches) or *E. coli*. The updated SWQS changes the criteria from the previous standard which was, for Class B waters, a monthly geometric mean for fecal coliform bacteria of 200 cfu/100 ml and no greater than 10% of the samples in a month were to exceed 400 cfu/100 ml. These criteria were based upon qualitative information and best professional judgment (Isaac, 2007).

The new criteria for enterococci are a monthly geometric mean of 33 cfu/100 ml and single sample maximum (SSM) of 61 cfu/100ml. These are designed for bathing beach areas. The new criteria for *E. coli* (used by MassDEP for non-beach inland waters) are 126 cfu/100 ml geometric mean and a SSM of 235 cfu/100 ml. These criteria are based upon statistical distribution (Isaac, 2007).

The bacteria criteria are based on the EPA criteria originally published in 1986 and more recently included in the EPA bacteria ruling found in the Federal Register (November 16, 2004: "Water Quality Standards for Coastal and Great Lakes Recreation Waters: Final Rule").

The *E. coli* SSM values are based on 4 classes of exposure with the upper 75% confidence level being the most stringent. MassDEP views the use of the 90% upper confidence level (lightly used full body contact recreation) of 409 cfu/100 ml as appropriate for setting effluent bacteria levels in NPDES permits. MassDEP views this as in keeping with how the fecal coliform criteria were used with the 10% exceedance allowance. EPA explained that if NPDES permits limits are set at the 75% upper confidence level for SSM it would, in fact, be more stringent than intended by the criteria and “could impart a level of protection much more stringent than intended by the 1986 bacteria criteria document.” (EPA-823-F-06-013, September 2006, Water Quality Standards for Coastal Recreation Waters: Using Single Sample Maximum Values in State Water Quality Standards).

The bacteria limits for this permit are thus set using the water quality standard based geometric mean value in the SWQS and setting the daily maximum at the 90% upper confidence level. The permit is more stringent in that it does not allow 10% of the effluent samples to be above 409 cfu/100 ml which is how the surface water criteria are applied in the water quality standards.

Comment #3: We do not understand the rationale for calculating the dilution factor in this permit. For most permits, the dilution factor is calculated as follows: $DF = [(7Q10) + (Plant Q)] / (Plant Q)$. The draft permit Fact Sheet shows a calculation of $DF = [(7Q10) + 1] / (Plant Q)$. What is the reason for using 1 rather than the Plant Q in the numerator?

Response: The following dilution formula, $[(7Q10) + (Plant Q)] / (Plant Q)$ is used when the river gage is above the treatment plant. The total flow of the river at the point where the POTW discharges will be the $(7Q10) + (Plant Q)$. In this case the river gauge (7Q10) is below the point where the effluent enters the river and thus the effluent volume is already included in the gauged flow. The dilution formula is adjusted accordingly.

Comment#4 BOD, TSS, and nitrogen compounds are being changed from an 8-hour composite to a 24-hour composite. The reason for this is not explained. However, the Fact Sheet on page 9 says that erratic influent loading and difficulty with access make representative influent and effluent sampling impractical. We wonder if the influent loading is so erratic, is a 24-hour composite necessary? Perhaps a composite over a day's operating schedule would make more sense? The lack of influent and effluent sampling will be an unfortunate change; since that means the facility would not be able to calculate % removal from its treatment process.

Response: A 24 hour flow proportioned sample will be far more representative than the current 8 hour sample. Flow proportioning takes larger effluent samples during peak flows and smaller samples during low flow periods, giving a clear picture of the waste stream.

POTW #3 is currently not doing influent monitoring for BOD and TSS. The POTW consists of two septic tanks followed by sand filters. Such systems receive influent at a point (deep underground) not conducive to safe sampling. Creating a safe influent sampling point is very difficult. There is at present no proper influent sampling location. The Town has plans to upgrade the POTW and include a safe influent sampling point.