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

FACT SHEET

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

NPDES PERMIT NO: **MA0100218**

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 Massachusetts Wastewater Treatment Plant
1 Mullins Way, Hadley, Massachusetts 01035

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

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

I. PROPOSED ACTION

The above named applicant has applied to the U.S. Environmental Protection Agency for the re-issuance of its National Pollutant Discharge Elimination System (NPDES) permit to discharge into the designated receiving water. The current permit was signed on July 11, 2000 and became effective on September 30, 2000. The permit expired September 30, 2005. A re-application was received on January 20, 2005. This draft permit, after it becomes effective, will expire five (5) years from the effective date of issuance.

II. TYPE OF FACILITY AND DISCHARGE LOCATION

The facility is a 7.1 million gallon per day (mgd) secondary wastewater treatment facility, which discharges to the Connecticut River in the Connecticut River Watershed.

The facility's discharge outfalls are listed below:

Outfall	Description of Discharge	Receiving Water
001	Treated Effluent	Connecticut River

III. DESCRIPTION OF DISCHARGE

Quantitative descriptions of the discharge in terms of significant effluent parameters based on recent discharge monitoring reports (DMRs) for May 1, 2005 through April 30, 2006 may be found in Fact Sheet Attachment A.

IV. RECENT PERMIT HISTORY

September 29, 1995	NPDES Permit reissued
March 15, 2000	EPA Issues Application Complete Letter
January 20, 2000	NPDES Permit Application received by EPA
July 11, 2000	NPDES Permit Reissued
September 30, 2000	NPDES Permit becomes effective
January 20, 2005	NPDES Permit Application received by EPA
March 8, 2005	EPA Issues Application Complete Letter
September 30, 2005	Current Permit Expired and is administratively continued

V. LIMITATIONS AND CONDITIONS

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

VI. PERMIT BASIS AND EXPLANATION OF EFFLUENT LIMITATION DERIVATION

A. PROCESS DESCRIPTION

The Amherst Wastewater Treatment Plant is a secondary treatment facility with a design capacity of 7.1 million gallons per day which treats domestic wastewaters with no industrial contribution. See Figure 1 and 2 with Location of the WWTP and Flow Diagram respectively. 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 38,500 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. 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, which overflows from the secondary tanks, is discharged to the effluent wet well and pumped through 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 a series of diffusers.

The sludge which settles in the primary sedimentation basins is co-thickened with waste activated sludge to above 7% solids and pumped to a 9000 gallon tank truck for transport to offsite incineration facilities.

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. 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, with the exception of the change from BOD_5 to $CBOD_5$ and the elimination of the maximum daily BOD_5 and TSS limits. 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.

2. Water Quality Standards and Designated Uses

The Amherst WWTP discharges to the Connecticut River Segment MA34-04(b). Segment MA34-04 runs from the confluence with the Deerfield River, Greenfield/Montague/Deerfield to the Holyoke Dam, Holyoke/South Hadley, a length of 34.2 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, and for primary and secondary contact recreation. They shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses. The waters should have consistently good aesthetic value.

A warm water fishery is defined in the Massachusetts Surface Water Quality Standards (314 CMR 4.02) as waters in which the maximum mean monthly temperature generally exceeds 20° Celsius during the summer months and are not capable of supporting a year-round population of cold water stenothermal aquatic life.

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

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

The segment of the Connecticut River, *(Segment MA34- Reach 04B: Confluence of Sawmill River, Montague to confluence of Mill River Hadley)* where the Amherst discharge occurs, is classified in the State's Integrated List of Waters as category 5, as not in attainment and requiring a TMDL. The listed impairments for this segment are priority organics and pathogens.

The Amherst WWTP effluent does not contain detectable levels of PCBs and is not believed to be the source of the contamination found in fish tissue samples. The permit has fecal coliform limits to insure that the WWTP discharge does not contribute to the impairment of the river.

The MassDEP 1998 Water Quality Assessment Report for the Connecticut River, which is the basis for the 303(d) list, stated that the aquatic life use is assessed as "supported" for this segment based on in-stream water chemistry and whole effluent toxicity data. There is a fish advisory for much of the Connecticut River, including this segment, for polychlorinated biphenyl (PCB) contamination.

Available Dilution

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

The facility design flow is 7.1 million gallons per day or 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. 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 is determined by multiplying the ratio of 7Q10 to drainage area at the Montague Gage Station by the drainage area at the Amherst WWTP.

WWTP is = 7923 sq mi.

Flow factor = 1727/7860 = 0.22 cfs/sq mi
Flow @ Amherst = 0.22 x 7923 = 1743 cfs

Dilution Ratio: 7.1 MGD x 1.547 = 10.98 cfs;
1743 + 10.98/10.98 = 159.7:1 = Dilution Factor

Flow - The flow limit of 7.1 mgd is based on the annual average design flow of the treatment plant. Federal regulations found at 40 CFR §122.45(b)(i) require that effluent limitations be calculated based on deign flow which is found in the Permