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 Amherst
Department of Public Works
586 South Pleasant Street, Amherst, MA 01002

is authorized to discharge from the facility located at

Amherst Wastewater Treatment Plant
100 Mullins Way, Hadley, MA 01035

to receiving water named

Connecticut River (Connecticut River Watershed – MA34-04)

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

This permit shall become effective on **(See ** below)**

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 September 29, 2006.

This permit consists of 15 pages in Part I including effluent limitations and monitoring requirements, Part II including Standard Conditions and Definitions, Attachment A – Revised Freshwater Acute Toxicity Test Procedure and Protocol, February 2011, 8 pages, and Attachment B – Summary of Report Submittal.

Signed this day of

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

David Ferris, Director
Massachusetts Wastewater Management Program
Department of Environmental Protection
Commonwealth of Massachusetts
Boston, MA

** This permit will become effective on the date of signature if no comments are received during public notice. If comments are received during public notice, this permit will be made effective no sooner than 30 days after signature

PART I

A.1. During the period beginning on the effective date and lasting through expiration, the permittee is authorized to discharge treated effluent from outfall serial number **001** to Connecticut River. Such discharges shall be limited and monitored as specified below.

EFFLUENT CHARACTERISTIC	**EFFLUENT LIMITS**					**MONITORING REQUIREMENTS** [3]	
PARAMETER	**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**MAXIMUM DAILY**	**MEASUREMENT FREQUENCY**	**SAMPLE[3] TYPE**
FLOW[2]	*********	*********	7.1 MGD	*********	Report MGD	CONTINUOUS	RECORDER
FLOW[2]	*********	*********	Report MGD	*********	*********	CONTINUOUS	RECORDER
$CBOD_5$ [4]	1480 lb/Day	2369 lb/Day	25 mg/l	40 mg/l	Report mg/l	2/WEEK	24-HOUR COMPOSITE[5]
TSS [4]	1776 lb/Day	2665 lb/Day	30 mg/l	45 mg/l	Report mg/l	2/WEEK	24-HOUR COMPOSITE[5]
pH RANGE[1]	6.0 - 8.3 SU (SEE PERMIT PAGE 5 OF 16, PARAGRAPH I.A.1.b.)					1/DAY	GRAB
TOTAL CHLORINE RESIDUAL[1,6] (April 1- October 31)	*********	**********	*********	*********	1.0 mg/l	1/DAY	GRAB
FECAL COLIFORM [1,6] (April 1-October 31)	*********	*********	200 cfu/100 ml	*********	400 cfu/100 ml	2/WEEK	GRAB
ESCHERICHIA COLI [1,6] (April 1- October 31)	*********	**********	126 cfu/100 ml	*********	409 cfu/100 ml	2/WEEK	GRAB
WHOLE EFFLUENT TOXICITY [7, 8, 9]	Acute LC_{50} ≥50%					2/YEAR	24-HOUR COMPOSITE[5]

CONTINUED FROM PREVIOUS PAGE

A.1. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge from treated effluent from outfall serial number **001** to Connecticut River. Such discharges shall be limited and monitored as specified below.

EFFLUENT CHARACTERISTIC	EFFLUENT LIMITS					MONITORING REQUIREMENTS [3]	
PARAMETER	**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**MAXIMUM DAILY**	**MEASUREMENT FREQUENCY**	**SAMPLE[3] TYPE**
TOTAL NITROGEN[10]	Report lb/day Report kg/day	********	Report mg/l	********	********	1/WEEK	24-HOUR COMPOSITE[5]
AMMONIA-NITROGEN[10]	Report lb/day Report kg/day	******** ********	Report mg/l	******** ********	********	1/WEEK	24-HOUR COMPOSITE[5]
TOTAL KJELDAHL NITROGEN[10]	Report lb/day Report kg/day	******** ********	Report mg/l	******** ********	********	1/WEEK	24-HOUR COMPOSITE[5]
TOTAL NITRATE[10]	Report lb/day Report kg/day	******** ********	Report mg/l	******** ********	********	1/WEEK	24-HOUR COMPOSITE[5]
TOTAL NITRITE[10]	Report lb/day Report kg/day	******** ********	Report mg/l	******** ********	********	1/WEEK	24-HOUR COMPOSITE5
TOTAL PHOSPHORUS	********	********	Report mg/l	********	********	1/MONTH	24-HOUR COMPOSITE[5]

Sampling Location: Flow – Influent Parshall Flumes
$CBOD_5$ and TSS – Directly after Parshall Flume (Influent) and Effluent Discharge Pipe (Effluent) .
pH, E. Coli, TRC, Phosphorus, Nitrogen and Nitrogen Compounds and Whole Effluent Toxicity – Effluent Discharge Pipe.

Footnotes:

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 will be calculated as the arithmetic mean of the monthly average flow for the reporting month and the monthly average flows for the previous eleven months.

3. Effluent sampling shall be collected at the point specified on page 3. 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 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.

4. Sampling required for influent and effluent.

5. 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.

6. E. coli, fecal coliform, and total residual chlorine effluent limitations and monitoring requirements will be in effect from April 1 to October 31. This is a State certification requirement. The monthly average limit for E. coli is expressed as a geometric mean. The weekly E. coli sample shall be collected at the same time the daily total residual chlorine sample is collected for that day. See Part I.F. for compliance schedule for E. Coli.

   Chlorination system shall include an alarm system 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, or interruptions or malfunctions of the dechlorination system that may have resulted in excessive levels of chlorine in the final effluent 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 or dechlorination chemicals occurred.

7. The permittee shall conduct acute toxicity tests two times per year using the fathead minnow *Pimephales promelas*. Toxicity test samples shall be collected during the second week of the months of June 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 July 31 and November 30 respectively. The tests must be performed in accordance with 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}**
June October	July 31 November 30	Pimephales promelas (fathead minnow)	≥50%

After submitting **two years** and a **minimum** of four consecutive sets of WET test results, all of which demonstrate compliance with the WET permit limits, the permittee may request a reduction in the WET testing requirements. The permittee is required to continue testing at the frequency specified in the permit until notice is received by certified mail from the EPA that the WET testing requirement has been changed.

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

9. If toxicity test(s) using receiving water as diluent show the receiving water to be toxic or unreliable, the permittee shall either follow procedures outlined in **Attachment A (Toxicity Test Procedure and Protocol) Section IV., DILUTION WATER** in order to obtain an individual approval for use of an alternate dilution water, or the permittee shall follow the Self-Implementing Alternative Dilution Water Guidance which may be used to obtain automatic approval of an alternate dilution water, including the appropriate species for use with that water. This guidance is found in Attachment G of *NPDES Program Instructions for the Discharge Monitoring Report Forms (DMRs)*, which may be found on the EPA Region I web site at http://www.epa.gov/Region1/enforcementandassistance/dmr.html. If this guidance is revoked, the permittee shall revert to obtaining individual approval as outlined in **Attachment A**. Any modification or revocation to this guidance will be transmitted to the permittees. However, at any time, the permittee may choose to contact EPA-New England directly using the approach outlined in **Attachment A**.

10. See Part I.E. for requirements to evaluate and implement optimization of nitrogen removal.

Part I.A.1. (Continued)

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 6.0 or greater than 8.3 at any time.

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

d. The effluent shall not contain a visible oil sheen, foam, or 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 permittee shall minimize the use of chlorine while maintaining adequate bacterial control.

g. The results of sampling for any parameter done in accordance with EPA approved methods above its required frequency must also be reported.

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 31 of the following calendar year describing its plans for further flow increases and describing how it 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 which would be subject to section 301 or 306 of the Clean Water Act if it were directly discharging those pollutants; 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.

3. 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.

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. UNAUTHORIZED DISCHARGES

The permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfall(s) 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 to EPA and MassDEP in accordance with Section D.1.e. (1) of the Standard Coditions of this 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. Written notifications to EPA shall be made to the address given in Part I.G.c. Oral notifications shall be made to the Water Technical Unit at 617-918-1850 to Denny Dart.

C. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM

Operation and maintenance of the sewer system shall be in compliance with the General Requirements of Part II and the following terms and conditions. The permittee is required to complete the following activities for the collection system which it owns:

1. 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. Provisions to meet this requirement shall be described in the Collection

System O & M Plan required pursuant to Section C.5. below.

2. Preventive Maintenance Program

The permittee shall maintain an ongoing preventive 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. Plans and programs to meet this requirement shall be described in the Collection System O & M Plan required pursuant to Section C.5. below.

3. Infiltration/Inflow

The permittee shall control infiltration and inflow (I/I) into the sewer system as necessary to prevent high flow related unauthorized discharges from their collection systems and high flow related violations of the wastewater treatment plant's effluent limitations. Plans and programs to control I/I shall be described in the Collection System O & M Plan required pursuant to Section C.5. below.

4. Collection System Mapping

Within 30 months of the effective date of this permit, the permittee shall prepare a map of the sewer collection system it owns (see page 1 of this permit for the effective date). The map shall be on a street map of the community, with sufficient detail and at a scale to allow easy interpretation. The collection system information shown on the map shall be based on current conditions and shall be kept up to date and available for review by federal, state, or local agencies. Such map(s) shall include, but not be limited to the following:

a. All sanitary sewer lines and related manholes;
b. All combined sewer lines, related manholes, and catch basins;
c. All combined sewer regulators and any known or suspected connections between the sanitary sewer and storm drain systems (e.g. combination manholes);
d. All outfalls, including the treatment plant outfall(s), CSOs, and any known or suspected SSOs, including stormwater outfalls that are connected to combination manholes;
e. All pump stations and force mains;
f. The wastewater treatment facility(ies);
g. All surface waters (labeled);
h. Other major appurtenances such as inverted siphons and air release valves;
i. A numbering system which uniquely identifies manholes, catch basins, overflow points, regulators and outfalls;
j. The scale and a north arrow; and
k. The pipe diameter, date of installation, type of material, distance between manholes, and the direction of flow.

5. Collection System Operation and Maintenance Plan

The permittee shall develop and implement a Collection System Operation and Maintenance Plan.

a. Within six (6) months of the effective date of the permit, the permittee shall submit to EPA and MassDEP

(1) A description of the collection system management goals, staffing, information management, and legal authorities;
(2) A description of the collection system and the overall condition of the collection system including a list of all pump stations and a description of recent studies and construction activities; and
(3) A schedule for the development and implementation of the full Collection System O & M Plan including the elements in paragraphs b.1. through b.8. below.

b. The full Collection System O & M Plan shall be completed, implemented and submitted to EPA and MassDEP within twenty four (24) months from the effective date of this permit. The Plan shall include:

(1) The required submittal from paragraph 5.a. above, updated to reflect current information;
(2) A preventive maintenance and monitoring program for the collection system;
(3) Description of sufficient staffing necessary to properly operate and maintain the sanitary sewer collection system and how the operation and maintenance program is staffed;
(4) Description of funding, the source(s) of funding and provisions for funding sufficient for implementing the plan;
(5) Identification of known and suspected overflows and back-ups, including manholes. A description of the cause of the identified overflows and back-ups, corrective actions taken, and a plan for addressing the overflows and back-ups consistent with the requirements of this permit;
(6) A description of the permittee's programs for preventing I/I related effluent violations and all unauthorized discharges of wastewater, including overflows and by-passes and the ongoing program to identify and remove sources of I/I. The program shall include an inflow identification and control program that focuses on the disconnection and redirection of illegal sump pumps and roof down spouts; and
(7) An educational public outreach program for all aspects of I/I control, particularly private inflow.
(8) An Overflow Emergency Response Plan to protect public health from overflows and unanticipated bypasses or upsets that exceed any effluent limitation in the permit.

6. Annual Reporting Requirement

The permittee shall submit a summary report of activities related to the implementation of its Collection System O & M Plan during the previous calendar year. The report shall be submitted to EPA and MassDEP annually by March 31. The summary report shall, at a minimum, include:

a. A description of the staffing levels maintained during the year;
b. A map and a description of inspection and maintenance activities conducted and corrective actions taken during the previous year;
c. Expenditures for any collection system maintenance activities and corrective actions taken during the previous year;
d. A map with areas identified for investigation/action in the coming year;
e. If treatment plant flow has reached 80% of the design flow [7.1 x 0.8 = 5.68 mgd] based on the annual average flow during the reporting year or there have been capacity related overflows, submit a calculation of the maximum daily, weekly, and monthly infiltration and the maximum daily, weekly, and monthly inflow for the reporting year; and
f. A summary of unauthorized discharges during the past year and their causes and a report of any corrective actions taken as a result of the unauthorized discharges reported pursuant to the Unauthorized Discharges section of this permit.

7. Alternate Power Source

In order to maintain compliance with the terms and conditions of this permit, the permittee shall provide an alternative power source(s) sufficient to operate the portion of the publicly owned treatment works1 it owns and operates.

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, including EPA regulations promulgated at 40 CFR Part 503, which prescribe "Standards for the Use or Disposal of Sewage Sludge" pursuant to Section 405(d) of the CWA, 33 U.S.C. § 1345(d).

2. If both state and federal requirements apply to the permittee's sludge use and/or disposal practices, the permittee shall comply with the more stringent of the applicable requirements.

3. The requirements and technical standards of 40 CFR Part 503 apply to the following sludge use or disposal practices.

a. Land application - the use of sewage sludge to condition or fertilize the soil

1 As defined at 40 CFR §122.2, which references the definition at 40 CFR §403.3

b. Surface disposal - the placement of sewage sludge in a sludge only landfill

c. Sewage sludge incineration in a sludge only incinerator

4. The requirements of 40 CFR Part 503 do not apply to facilities which dispose of sludge in a municipal solid waste landfill. 40 CFR § 503.4. These requirements also do not apply to facilities which do not use or 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 40 CFR. Part 503 requirements including the following elements:

- General requirements
- Pollutant limitations
- Operational Standards (pathogen reduction requirements and vector attraction reduction requirements)
- Management practices
- Record keeping
- Monitoring
- Reporting

Which of the 40 C.F.R. Part 503 requirements apply to the permittee will depend upon the use or disposal practice followed and upon the quality of material produced by a facility. The EPA Region 1 Guidance document, "EPA Region 1 - NPDES Permit Sludge Compliance Guidance" (November 4, 1999), may be used by the permittee to assist it in determining the applicable requirements.[2]

6. The sludge shall be monitored for pollutant concentrations (all Part 503 methods) and pathogen reduction and vector attraction reduction (land application and surface disposal) 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 1,500	1 /quarter
1,500 to less than 15,000	6 /year
15,000 +	1 /month

Sampling of the sewage sludge shall use the procedures detailed in 40 CFR 503.8.

7. Under 40 CFR § 503.9(r), the permittee is a "person who prepares sewage sludge" because it "is … the person who generates sewage sludge during the treatment of domestic sewage in a treatment works …." If the permittee contracts with *another* "person who prepares sewage sludge" under 40 CFR § 503.9(r) – i.e., with "a person who

2 This guidance document is available upon request from EPA Region 1 and may also be found at: http://www.epa.gov/region1/npdes/permits/generic/sludgeguidance.pdf

derives a material from sewage sludge" – for use or disposal of the sludge, then compliance with Part 503 requirements is the responsibility of the contractor engaged for that purpose. If the permittee does not engage a "person who prepares sewage sludge," as defined in 40 CFR § 503.9(r), for use or disposal, then the permittee remains responsible to ensure that the applicable requirements in Part 503 are met. 40 CFR §503.7. If the ultimate use or disposal method is land application, the permittee is responsible for providing the person receiving the sludge with notice and necessary information to comply with the requirements of 40 CFR Part 503 Subpart B.

8. The permittee shall submit an annual report containing the information specified in the 40 CFR Part 503 requirements (§ 503.18 (land application), § 503.28 (surface disposal), or § 503.48 (incineration)) by **February 19** (*see also* "EPA Region 1 - NPDES Permit Sludge Compliance Guidance"). Reports shall be submitted to the address contained in the reporting section of the permit. If the permittee engages a contractor or contractors for sludge preparation and ultimate use or disposal, the annual report need contain only the following information:

   a. Name and address of contractor(s) responsible for sludge preparation, use or disposal
   b. Quantity of sludge (in dry metric tons) from the POTW that is transferred to the sludge contractor(s), and the method(s) by which the contractor will prepare and use or dispose of the sewage sludge.

E. SPECIAL CONDITIONS

Within six (6) months of the effective date of this permit, the permittee shall complete an evaluation of alternative methods of operating the existing water pollution control facility to optimize the removal of nitrogen, and submit a report to EPA and MassDEP documenting this evaluation and presenting a description of recommended operational changes. The methods to be evaluated include, but are not limited to, operational changes designed to enhance nitrification (seasonal and year round), incorporation of anoxic zones, septage receiving policies and procedures, and side stream management. The permittee shall implement the recommended operational changes in order to maintain the mass discharge of total nitrogen less than the existing annual discharge load. Existing mass loadings will be based on the 503.3 lbs/day 2004-2005 baseline estimate.

The permittee shall also submit an annual report to EPA and MassDEP, **by April 1 each year**, that summarizes activities related to optimizing nitrogen removal efficiencies, documents the annual nitrogen discharge load from the facility, and tracks trends relative to the previous year.

F. COMPLIANCE SCHEDULE

The permittee shall achieve compliance with the effluent limittions for E. Coli by the **end of the first disinfection season** following the effective date of the permit. The limits will become effective at the start of the next disinfection season. During the interim period, the limits for E. Coli will not be in effect, but sampling and reporting will be required at the frequency required in

Part I.A.1. The effluent limitations and monitoring requirements for Fecal Coliform will end when the E. Coli limitations go into effect.

G. MONITORING AND REPORTING

1. **For a period of one year from the effective date of the permit**, the permittee may either submit monitoring data and other reports to EPA in hard copy form, or report electronically using NetDMR, a web-based tool that allows permittees to electronically submit discharge monitoring reports (DMRs) and other required reports via a secure internet connection. **Beginning no later than one year after the effective date of the permit**, the permittee shall begin reporting using NetDMR, unless the facility is able to demonstrate a reasonable basis that precludes the use of NetDMR for submitting all DMRs and reports. Specific requirements regarding submittal of data and reports in hard copy form and for submittal using NetDMR are described below:

a. Submittal of Reports Using NetDMR

NetDMR is accessed from: http://www.epa.gov/netdmr. Within one year of the effective date of the Permit, the permittee shall begin submitting DMRs and reports required under this permit electronically to EPA using NetDMR, unless the facility is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes the use of NetDMR for submitting DMRs and reports ("opt out request").

DMRs shall be submitted electronically to EPA no later than the 15th day of the month following the completed reporting period. All reports required under the permit shall be submitted to EPA, including the MassDEP Monthly Operations and Maintenance Report, as an electronic attachment to the DMR. Once a permittee begins submitting reports using NetDMR, it will no longer be required to submit hard copies of DMRs or other reports to EPA and will no longer be required to submit hard copies of DMRs to MassDEP. However, permittees shall continue to send hard copies of reports other than DMRs (including Monthly Operation and Maintenance Reports) to MassDEP until further notice from MassDEP.

b. Submittal of NetDMR Opt Out Requests

Opt out requests must be submitted in writing to EPA for written approval at least sixty (60) days prior to the date a facility would be required under the Permit to begin using NetDMR. This demonstration shall be valid for twelve (12) months from the date of EPA approval and shall thereupon expire. At such time, DMRs and reports shall be submitted electronically to EPA unless the permittee submits a renewed opt out request and such request is approved by EPA. All opt out requests should be sent to the following addresses:

Attn: NetDMR Coordinator
U.S. Environmental Protection Agency, Water Technical Unit
5 Post Office Square, Suite 100 (OES04-4)
Boston, MA 02109-3912

And

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

c. Submittal of Reports in Hard Copy Form

Hard copy DMR submittals shall be completed and postmarked no later than the 15th day of the month following the completed reporting period. MassDEP Monthly Operation and Maintenance Reports shall be submitted as an attachment to the DMRs. Signed and dated originals of the DMRs, and all other reports required herein, shall be submitted to the appropriate State addresses and to the EPA address listed below:

U.S. Environmental Protection Agency
Water Technical Unit
5 Post Office Square, Suite 100 (OES04-4)
Boston, MA 02109-3912

The State Agency addresses are:

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

And

Copies of toxicity tests and nitrogen optimization reports only to:

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

H. STATE PERMIT CONDITIONS

1. This authorization to discharge includes two separate and independent permit authorizations. The two permit authorizations are (i) a federal National Pollutant Discharge Elimination System permit issued by the U.S. Environmental Protection

Agency (EPA) pursuant to the Federal Clean Water Act, 33 U.S.C. §§1251 et seq.; and (ii) an identical state surface water discharge permit issued by the Commissioner of the Massachusetts Department of Environmental Protection (MassDEP) pursuant to the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53, and 314 C.M.R. 3.00. All of the requirements contained in this authorization, as well as the standard conditions contained in 314 CMR 3.19, are hereby incorporated by reference into this state surface water discharge permit.

2. This authorization also incorporates the state water quality certification issued by MassDEP under § 401(a) of the Federal Clean Water Act, 40 C.F.R. 124.53, M.G.L. c. 21, § 27 and 314 CMR 3.07. All of the requirements (if any) contained in MassDEP's water quality certification for the permit are hereby incorporated by reference into this state surface water discharge permit as special conditions pursuant to 314 CMR 3.11.

3. 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 a 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.

Attachment B

Summary of Required Report Submittals*

Required Report	Date Due	Submitted By:	Submitted To: ** (see next page for key)
Discharge Monitoring Report (DMR)	Monthly, postmarked by the 15th of the month following the monitoring month (e.g. the March DMR is due by April 15th.	Town of Amherst	1, 2
Whole Effluent Toxicity (WET)Test Report (Part I.A.1)	July 31 and November 30 of each year	Town of Amherst	1, 2, 3
Collection System Mapping (Part I.C.4)	Within 30 months of effective date	Town of Amherst	Available on request
Collection System O & M Plan (Part I.C.5)	Within 24 months of effective date	Town of Amherst	1,2
Collection System Summary Report (Part I.C.6)	By March 31 of each year	Town of Amherst	1,2
Annual Sludge Report (Part I.D.8)	February 19 each year	Town of Amherst	1,2
Nitrogen Optimization (Part I.E.) Annual Report	Within one year. By February 1 of each year	Town of Amherst Town of Amherst	1,2,3 1,2,3

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

**The addresses are for the submittal of hard copies. When the permittee begins reporting using NetDMR, submittal of hard copies of many of the required reports will not be necessary. See permit conditions for details.

1. Environmental Protection Agency
   Water Technical Unit (OES04-SMR)
   5 Post Office Square – Suite 100
   Boston, Massachusetts 02109 - 3912

2. Massachusetts Department of Environmental Protection
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BOSTON, MASSACHUSETTS 02109-3912

FACT SHEET

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

NPDES PERMIT NO: **MA0100218**

DATE OF PUBLIC NOTICE: January 12, 2012 thru February 10, 2012

NAME AND ADDRESS OF APPLICANT:

Town of Amherst
Department of Public Works
586 South Pleasant Street, Amherst, Massachusetts 01002

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Amherst Wastewater Treatment Plant
100 Mullins Way, Hadley, Massachusetts 01035

RECEIVING WATER: **Connecticut River (Connecticut River Watershed – MA34-04)**

CLASSIFICATION: **Class B - Warm Water Fishery**

I. Proposed Action, Type of Facility and Outfall Location

The above named applicant has applied to the U.S. Environmental Protection Agency for the reissuance of its NPDES permit to discharge to the Connecticut River, the designated receiving water. The facility is engaged in the collection and treatment of municipal wastewater. A figure showing the wastewater treatment facility and outfall location is included as **Attachment A.**

Process Description

The Amherst Wastewater Treatment Plant is a secondary treatment facility with a design capacity of 7.1 million gallons per day. Wastewater collected and treated by the facility consists entirely of domestic wastewaters. There are no known industrial contributors to the collection system. The following is a brief description of the collection system and the treatment plant.

Wastewater flow is brought to the plant by gravity sewers from three regions; the University of Massachusetts, North Amherst, and Amherst. The collection system is a 100% separate sanitary system serving 36,000 inhabitants. Plant influent passes through three Parshall flumes, then to preliminary treatment by two comminutors, and two grit collectors. An onsite septage receiving station discharges septage waste to the head of the treatment plant. Flow is then pumped to three primary sedimentation tanks where the heavier solids are settled out. Clarified wastewater overflows the primary sedimentation tanks and flows to three aeration tanks, where biological treatment occurs. The mixture of wastewater and activated sludge, called the "mixed liquor", then flows by gravity to the three secondary sedimentation tanks for final settling. Clarified wastewater is then discharged to the effluent wet well and pumped through a 3.5 mile force main to a 36 inch outfall. A chlorine diffuser doses the wastewater with chlorine soon after pumping. The required chlorine contact time for disinfection is assured by the 45 minute detention time in the effluent force main and outfall before discharge. The treated effluent is discharged into the main channel of the Connecticut River through diffusers.

The sludge which settles in the primary sedimentation basins is co-thickened with waste activated sludge from the secondary sedimentation basins to about 7% solids and then pumped to a 9,000 gallon tank truck for transport to offsite incineration facilities.

II. Description of Dicharge

A quantitative description of the discharge in terms of significant effluent parameters based on recent discharge monitoring reports (DMRs) from January, 2009 through March 2011 may be found in fact sheet **Attachment B**.

III. Limitations and Conditions

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

IV. Permit Basis and Explanation of Effluent Limitation Derivation

Overview of Federal and State Regulations

Pursuant to 40 C.F.R. § 122.44 (d), permittees must achieve water quality standards established under Section 303 of the Clean Water Act (CWA), including state narrative criteria for water quality. Additionally, under 40 C.F.R. § 122.44 (d)(1)(i), "Limitations must control all pollutants or pollutant parameters which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard." When determining whether a discharge causes, or has the reasonable potential to cause or contribute to an in-stream excursion above a narrative or numeric criterion, the permitting authority shall use procedures which account for existing controls on point and non-point sources of pollution, and where appropriate, consider the dilution of the effluent in the receiving water.

A permit may not be renewed, reissued, or modified with less stringent limitations or conditions than those contained in the previous permit unless in compliance with the anti-backsliding requirements of the CWA. EPA's anti-backsliding provisions restrict the relaxation of permit limits, standards, and conditions. Therefore effluent limits in the reissued permit must be at least as stringent as those of the previous permit. Effluent limits based on technology, water quality, and state certification requirements must meet anti-backsliding provisions found under section 402 (o) and 303 (d) of the CWA, and in 40 CFR 122.44 (1).

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 Connecticut 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 Amherst WWTP discharges to the Connecticut River Segment MA34-04. This segment runs from the confluence with the Deerfield River, Greenfield/Montague/Deerfield to the Holyoke Dam, Holyoke/South Hadley, a length of 34.4 miles.

The Connecticut River has been designated as a 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 including for their reproduction, migration, growth and other critical functions, 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 68° F (20° Celsius) during the summer months and are not capable of supporting a year-round population of cold water stenothermal aquatic life.

This segment of the Connecticut River is classified in the State's 2010 Integrated List of Waters as Category 5, as not in attainment and requiring a TMDL. The listed impairments for this segment are PCBs in fish tissue and Escherichia coli.

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. The facility design flow was used to calculate available effluent dilution (40 CFR § 122.45(b)(i)).

The facility design flow is 7.1 million gallons per day [10.98 cubic feet per second (cfs)]. The nearest United States Geological Survey (USGS) streamflow gage to the discharge point is located upstream in Montague. The Montague (01170500) gage station has a drainage area of 7860 square miles (mi^2). The USGS-calculated 7Q10 at the gage Station is 1727 cfs for the record years 1905-1999 using D-flow. The drainage area at Route 116 [upstream of Amherst] is 7916 sq mi. Downstream of Rte 116, the Russellville Brook adds 7 sq mi of drainage for a total drainage area downstream of Rte 116 of 7923 sq mi. at the Amherst WWTP. The 7Q10 at the Amherst WWTP was determined by multiplying the 7Q10 measured at the Montague gage by the ratio of the drainage area at the Montague Gage Station divided by the drainage area at the Amherst WWTP.

Drainage Area at the Montague gage = 7860
Drainage area at Amherst WWTP outfall = 7923 sq mi.

7Q10 Flow at Montague gage = 1727 cfs
7Q10 Flow at Amherst WWTP outfall = 1727(7923/7860) = 1741 cfs

Design Flow of Amherst WWTP = 7.1 MGD x 1.547 = 10.98 cfs;

Dilution Factor = (Receiving water 7Q10 + discharge flow)/discharge flow
= (1741 + 10.98)/10.98 = 160

Flow - The flow limit of 7.1 mgd is based on the annual average design flow of the treatment plant, which is found in the Permit Application Form 2A, Part A, Section a.6. The draft permit requires that flow be measured continuously, and requires the permittee to report the annual average flow, the monthly average flow, and the maximum daily flow. Discharge monitoring reports (DMRs) submitted by the Town show that the facility consistently achieves the limit. (**See Attachment B of this fact sheet**)

Conventional Pollutants

Biochemical Oxygen Demand/Carbonaceous Biochemical Oxygen Demand ($CBOD_5$) - Publicly Owned Treatment Works (POTWs) are subject to the secondary treatment requirements set forth at 40 CFR Part 133. The BOD_5 limits were changed to $CBOD_5$ (Carbonaceous BOD) in the previous permit. 40 CFR Part 133.102(a)(4) allows the use of $CBOD_5$ limits in place of BOD_5 limits provided the 30 day limit not exceed 25 mg/l (as opposed to 30 mg/l for BOD_5), that the weekly average limit be 40 mg/l (as opposed to 45 mg/l for BOD_5), and that the 30 day average percent removal not be less than 85 percent (the same as for BOD_5). Accordingly, these limits are continued in the draft permit. The maximum daily concentration shall continue to be reported.

Monthly average and weekly average $CBOD_5$ mass (lbs per day) have been maintained. Discharge monitoring reports (DMRs) submitted by the permittee show that the facility consistently achieves the (lbs/day) limit. The mass limitations for $CBOD_5$ are based on the 7.1 mgd design flow.

Total Suspended Solids (TSS) - Publicly Owned Treatment Works (POTWs) are subject to the secondary treatment requirements set forth at 40 CFR 133.102 (b)(1), (2) and 40 CFR 122.45 (f). The secondary treatment limitations are a monthly average TSS concentration of 30 mg/l and a weekly average concentration of 45 mg/l. The maximum daily limit has been removed because it is no longer required as a condition for obtaining state certification. The maximum daily concentration shall continue to be reported.

Monthly average and weekly average TSS mass (lbs per day) limits have been maintained. Discharge monitoring reports (DMRs) submitted by the permittee show that the facility consistently achieves the (lbs/day) limit. The mass limitations for TSS are based on the 7.1 MGD design flow.

$\underline{CBOD_5}$ and TSS Mass Loading Calculations:

Calculations of maximum allowable loads for average monthly BOD_5 and TSS are based on the following equation:

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 weekly and daily maximum.
DF = Design flow of facility in mgd.
8.34 = Factor to convert effluent concentration in mg/l and design flow in MGD to lbs/day.

$\underline{CBOD_5}$
(Concentration limit) [40] X 8.34 (Constant) X 7.1 (design flow) = 2369 lbs/day

(Concentration limit) [25] X 8.34 (Constant) X 7.1 (design flow) = 1480 lbs/day

TSS
(Concentration limit) [45] X 8.34 (Constant) X 7.1 (design flow) = 2665 lbs/day

(Concentration limit) [30] X 8.34 (Constant) X 7.1 (design flow) = 1776 lbs/day

Eighty-Five Percent (85%) $CBOD_5$ Removal - the provisions of 40 CFR § 133.102(a)(4)(iii), require that the 30 day average percent removal for $CBOD_5$ be not less than 85%.

Eighty-Five Percent (85%) TSS Removal - the provisions of 40 CFR 40 CFR § 133.102(a)(3) require that the 30 day average percent removal for TSS be not less than 85%. The limit is maintained in the draft permit.

pH - The draft permit includes pH limitations which are required by state water quality standards, and are protective of pH standards set forth at Title 314 CMR 4.05(b)(3), for Class B water. The current permit has a pH limitation range of 6.0 to 8.3 s.u. pH limitations for state water quality standards are between 6.5 to 8.3 s.u. In a letter dated December 6, 1999, the permittee requested to reduce the lower limit from 6.5 to 6.0 s.u. EPA and MassDEP reduced the lower limit from 6.5 to 6.0 s.u. in the previous permit. The pH requirements are more stringent than those required under 40 C.F.R. § 133.102(c). The pH limits are carried forward from the current permit. The monitoring frequency is one per day.

E. Coli: Limitations on E.coli bacteria replace the limitations on fecal coliform bacteria found in the current permit. The bacterial limits has been changed to conform to the Class B water quality criteria for bacteria found in the Massachusetts Water Quality Standards (314CMR 4.05(3)(b)4.). Massachusetts adopted these new criteria on December 29, 2006, and they were approved by EPA on September 19, 2007. Accordingly, the monthly average and maximum daily E. coli limits are set at 126 cfu/100ml and 409 cfu/100ml (this is the 90% distribution of the geometric mean of 126 cfu/100 ml) respectively in the draft permit. Monitoring data collected by the permittee shows that the facility does not consistently achieve the proposed limits (see **Attachment B**). A compliance schedule for attaining the E. Coli limits is included in Section F of the draft permit. The limits and monitoring requirements for fecal coliform will continue until E. Coli limits are in place.

These are seasonal limits that apply from April 1 through October 31, the months in which primary and secondary contact recreation are expected to occur. The limits are based on state certification requirements under section 401 (a) (1) of the CWA, as described in 40 CFR 124.53 and 124.55

Non-Conventional Pollutants

Total Residual Chlorine - (TRC) Chlorine compounds produced by the chlorination of wastewater, as well as chlorine, can be extremely toxic to aquatic life. The instream chlorine

criteria for the Connecticut River are defined in the EPA Quality Criteria for Water, as adopted by the MassDEP into the state water quality standards [Title 314 CMR 4.05(5)(e)], and as revised in the Federal Register: December 27, 2002 (Volume 67, Number 249). The recommended criteria include a TRC chronic criteria of 11 ug/l and an acute criteria of 19 ug/l. The following is a water quality based calculation of chlorine limits:

Acute Chlorine WQC = 19 ug/l

Chronic Chlorine WQC = 11 ug/l

Total Residual Chlorine Limitations:

(acute criteria * dilution factor) = Acute (Maximum Daily)
19 ug/l x 160 = 3040 ug/l /1000 = 3.04 mg/l Maximum Daily.

(chronic criteria * dilution factor) = Chronic (Average Monthly)
11 ug/l x 160 = 1760 ug/l /1000 = 1.76 mg/l Average Monthly

The draft permit has a more protective TRC limit of 1.0 mg/l based on the Massachusetts Water Quality Standards Implementation Policy For The Control Of Toxic Pollutants In Surface Waters, February 23, 1990. The Implementation Policy states that: "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." The maximum daily TRC limit of 1.0 mg/l will be carried forward from the current permit. Because the maximum daily TRC limit is well below the calculated average monthly limit, no average monthly permit limit is necessary. The period of applicability will continue as in the current permit from April 1 - October 31.

The permittee is required to have an alarm system to warn of a chlorination system malfunction. This is a best management practice (BMP), and is being required under authority of 40 CFR § 122.44(k)(4). 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).

Nitrogen

The 2006 Permit requires reporting of average monthly total kjeldahl nitrogen, nitrate-nitrogen, and nitrite-nitrogen on a quarterly basis. The draft permit proposes weekly reporting of average monthly and maximum daily effluent concentrations and masses of total nitrogen, total kjeldahl nitrogen, total ammonia nitrogen, total nitrate nitrogen, and total nitrite nitrogen consistent with other permits. These changes are further explained below.

It has been determined that excessive nitrogen loadings are causing significant water quality problems in Long Island Sound, including low dissolved oxygen. 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 Loading1 (lbs/day)	TMDL Target2 (lbs/day)	Current Loading3 (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

The TMDL target of a 25 percent aggregate reduction from baseline loadings is currently being met.

The estimated current loading for the Amherst WWTP used in the above analysis was 503.3 lbs/day, based upon a total nitrogen concentration of 14.1 mg/l and the average flow of 4.28 MGD (14.1 mg/L *4.28 MGD * 8.34), as indicated in the Facility's 2004 through 2005 DMRs. A review of the DMRs from January 2009 through March 2011 indicate that the monthly average total nitrogen load varied from from 272 lbs/day to 1164 lbs/day with an average value of 664 lbs/day (Refer to Attachment B for TKN and nitrite and nitrate monitoring results) which is more than the estimated loading of 503.3 lbs/day. Based on a review of the data, it appears that the facility is not nitrifying as effectively in recent years as it was during the baseline years.

In order to ensure that the aggregate nitrogen loading from out-of-basin point sources does not exceed the TMDL target of a 25 percent reduction over baseline loadings, EPA has included a condition in the draft permit requiring the permittee to evaluate alternative methods of operating its plant to optimize the removal of nitrogen, and to describe previous and ongoing optimization efforts. Specifically, Part I.E. of the draft permit requires an evaluation of alternative methods of operating the existing wastewater treatment facility in order to control total nitrogen levels, including, but not limited to, operational changes designed to enhance nitrification (seasonal and

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.

year round), incorporation of anoxic zones, septage receiving policies and procedures, and side stream management. This evaluation is required to be completed and submitted to EPA and MassDEP within one year of the effective date of the permit, along with a description of past and ongoing optimization efforts. The permit requires annual reports to be submitted that summarize progress and activities related to optimizing nitrogen removal efficiencies, document the annual nitrogen discharge load from the facility, and track trends relative to previous years.

The agencies intend to 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 plant consider alternatives for further enhancing nitrogen reduction.

Phosphorus

Excessive phosphorus in a water body can interfere with water uses by promoting excessive plant growth that can interfere with recreational activities and can also to reduce instream dissolved oxygen concentrations below levels necessary to support aquatic life.

Massachusetts Surface Water Quality Standards include narrative nutrient criteria at 314 CMR 4.05(5), requiring that "unless naturally occurring, all surface waters shall be free from nutrients in concentrations that would cause or contribute to impairment of existing or designated uses and shall not exceed the site specific criteria established in a TMDL or as otherwise established by the Department pursuant to 314 CMR 4.00. Any existing point source discharge containing nutrients in concentrations that would cause or contribute to cultural eutrophication, including the excessive growth of aquatic plant or algae, in any surface water shall be provided with the most appropriate treatment as determined by the Department, including where necessary, highest and best practicable treatment for POTWs…"

EPA has published national guidance documents that contain recommended total phosphorus criteria and other indicators of eutrophication. EPA's Quality Criteria for Water 1986 (the Gold Book) recommends, to control eutrophication, that in-stream phosphorus concentrations should be less than 100 μg/l (0.100 mg/l) in streams or other flowing waters not discharging directly to lakes or impoundments.

More recently, EPA released Ecoregional Nutrient Criteria, established as part of an effort to reduce problems associated with excess nutrients in water bodies in specific areas of the country. The published ecoregion-specific criteria represent conditions in waters minimally impacted by human activities, and thus representative of water without cultural eutrophication. The Hatfield Wastewater Treatment Plant is within Ecoregion XIV, Eastern Coastal Plain, Northeastern Coastal Zone. Recommended criteria for this Ecoregion is found in Ambient Water Quality Criteria Recommendations, Information Supporting the Development of State and Tribal

Nutrient Criteria, Rivers and Streams in Ecoregion XIV, published in December, 2001, and includes a total phosphorus criteria of 23.75 µg/l (0.024 mg/l).

EPA has employed the Gold Book-recommended concentration (0.1 mg/l) to interpret the state's narrative standards for nutrients. The Gold Book value is based on effects as opposed to the ecoregional criterion, which was developed on the basis of reference conditions. EPA opted for the effects-based approach because it is often more directly associated with an impairment to a designated use (i.e. fishing, swimming). The effects-based approach provides a threshold value above which adverse effects (i.e. water quality impairments) are likely to occur. It applies empirical observations of a causal variable (i.e. phosphorus) and a response variable (i.e. chlorophyll a) associated with designated use impairments. Reference-based values are statistically derived from a comparison within a population of rivers in the same ecoregion class. Specifically, reference conditions presented are based on the 25th percentile of *all* nutrient data, including a comparison of reference conditions for the aggregate ecoregion versus subecoregions. *See* Ecoregional Nutrient Criteria at vii. They are a quantitative set of river characteristics (physical, chemical, and biological) that represent minimally impacted conditions. Thus, while reference conditions, which reflect minimally disturbed conditions, may meet the requirements necessary to support designated uses, they may also *exceed* the water quality necessary to support such requirements.

EPA has performed a reasonable potential analysis to determine whether, at the current effluent phosphorus concentration, there is reasonable potential for the discharge to cause or contribute to an exceedance of water quality criteria. EPA has taken the upstream concentration of phosphorus into account in its analysis. The 2003 Connecticut River Watershed Water Quality Assessment presented ambient phosphorus concentrations for samples taken during April 2003 through August 2003 at Station 04A, upstream on the Connecticut River from the Amherst WWTP. Five samples were taken, with results varying from 0.008 mg/l to 0.029 mg/l with an average value of 0.016 mg/l. Because permit limits must protect receiving water during low flow conditions, 7Q10 flow of 1741 cfs, and the average background value of 16 ug/l were used in the equation below. The following data is also used in the calculations: the treatment plant discharge total phosphorus concentration of 1,760 ug/l (2 mg/l) as reported in the DMRs (see Attachment B), and the treatment plant design flow of 7.1 MGD. EPA used this data to calculate an instream concentration downstream of the discharge. If the calculated concentration exceeds 100 ug/l (the EPA-recommended Gold book concentration) there is reasonable potential for the discharge to exceed water quality standards and a phosphorus limit must be included in the permit.

Reasonable Potential Analysis

$$C_r = \frac{Q_e C_e + Q_s C_s}{Q_r}$$

Q_e = effluent flow, i.e. facility design flow	= 7.1 MGD
C_e = effluent pollutant concentration	= 1,760 µg/l
Q_s = 7Q10 flow of receiving water	= 1741 cfs = 1125 MGD
Cs = upstream concentration	= 16 µg/l
Q_r = receiving water flow = $Q_s + Q_e$	= (7.1 + 1125) MGD = 1132.1 MGD
C_r = receiving water concentration	= 100 µg/l (water quality criterion)

$$C_r = \frac{(7.1 \text{ MGD} \times 1{,}760 \text{ µg/l}) + (1125 \text{ MGD} \times 16 \text{ µg/l})}{1132.1 \text{ MGD}}$$

$C_r = 27$ µg/l < 100 µg/l

Since the calculated instream concentration is less than the EPA-recommended criteria, there is no reasonable potential to cause or contribute to an exceedance of water quality standards.

Based on the above calculation, the draft permit does not require a limit. The current permit has a monitoring requirement at a frequency of one per month. This requirement will continue in the draft permit.

Metals

Certain metals in water can be toxic to aquatic life. There is a need to limit toxic metal concentrations in the effluent where aquatic life may be impacted. An evaluation of the concentration of metals in the facility's effluent (from October 2006 to October 2010 Whole Effluent Toxicity testing reports) was used to determine reasonable potential for toxicity caused by aluminum, cadmium, chromium, copper, lead, nickel and zinc.

Parameter	Criteria (Total Recoverable) Acute (ug/l)	Criteria (Total Recoverable) Chronic (ug/l)	Upstream Median Conc (ug/l)	Assimilative Capacity Acute (ug/l)	Assimilative Capacity Chronic (ug/l)	Dilution Factor	Limit (Total Recoverable) Acute (mg/l)	Limit (Total Recoverable) Chronic (mg/l)	Estimated Daily Max 95th Percentile (mg/l)	Exceedences?
Aluminum	750.00	87.00	59	691	28	160	110.56	4.48	0.315	**NO**
Cadmium	0.88	0.14	0	0.88	0.14	160	0.14	0.023	0.000	**NO**
Chromium	886	42	0	886.03	42.35	160	141.76	6.78	0.000	**NO**
Copper	6.18	4.45	2	4.18	2.45	160	0.6691	0.3912	0.0324	**NO**
Lead	27.06	1.05	0	27.06	1.05	160	4.33	0.169	0.005	**NO**
Nickel	225.22	25.04	0	225.22	25.04	160	36.03	4.01	0.005	**NO**
Zinc	57.45	57.45	6	51.45	51.45	160	8.23	8.23	0.079	**NO**

* Median upstream data taken from Whole Effluent Toxicity testing on Connecticut River just upstream of Amherst WWTP

As shown above, the maximum reported effluent metals concentrations are compared to the water quality criteria found in EPA's *National Recommended Water Quality Criteria: 2002*. Based on an upstream median hardness of 41.6 mg/l as $CaCO_3$ and an effluent median hardness of 63.2 mg/l as $CaCO_3$, the downstream hardness was calculated to be 42 mg/l as $CaCO_3$ (based on a mass balance equation using the design flow and receiving water 7Q10). The downstream hardness of 42 mg/l was used to determine the total recoverable metals criteria. Subtracting the upstream median concentration from the criteria for each metal (to obtain the current assimilative capacity) and applying the dilution factor of 160, results in the maximum allowable effluent concentration which would not cause an exceedence of the in-stream water quality criteria. Reasonable potential is then determined by comparing this allowable concentration (for both acute and chronic conditions) with the estimated 95^{th} percentile of the effluent concentration (determined using the approach described in EPA's *Technical Support Document for Water Quality-based Toxics Control*, chapter 3) for each metal.

As indicated in the chart above, there is no reasonable potential (for both acute and chronic conditions) that the discharge of aluminum, cadmium, chromium, copper, lead, nickel or zinc will cause or contribute to an exceedance of applicable water quality criteria. Therefore, the draft permit does not contain limits for these metals. Monitoring will continue to be required for these metals (except chromium) with each whole effluent toxicity test, as indicated in the draft permit.

Whole Effluent Toxicity

National studies conducted by the Environmental Protection Agency have demonstrated that domestic sources contribute toxic constituents to POTWs. These constituents include metals, chlorinated solvents and aromatic hydrocarbons, among others.

Based on the potential for toxicity resulting from domestic and industrial contributions, and in accordance with EPA regulation and policy, the draft permit includes acute toxicity limitations and monitoring requirements. (See, e.g., Policy for the Development of Water Quality-Based Permit Limitations for Toxic Pollutants, 50 Fed. Reg. 30,784 (July 24, 1985); see also, EPA's Technical Support Document for Water Quality-Based Toxics Control). EPA Region I has developed a toxicity control policy which requires wastewater treatment facilities to perform toxicity bioassays on their effluents. The Region's current policy is to include toxicity testing requirements in all municipal permits, while Section 101(a)(3) of the CWA specifically prohibits the discharge of toxic pollutants in toxic amounts.

The principal advantages of biological techniques are: (1) the effects of complex discharges of many known and unknown constituents can be measured only by biological analyses; (2) bioavailability of pollutants after discharge is best measured by toxicity testing including any synergistic effects of pollutants; and (3) pollutants for which there are inadequate chemical analytical methods or criteria can be addressed. Therefore, toxicity testing is being used in conjunction with pollutant- specific control procedures to control the discharge of toxic pollutants.

Pursuant to EPA Region I policy, and MassDEP's Implementation Policy for the Control of Toxic Pollutants in Surface Waters (February 23, 1990), discharges having a dilution factors greater than 100 require acute toxicity testing two times per year and an acute LC50 limit of 50 percent. The dilution factor for this discharge is greater than 100, so in accordance with EPA and MassDEP policy the draft permit includes an LC50 limit of 50 percent and requires two tests per year. In a previous permit, the required testing had been reduced from two species to one. Based on results, testing for the fathead minnow was eliminated and testing on *Ceriodaphnia dubia* was retained. However, the data submitted over the past two years shows occasional toxicity, and this toxicity appears to correlate to ammonia concentrations. Given that fathead minnows are more sensitive to ammonia than *Ceriodaphnia dubia*, the fathead minnow test has been reinstated instead of *Ceriodaphnia dubia* in the draft permit.

V. Sludge

Section 405(d) of the Clean Water Act requires that sludge conditions be included in all POTW

permits. Technical sludge standards required by Section 405 of the Clean Water Act (CWA) were finalized on November 25, 1992 and were published on February 19, 1993. The regulations went into effect on March 21, 1993 (see 40 CFR part 503).

The draft permit has been conditioned to ensure that sewage sludge use and disposal practices meet the Act's Section 405(d) Technical Standards. In addition, EPA-New England prepared a 72-page document entitled "EPA Region I NPDES Permit Sludge Compliance Guidance" for use by the permittee in determining their appropriate sludge conditions for their chosen method of sewage sludge use or disposal practices. This guidance document is available upon request from EPA Region 1 and may also be found at:
http://www.epa.gov/region1/npdes/permits/generic/sludgeguidance.pdf .

VI. Pretreatment

There are no significant industries contributing industrial wastewater to the WWTF and the permittee is not required to develop an industrial pretreatment program. The draft permit does include conditions specifying that pollutants introduced into POTWs by non-domestic sources shall not pass through the POTW or interfere with the operation or performance of the treatment works.

VII. Anti-degradation

This draft permit is being reissued with an allowable waste-load identical to the current permit and there has been no change in outfall location. The State of Massachusetts has indicated that there will be no lowering of water quality and no loss of existing water uses and that no additional anti-degradation review is warranted.

VIII. Essential Fish Habitat (EFH)

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.

The Atlantic salmon (*Salmo salar)* is the only managed species with designated EFH in the Connecticut River, which is classified in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00 as a Class B - warm water fishery. Class B waters are designated as a habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other

crucial functions, and for primary and secondary contact recreation.

Atlantic salmon are expected to be present during one or more lifestages within the area which encompasses the discharge site. Although the last remnant stock of Atlantic salmon indigenous to the Connecticut River was believed to have been extirpated over 200 years ago, an active effort has been underway throughout the Connecticut River system since 1967 to restore this historic run (HG&E/MMWEC, 1997). Atlantic salmon may pass in the vicinity of the discharge either on the migration of juveniles downstream to Long Island Sound or on the return of adults to upstream areas. The area of the discharge on the river mainstem, approximately 16 miles downstream from the Turners Falls Dam and approximately 20 miles upstream from the Holyoke Dam, is not judged to be suitable for spawning, which is likely to occur in tributaries where the appropriate gravel or cobble riffle substrate can be found.

EPA has determined that the limits and conditions contained in this draft permit minimize adverse effects to Atlantic Salmon EFH for the following reasons:

- This is a reissuance of an existing permit;
- The dilution factor (160) is high;
- The Connecticut River is approximately 430 feet wide in the vicinity of the discharge at Amherst, providing a large zone of passage for migrating Atlantic salmon that is unaffected by the discharge;
- Acute toxicity tests will be conducted twice per year on fathead minnows (*Pimephales promelas).*
- The draft permit prohibits violations of the state water quality standards.
- Limits specifically protective of aquatic organisms have been established for chlorine, based on state water quality criteria
- The facility withdraws no water from the Connecticut River, so no life stages of Atlantic salmon are vulnerable to impingement or entrainment from this facility.
- The effluent limitations and conditions in the draft permit were developed to be protective of all aquatic life.

EPA believes that the conditions and limitations contained within the draft permit adequately protects all aquatic life, including those with designated EFH in the receiving water, and that further mitigation is not warranted. Should adverse impacts to EFH be detected as a result of this permit action, or if new information is received that changes the basis for EPA's conclusions, NMFS will be contacted and an EFH consultation will be re-initiated.

As the federal agency charged with authorizing the discharge from this facility, EPA has submitted the Draft Permit and fact sheet, along with a cover letter, to NMFS Habitat Division for their review.

IX. Endangered Species

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

Section 7(a)(2) of the Act requires every federal agency in consultation with and with the assistance of the Secretary of the Interior, to ensure 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. The National Marine Fisheries Service (NMFS) administers Section 7 consultations for marine species and anadromous fish.

EPA is monitoring regulatory activities regarding the protection of Atlantic sturgeon (*Acipenser oxyrinchus*). The following information was taken from a NMFS Letter to EPA, dated September 6, 2011, concerning the repermitting of the Hadley Indian Hill WWTP.

> "On October 6, 2010, NMFS published two proposed rules to list five distinct population segments (DPS) of Atlantic sturgeon under the ESA. NMFS is proposing to list four DPSs as endangered (New York Bight, Chesapeake Bay, Carolina and South Atlantic) and one DPS of Atlantic sturgeon as threatened (Gulf of Maine DPS). Once a species is proposed for listing, as either endangered or threatened, the conference provisions of the ESA may apply (see ESA Section 7(a)(4) and 50 CFR 402.10). As stated at 50 CFR402.1O, "Federal agencies are required to confer with NMFS on any action which is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat."
>
> "Atlantic sturgeon have some potential to travel up the mainstem of the Connecticut River into the state of Massachusetts. Atlantic sturgeon are a longlived, late maturing, estuarine-dependent, anadromous species, feeding predominantly on benthic invertebrates (ASSRT 2007). They have been historically reported in the Connecticut River as far upstream as Hadley, MA. However, significant evidence that Atlantic sturgeon moved past Enfield, CT into the upper Connecticut River was previously rare since this species tends to remain in the lower river in the range of the salt wedge (River mile 6-16) (Savoy and Shake 1993). In 2006, an adult Atlantic sturgeon was observed in the spillway lift at the Holyoke Dam, providing some indication that this species may move further upstream into the freshwater reaches of the Connecticut River. However, extensive sampling and the lack of any strong evidence of Atlantic sturgeon spawning indicates that the presence of this species in the vicinity of the discharges is unlikely."

Based on the above information and EPA's assessment, the only endangered species potentially influenced by the reissuance of this permit is the shortnose sturgeon (*Acipenser brevirostrum*). It is EPA's preliminary determination that the operation of this facility, as governed by the permit action, is not likely to adversely affect the species of concern. It is our position that this permit action does not warrant a formal consultation under Section 7 of the ESA. The reasoning to support this position follows.

A. Environmental Setting

Effluent from the Amherst WWTP is discharged to approximately the mid-point of segment MA34-04 of the Connecticut River, which is classified in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00 as a Class B - warm water fishery. Class B waters are designated as a habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other crucial functions, and for primary and secondary contact recreation. The Standards define a warm water fishery as waters in which the maximum mean monthly temperatures generally exceed 68° F (20° C) during the summer months and are not capable of sustaining a year-round population of cold water stenothermal aquatic life.

B. Outfall Description

The outfall (001) discharges to the mainstem of the Connecticut River and is located approximately 16 miles downstream of the Turners Falls Dam and approximately 20 miles upstream from the Holyoke Dam. The discharge pipe is approximately 50 feet from the east bank of the river and 10 feet below the water surface. The outfall is equipped with a diffuser. The Connecticut River is approximately 430 feet wide in the vicinity of the discharge. The current expected dilution factor is about 160. The dilution factor was calculated in Section IV of this fact sheet.

C. Shortnose Sturgeon Information

Update information presented in this section on the life history and known habitat of shortnose sturgeon (SNS) in the Connecticut River was obtained from, among other sources, "The Connecticut River IBI Electrofishing NMFS Biological Opinion, Connecticut and Merrimack River Bioassessment Studies" (NMFS BO, July 30, 2009) and the Draft Endangered Species Act Section 7 Consultation Biological Opinion (BO) for the Holyoke Hydroelectric Project (Federal Energy Regulatory Commission (FERC) Permit #2004), issued to FERC by NOAA Fisheries on January 27, 2005 (NMFS BO 2005). Information dealing with the potential effects of pollutants on SNS was obtained from, among other sources, a detailed ESA response letter from NMFS to EPA regarding the Montague Water Pollution Control Facility, dated September 10, 2008 (Montague Letter).

Information gathered from a variety of sources confirms the presence of shortnose sturgeon in the Connecticut River. The population is largely divided by the Holyoke Dam, although limited successful downstream passage does occur. Modifications to the dam are currently ongoing to ensure the safe and successful upstream and downstream passage of fish, including shortnose sturgeon, at the Dam (Montague Letter).

The Holyoke Dam separates shortnose sturgeon in the Connecticut River into an upriver group (above the Dam) and a lower river group that occurs below the Dam to Long Island Sound. The abundance of the upriver group has been estimated by mark-recapture techniques using Carlin tagging (Taubert 1980) and PIT tagging (Kynard unpublished data). Estimates of total adult abundance calculated in the early 1980s range from 297 to 516 in the upriver population to 800 in the lower river population. Population estimates conducted in the l990s indicated populations in the same range. The total upriver population estimates ranged from 297 to 714 adult shortnose sturgeon, and the size of the spawning population was estimated at 47 and 98 for the years 1992

and 1993 respectively. The lower Connecticut River population estimate for sturgeon >50 cm TL was based on a Carlin and PIT tag study from 1991 to 1993. A mean value of 875 adult shortnose sturgeon was estimated by these studies. Savoy estimated that the lower river population may be as high as 1000 individuals, based on tagging studies from 1988-2002. It has been cautioned that these numbers may overestimate the abundance of the lower river group because the sampled area is not completely closed to downstream migration of upriver fish (Kynard 1997). Other estimates of the total adult population in the Connecticut River have reached 1200 (Kynard 1998) and based on Savoy's recent numbers the total population may be as high as 1400 fish (Montague Letter). Regardless of the actual number of SNS in the river, the effective breeding population consists of only the upriver population, as no lower river fish are successfully passed upstream at the present time. This effective breeding population is estimated at approximately 400 fish (NMFS BO 2009).

Several areas of the river have been identified as concentration areas. In the downriver segment, a concentration area is located in Agawam, MA which is thought to provide summer feeding and over-wintering habitat. Other concentration areas for foraging and over wintering are located in Hartford, Connecticut, at the Head of Tide (Buckley and Kynard 1985) and in the vicinity of Portland, Connecticut (CTDEP 1992). Shortnose sturgeon also make seasonal movements into the estuary, presumably to forage (Buckley and Kynard 1985; Savoy in press). Above the Dam, there are also several concentration areas. During summer, shortnose sturgeon congregate near Deerfield (NMFS BO), which is approximately 14 miles upstream of the facility discharge. Many SNS overwinter at Whitmore.

Two areas above Holyoke Dam, near Montague, have more consistently been found to provide spawning habitat for SNS. This spawning habitat is located at river km 190-192 and is the most upstream area of use. It is located just downstream of the species' historical limit in the Connecticut River at Turners Falls (river km 198). This area is approximately 16 miles upstream of the Amherst discharge. Across the latitudinal range of the species, spawning adults typically travel to approximately river km 200 or further upstream where spawning generally occurs at the uppermost point of migration within a river (Kynard 1997; NMFS 1998). The Montague sites have been verified as spawning areas based on successful capture of sturgeon eggs and larvae in 1993, 1994, and 1995, that were 190 times the number of fertilized eggs and 10 times the number of embryos found in the Holyoke site (Vinogradov 1997). In seven years of study (1993-1999), limited successful spawning, as indicated by capture of embryos or late stage eggs, occurred only once (1995) at Holyoke Dam (Vinogradov 1997; Kynard et al. 1999c). Using this same measure, successful spawning occurred at Montague during 4 of 7 years. Both Montague and Holyoke sites have been altered by hydroelectric dam activities, but all information suggests that females spawn successfully at Montague, not at Holyoke Dam. Thus, it appears that most, if not all, recruitment to the population comes from spawning in the upriver segment (NMFS BO).

The effects of the Holyoke Project on the shortnose sturgeon's ability to migrate in the Connecticut River have likely adversely affected the shortnose sturgeon's likelihood of surviving in the river. An extensive evaluation of shortnose sturgeon rangewide revealed that shortnose sturgeon above Holyoke Dam have the slowest growth rate of any surveyed (Taubert 1980, Kynard 1997) while shortnose sturgeon in the lower Connecticut River have a high condition factor and general robustness (Savoy, in press). This suggests that there are growth advantages associated with foraging in the lower river or at the fresh-and salt-water interface. There are four documented foraging sites downstream of the Holyoke Dam, while only one exists upstream.

The presence of the Holyoke Dam has likely resulted in depressed juvenile and adult growth due to inability to take advantage of the increased productivity of the fresh/salt water interface. This likely has negatively impacted the survival of the Connecticut River population of shortnose sturgeon and impeded recovery. This has also likely made the spawning periodicity of females greater (NMFS BO 2005).

D. Pollutant Discharges Permitted

1. Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)

The draft permit proposes the same $CBOD_5$ concentration limits as in the current permit, which are based on the secondary treatment requirements set forth at 40 CFR 133.102 (a)(1), (2), (4) and 40 CFR 122.45 (f). The secondary treatment limitations are a monthly average BOD_5 concentration of 25 mg/l and a weekly average concentration of 40 mg/l. The draft permit also requires the permittee to report the maximum daily BOD_5 value each month, but does not establish an effluent limit. The monitoring frequency is two per week.

Shortnose sturgeon are known to be adversely affected by DO levels below 5 mg/L (Jenkins et. al1994, Niklitschek 2001). The permit conditions above are designed to ensure that the discharge meets the Massachusetts Water Quality Standards for Class B waterbodies, which requires that waters attain a minimum DO of 5 mg/L. Discharges meeting these criteria are not likely to have any negative impacts on SNS.

2. Total Suspended Solids (TSS)

TSS can affect aquatic life directly by killing them or reducing growth rate or resistance to disease, by preventing the successful development of fish eggs and larvae, by modifying natural movements and migration, and by reducing the abundance of available food (EPA 1976). These effects are caused by TSS decreasing light penetration and by burial of the benthos. Eggs and larvae are most vulnerable to increases in solids.

The draft permit proposes the same TSS concentration limitations as in the existing permit. The average monthly and average weekly limits are based on the secondary treatment requirements set forth at 40 CFR 133.102 (b)(1), (2) and 40 CFR 122.45 (f) and are a monthly average TSS concentration of 30 mg/l and a weekly average concentration of 45 mg/l. The permittee has been able to achieve consistent compliance with those limits in the past. The draft permit requires the permittee to report the maximum TSS value each month, but does not establish a maximum daily effluent limit. The monitoring frequency is two per week.

Studies of the effects of turbid waters on fish suggest that concentrations of suspended solids can reach thousands of milligrams per liter before an acute toxic reaction is expected (Burton 1993). The studies reviewed by Burton demonstrated lethal effects to fish at concentrations of 580mg/L to 700,000mg/L depending on species. Sublethal effects have been observed at substantially lower turbidity levels. For example, prey consumption was significantly lower for striped bass larvae tested at concentrations of 200 and 500 mg/L compared to larvae exposed to 0 and 75 mg/L (Breitburg 1988 in Burton l993). Studies with striped bass adults showed that pre-spawners did not avoid concentrations of 954 to 1,920 mg/L to reach spawning sites (Summerfelt and Moiser 1976 and Combs 1979 in Burton l993). While there have been no directed studies on the effects of TSS on shortnose sturgeon, SNS juveniles and adults are often documented in turbid

water. Dadswell (1984) reports that shortnose sturgeon are more active under lowered light conditions, such as those in turbid waters. (Montague Letter) As such, shortnose sturgeon are assumed to be as least as tolerant to suspended sediment as other estuarine fish such as striped bass.

As noted above, shortnose sturgeon eggs and larvae are less tolerant to sediment levels than juveniles and adults. Several studies have examined the effects of suspended solids on fish larvae. Observations in the Delaware River indicated that larval populations may be negatively affected when suspended material settles out of the water column (Hastings 1983). Larval survival studies conducted by Auld and Schubel (1978) showed that striped bass larvae tolerated 50 mg/l and 100 mg/l suspended sediment concentrations and that survival was significantly reduced at 1000 mg/L. According to Wilber and Clarke (2001), hatching is delayed for striped bass and white perch eggs exposed for one day to sediment concentrations of 800 and 1000 mg/L, respectively (Montague Letter).

In a study on the effects of suspended sediment on white perch and striped bass eggs and larvae performed by the ACOE (Morgan et al. 1973), researchers found that sediment began to adhere to the eggs when sediment levels of over 1000 parts per million (ppm) were reached. No adverse effects to demersal eggs and larvae have been documented at levels at or below 50 mg/L (Montague Letter). This is above the highest level authorized by this permit. Based on this information, it is likely that the discharge of sediment in the concentrations allowed by the permit will have an insignificant effect on shortnose sturgeon .

3. pH

The draft permit requires that the pH of the Amherst WWTP effluent shall not be less than 6.0 or greater than 8.3 standard units at any time. Since a pH from 6.0 to 8.3 is considered harmless to most marine organisms (Ausperger 2004), no adverse effects to SNS are likely to occur as a result of a discharge meeting the above pH range.

4. Escherichia coli (E. coli)

E. coli bacteria are indicators of the presence of fecal wastes from warm-blooded animals. The primary concern regarding elevated levels of these bacteria is for human health and exposure to pathogen-contaminated recreational waters. Fecal bacteria are not known to be toxic to aquatic life. E. coli limits are therefore designed to ensure compliance with human health criteria and are seasonal, corresponding to the recreational use season, consistent with the Massachusetts WQS.

5. Total Residual Chlorine

The acute and chronic water quality criteria for chlorine defined in the 2002 EPA National Recommended Water Quality Criteria for freshwater are 19 ug/l and 11 ug/l, respectively. Given the very high dilution factor of 160 at the outfall of the Amherst WWTP, the total residual chlorine limits have been calculated as 3.03 mg/l maximum daily and 1.76 mg/l average monthly. However, the Massachusetts Implementation Policy for the Control of Toxic Pollutants in Surface Waters stipulates that the maximum effluent concentration of chlorine shall not exceed 1.0 mg/l for discharges with dilution factors greater than 100. Consequently, the 2006 permit included a maximum daily effluent limitation for TRC of 1.0 mg/l and in compliance with

that policy.

Based upon this analysis, the TRC maximum daily limit of 1.0 mg/l is being carried forward in the draft permit, in accordance with anti-backsliding requirements. The sampling frequency has been maintained as once per day.

There are a number of studies that have examined the effects of TRC (Post 1987; Buckley 1976; EPA 1986) on fish; however, no directed studies that have examined the effects of TRC on shortnose sturgeon. The EPA has set the Criteria Maximum Concentration (CMC or acute criteria; defined in 40 CFR 131.36 as equals the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time (up to 96 hours) without deleterious effects) at 0.019 mg/L, based on an analysis of exposure of 33 freshwater species in 28 genera (EPA 1986) where acute effect values ranged from 28 ug/L for *Daphia magna* to 710 ug/L for the threespine stickleback. The CMC is set well below the minimum effect values observed in any species tested. As the water quality criteria levels have been set to be protective of even the most sensitive of the 33 freshwater species tested, it is reasonable to judge assumes that the criteria are also protective of shortnose sturgeon.

The anticipated TRC level at the outfall satisfies the EPA's ambient water quality criteria and is lower than TRC levels known to effect aquatic life. As such, the discharge of the permitted concentrations of TRC are likely to have an insignificant effect on shortnose sturgeon.

6. Phosphorus

State water quality standards require any existing point source discharge containing nutrients in concentrations which encourage eutrophication or growth of weeds or algae shall be provided with the highest and best practical treatment to remove such nutrients. Phosphorus interferes with water uses and reduces instream dissolved oxygen. The draft permit includes a one(1) per month monitoring and reporting requirement for effluent phosphorus. If a Total Maximum Daily Load (TMDL) or other data demonstrates that the WWTP is contributing to eutrophication of the river, EPA and MassDEP may reopen the permit under Part II.A.4. of the permit and modify the limit. In order to modify the limit, a formal public review process would be required.

EPA has employed the Gold Book-recommended concentration (0.1 mg/l) to interpret the state's narrative standards for nutrients EPA also performed a reasonable potential analysis to determine whether, at the current effluent phosphorus concentration, there is reasonable potential for the discharge to cause or contribute to an exceedance of water quality criteria. EPA has taken the upstream concentration of phosphorus into account in its analysis.

Based on the reasonable potential calculation, the draft permit does not require a limit. The current permit has a monthly average monitoring requirement of one per month for phosphorus. Same requirement will continue in the draft permit. Please refer to the Phosphorus Section of Part IV of this fact sheet for a full discussion of the reasonable potential analysis performed.

7. Nitrogen

DO levels in the Long Island Sound estuary, approximately 100 miles downstream from the Amherst WWTP, have been determined to be impacted by nitrogen discharges from wastewater

treatment plants on the Connecticut River and other tributaries. A TMDL has been developed that includes, *inter alia*, a Waste Load Allocation for Massachusetts, New Hampshire and Vermont wastewater facilities discharging to those receiving waters that is design to achieve the DO criteria. That WLA is currently being met, and the draft permit contains conditions to ensure that the WLA continues to be met by requiring optimization of nitrogen removal, in order to ensure that nitrogen loads do not increase over the 2004-2005 baseline of 16,254 lbs/day. Please see the Nitrogen Section of Part IV of this fact sheet for a detailed explanation.

The estimated current loading for the Amherst WWTP used in the above analysis was 503.3 lbs/day, based upon a total nitrogen concentration of 14.1 mg/l and the average flow of 4.28 MGD (14.1 mg/L * 4.28 MGD * 8.34), as indicated in the Facility's 2004 through 2005 DMRs. A review of the DMRs from January 2009 through March 2011 indicate that TKN varies from 63.8 lb/day to 1310.0 lb/day with an average value of 780.4 lb/day. Nitrite and nitrate varies from 25.0 lb/day to 462.0 lb/day with an average value of 177.2 lb/day. Therefore, total nitrogen varies from 88.8 lb/day to 1772.0 lb/day with an average value of 957.6 lb/day (Refer to Attachment B for TKN and nitrite and nitrate monitoring results) which is more than the estimated loading of 503.3 lbs/day.

In order to ensure that the aggregate nitrogen loading from out-of-basin point sources does not exceed the TMDL target of a 25 percent reduction over baseline loadings, EPA has included a condition in the draft permit requiring the permittee to evaluate alternative methods of operating its plant to optimize the removal of nitrogen, and to describe previous and ongoing optimization efforts. Specifically, Part I.E. of the draft permit requires an evaluation of alternative methods of operating the existing wastewater treatment facility in order to control total nitrogen levels, including, but not limited to, operational changes designed to enhance nitrification (seasonal and year round), incorporation of anoxic zones, septage receiving policies and procedures, and side stream management. This evaluation is required to be completed and submitted to EPA and MassDEP within one year of the effective date of the permit, along with a description of past and ongoing optimization efforts. The permit requires annual reports to be submitted that summarize progress and activities related to optimizing nitrogen removal efficiencies, document the annual nitrogen discharge load from the facility, and track trends relative to previous years.

The agencies intend to 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 plant consider alternatives for further enhancing nitrogen reduction.

8. Metals

Certain metals in water can be toxic to aquatic life, including SNS. There is a need to limit toxic metal concentrations in the effluent where aquatic life may be impacted. An evaluation (see the Metals discussion in Part IV of the fact sheet) of the concentration of metals in the facility's effluent (from October 2006 to October 2010 Toxicity Testing Reports) shows that there is not

reasonable potential for toxicity caused by any reported metals, including aluminum, cadmium, chromium, copper, lead, nickel, and zinc.

9. Whole Effluent Toxicity (WET)

Under Section 301(b)(1)(C) of the CWA, discharges are subject to effluent limitations based on water quality standards. The Massachusetts Surface Water Quality Standards include the following narrative statement and requires that EPA criteria established pursuant to Section 304(a)(1) of the CWA be used as guidance for interpretation of the following narrative criteria:

> *"All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife."*

National studies conducted by the EPA have demonstrated that domestic sources contribute toxic constituents to WWTPs. These constituents include metals, chlorinated solvents, aromatic hydrocarbons and others. Based on the potential for toxicity from domestic and industrial sources, the state narrative water quality criterion, and in accordance with EPA national and regional policy and 40 C.F.R. § 122.44(d), the draft permit includes a whole effluent acute toxicity limitation (LC_{50} =50%). (See also "Policy for the Development of Water Quality-Based Permit Limitations for Toxic Pollutants", 49 Fed. Reg. 9016 March 9, 1984, and EPA's "Technical Support Document for Water Quality-Based Toxics Control", September, 1991.)

Pursuant to EPA Region I policy, and MassDEP's Implementation Policy for the Control of Toxic Pollutants in Surface Waters (February 23, 1990), discharges having a dilution factors greater than 100 require acute toxicity testing two times per year and an acute LC50 limit of 50 percent. The dilution factor for this discharge is greater than 100, so in accordance with EPA and MassDEP policy the draft permit includes an LC50 limit of 50 percent and requires acute toxicity testing twice per year on the fathead minnows *(Pimephales promelas)*.

The permit shall be modified or alternatively revoked and reissued, to incorporate additional toxicity testing requirements, including chemical specific limits, if the results of the toxicity tests indicate the discharge causes an exceedance of any state water quality criterion. Results from these toxicity tests are considered "New Information" and the permit may be modified pursuant to 40 CFR 122.62(a)(2).

E. Finding

Based on the above analysis, including (1) the location of the discharge along the west bank of a wide, channelized portion of the Connecticut River (approximately 450 feet wide); (2) the extremely high dilution factor; (3) the proposed permit limits; and (4) the minimal water quality effects of the permit action, EPA has made the preliminary determination that the proposed reissuance of the NPDES permit for this facility is not likely to adversely affect shortnose sturgeon. Therefore, EPA has judged that a formal consultation pursuant to Section 7 of the ESA is not required. EPA is seeking concurrence from NMFS regarding this determination through the information in this fact sheet, the Draft Permit as well as a letter under separate cover.

Reinitiation of consultation will take place: (a) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously

considered in the consultation; (b) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the consultation; or (c) If a new species is listed or critical habitat is designated that may be affected by the identified action.

X. Sewer System Operation and Maintenance

EPA regulations set forth a standard condition for "Proper Operation and Maintenance" that is included in all NPDES permits. *See* 40 CFR § 122.41(e). This condition is specified in Part II.B.1 (General Conditions) of the draft permit and it requires the proper operation and maintenance of all wastewater treatment systems and related facilities installed or used to achieve permit conditions.

EPA regulations also specify a standard condition to be included in all NPDES permits that specifically imposes on permittees a "duty to mitigate." *See* 40 CFR § 122.41(d). This condition is specified in Part II.B.3 of the draft permit and it requires permittees to take all reasonable steps – which in some cases may include operations and maintenance work - to minimize or prevent any discharge in violation of the permit which has the reasonable likelihood of adversely affecting human health or the environment.

Proper operation of collection systems is critical to prevent blockages and equipment failures that would cause overflows of the collection system (sanitary sewer overflows, or SSOs), and to limit the amount of non-wastewater flow entering the collection system (inflow and infiltration or I/I). I/I in a collection system can pose a significant environmental problem because it may displace wastewater flow and thereby cause, or contribute to causing, SSOs. Moreover, I/I could reduce the capacity and efficiency of the treatment plant and cause bypasses of secondary treatment. Therefore, reducing I/I will help to minimize any SSOs and maximize the flow receiving proper treatment at the treatment plant. There is presently estimated to be approximately 50,000 gpd of I/I in the sewer system. In its September 6, 2001 Infiltration and Inflow Policy, MassDEP specified that certain conditions related to I/I control be established in NPDES municipal permits

Therefore, specific permit conditions have been included in Part I.B., and I.C. of the draft permit. These requirements include mapping of the wastewater collection system, preparing and implementing a collection system operation and maintenance plan, reporting unauthorized discharges including SSOs, maintaining an adequate maintenance staff, performing preventative maintenance, controlling infiltration and inflow to the extent necessary to prevent SSOs and I/I related-effluent violations at the wastewater treatment plant, and maintaining alternate power where necessary.

These requirements are intended to minimize the occurrence of permit violations that have a reasonable likelihood of adversely affecting human health or the environment.

XI. 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.

XII. Public Comment Period, Public Hearing, And Procedures For Final Decision

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and a supporting material for their arguments in full by the close of the public comment period, to Michael Cobb, U.S. EPA, MA Office of Ecosystem Protection, 5 Post Office Square, Suite 100 , Boston, Massachusetts 02109-3912. Any person, prior to such date, may submit a request in writing to EPA and MassDEP for a public hearing to consider the draft permit. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on the draft permit, the Regional Administrator 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 a public hearing, if such hearing is held, the Regional Administrator 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.

XIII. 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:

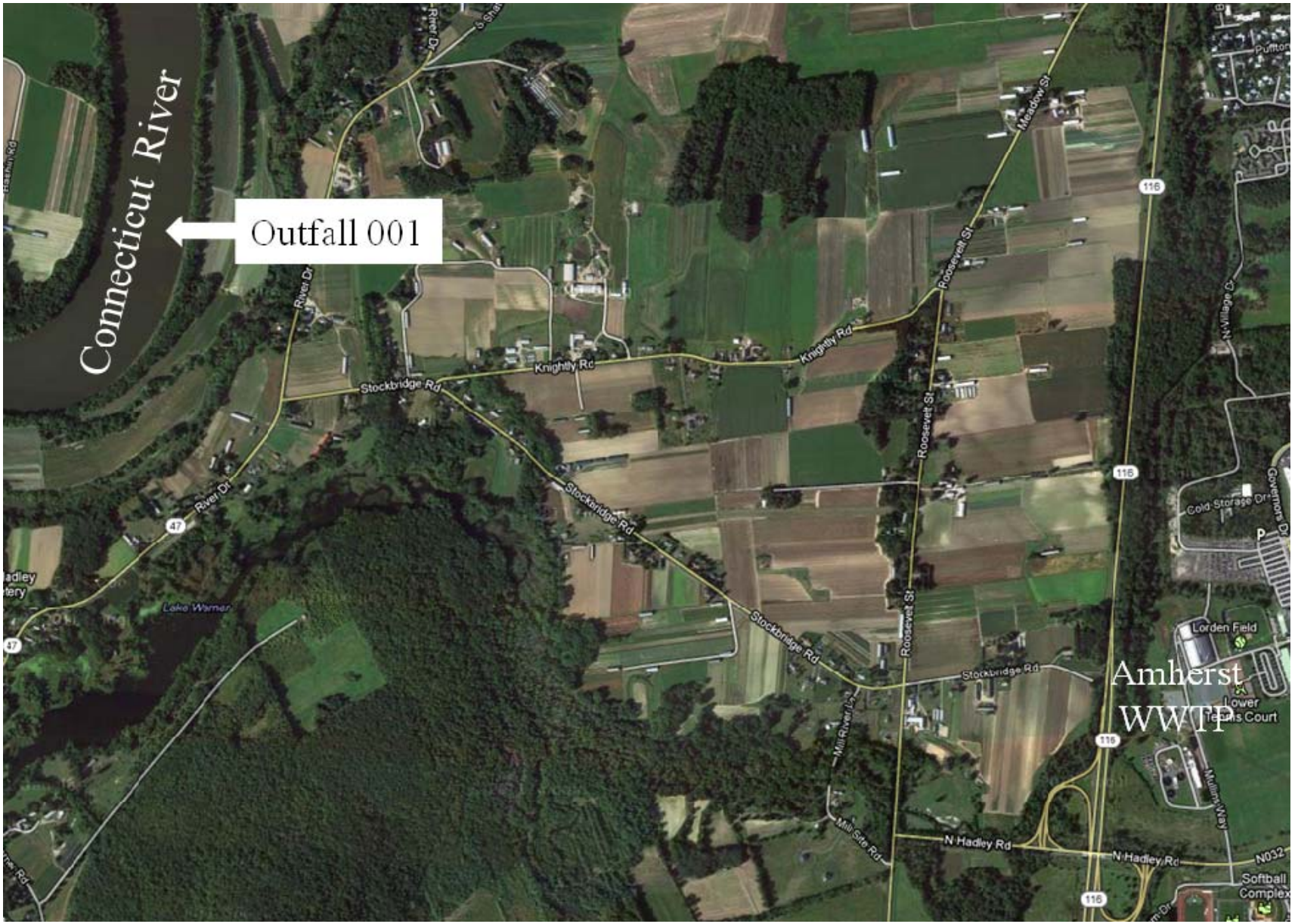
Mr. Michael Cobb
Industrial Permits Branch
U.S. Environmental Protection Agency
5 Post Office Square, Suite 100 (OEP 06-1)
Boston, MA 02109-3912
Telephone: (617) 918-1369
E-Mail: cobb.michael@epa.gov

Kathleen Keohane
Department of Environmental Protection
Division of Watershed Management
627 Main Street, Floor # 2
Worcester, MA 01608
508-767-2856
kathleen.keohane@state.ma.us

_____
Date

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

Attachment A – Aerial View of Facility, Receiving Water and Outfall Location



(Aerial view obtained from maps.google.com)

Attachment B – Discharge Monitoring Report Summary

Date	Flow			BOD			TSS			TRC	Fecal Coliform		E.coli		Total Phosphorus	TKN	Nitrate/Nitrite	Total N	LC50 ceriodaphnia
	Annual Avg (MGD)	Monthly Avg (MGD)	Daily Max (MGD)	Monthly Avg (mg/l)	Weekly Avg (mg/l)	Daily Max (mg/l)	Monthly Avg (mg/l)	Weekly Avg (mg/l)	Daily Max (mg/l)	Daily Max (mg/l)	Monthly Avg (#/ 100 ml)	Daily Max (#/ 100 ml)	Monthly Avg (#/ 100 ml)	Daily Max (#/ 100 ml)	Monthly Avg (mg/l)	Monthly Avg (mg/l)	Monthly Avg (mg/l)	Monthly Avg (mg/l)	(%)
01/31/2009	4.62	3.93	4.5	4	5	5	4	5	5						2.1	1.7	12.3	14.0	
02/28/2009	4.39	4.32	5.52	5	5	5	5	6	6						4.9	9.2	10.6	19.8	
03/31/2009	4.23	4.85	6.72	5	9	9	5	7	9						1.3	0.0	8.7	8.7	
04/30/2009	4.2	4.7	5.5	3	4	4	4	5	6	0.72	114	367	2005	2005	2.0	8.5	7.8	16.3	
05/31/2009	4.25	4.154	5.771	2	2	2	2	2	2	0.61	32	46	4010	4010	1.0	19.0	1.5	20.5	
06/30/2009	4.33	3.79	5.75	2	2	2	2	3	3	0.74	37	168	870	870	0.6	3.9	4.7	8.6	100.
07/31/2009	4.35	4.035	6.391	2	3	3	2	3	3	0.69	43	66	43	66	1.2	8.1	5.8	13.9	
08/31/2009	4.38	3.516	5.108	2	4	4	2	3	3	0.64	122	**700**	990	990	0.9	3.9	5.4	9.3	
09/30/2009	4.27	3.58	3.798	2	3	94	3	6	8	0.79	136	**520**	13500	13500	2.0	25.0	2.5	27.5	
10/31/2009	4.22	3.79	4.76	3	5	5	3	5	5	0.86	134	369	4000		2.1	35.0	1.8	36.8	70.7
11/30/2009	4.18	3.96	4.53	3	5	6	3	4	5						1.7	28.0	1.9	29.9	
12/31/2009	4.06	4.03	4.92	4	6	7	4	7	7						1.1	20.0	2.1	22.1	
01/31/2010	4.065	3.715	5.803	4	7	8	5	8	9						2.4	20.4	2.7	23.1	
02/28/2010	4.01	4.36	6.67	4	6	6	4	6	6						1.6	19.2	3.8	23.0	
03/31/2010	3.965	5.21	9.434	3	4	4	4	4	4						1.8	14.6	4.2	18.8	
04/30/2010	4.012	4.761	7.407	3	5	7	3	5	7	0.75	14	162	162	162	1.7	16.5	4.2	20.7	
05/31/2010	4.067	3.267	4.014	4	7	11	3	3	4	0.63	9	56	200	200	2.0	14.6	2.7	17.3	
06/30/2010	4.02	2.766	3.076	3	4	6	2	3	4	0.45	13	48	24	24	2.6	12.3	3.6	15.9	100.
07/31/2010	3.905	2.664	2.895	3	3	3	2	2	2	0.51	15	47	330	330	1.7	12.7	2.0	14.7	
08/31/2010	3.722	2.57	2.844	3	4	4	2	3	3	0.51	56	263	350	350	1.4	16.0	1.3	17.3	
09/30/2010	3.7	3.308	4.073	4	6	8	3	5	7	0.94	66	**1256**			3.2	29.1	3.1	32.2	
10/31/2010	3.697	3.76	5.344	5	7	7	3	5	5	0.94	9	111	112	112	1.3	29.4	2.4	31.8	70.7
11/30/2010	3.685	3.811	4.892	4	5	5	4	5	5						3.1	26.6	1.9	28.5	
12/31/2010	3.669	3.835	6.624	5	6	6	4	5	5						1.0	24.8	1.6	26.4	
01/31/2011	3.665	3.226	3.751	6	8	9	5	6	6						0.7	26.3	0.8	27.1	
02/28/2011	3.562	4.082	5.299	7	8	8	8	9	9						1.9	25.9	1.5	27.4	
03/31/2011	3.459	6.473	14.783	4	6	7	5	6	7						0.2	3.4	2.2	5.6	
Avg	4.025			4			4			0.70	57		2046		1.8	16.8	3.8	20.6	
Max	4.620	6.473	14.783	7	9	94	8	9	9	0.94	136	1256	13500	13500	4.9	35.0	12.3	36.8	
Limit in Current Permit	7.1			25	40		25	40		1	200	400							50

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
COMMONWEALTH OF MASSACHUSETTS
1 WINTER STREET
BOSTON, MASSACHUSETTS 02108

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF ECOSYSTEM PROTECTION
REGION I
BOSTON, MASSACHUSETTS 02109

JOINT PUBLIC NOTICE OF A DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE INTO THE WATERS OF THE UNITED STATES UNDER SECTION 301 AND 402 OF THE CLEAN WATER ACT, AS AMENDED, AND REQUEST FOR STATE CERTIFICATION UNDER SECTION 401 OF THE CLEAN WATER ACT.

DATE OF NOTICE: January 12, 2012

PERMIT NUMBER: MA0100218

PUBLIC NOTICE NUMBER: MA-006-12

NAME AND MAILING ADDRESS OF APPLICANT:

Mr. James Laford, Wastewater Division Director
Town of Amherst
586 South Pleasant Street
Amherst, MA 01002

NAME AND ADDRESS OF THE FACILITY WHERE DISCHARGE OCCURS:

Amherst Wastewater Treatment Plant
100 Mullins Way
Hadley, MA 01035

RECEIVING WATER: Connecticut River (Connecticut Watershed)

RECEIVING WATER CLASSIFICATION: B (Warm Water Fishery)

PREPARATION OF THE DRAFT PERMIT:

The U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) have cooperated in the development of a permit for the above identified facility. The effluent limits and permit conditions imposed have been drafted to assure compliance with the Clean Water Act, 33 U.S.C. sections 1251 et seq.,, the Massachusetts Clean Waters Act, G.L. c. 21, § 26-53, 314 CMR 3.00 and State Surface Water Quality Standards at 314 CMR 4.00. EPA has formally requested that the State certify this draft permit pursuant to Section 401 of the Clean Water Act and expects that the draft permit will be certified.

INFORMATION ABOUT THE DRAFT PERMIT:

A fact sheet is developed for this facility which is engaged in the collection and treatment of a 7.1 mgd municipal wastewater system. The draft permit may be obtained at no cost at http://www.epa.gov/region1/npdes/draft_permits_listing_ma.html or by writing or calling EPA's contact person named below:

Mr. Michael Cobb
U.S. Environmental Protection Agency – Region 1
5 Post Office Square, Suite 100 (OEP06-1)
Boston, MA 02109-3912
Telephone: (617) 918- 1369
e-mail: cobb.michael@epa.gon@epa.gov

The administrative record containing all documents relating to this draft permit is on file and may be inspected at the EPA Boston office mentioned above between 9:00 a.m. and 5:00 p.m., Monday through Friday, except holidays.

PUBLIC COMMENT AND REQUEST FOR PUBLIC HEARING:

All persons, including applicants, who believe any condition of this draft permit is inappropriate, must raise all issues and submit all available arguments and all supporting material for their arguments in full by **February 10, 2012**, to the U.S. EPA, 5 Post Office Square, Boston, Massachusetts 02109-3912. Any person, prior to such date, may submit a request in writing to EPA and the State Agency for a public hearing to consider this draft permit. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on this draft permit, the Regional Administrator will respond to all significant comments and make the responses available to the public at EPA's Boston office.

FINAL PERMIT DECISION:

Following the close of the comment period, and after a public hearing, if such hearing is held, the Regional Administrator 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.

DAVID FERRIS, DIRECTOR
MASSACHUSETTS WASTEWATER
MANAGEMENT PROGRAM
MASSACHUSETTS DEPARTMENT OF
ENVIRONMENTAL PROTECTION

STEPHEN S. PERKINS, DIRECTOR
OFFICE OF ECOSYSTEM PROTECTION
ENVIRONMENTAL PROTECTION
AGENCY – REGION 1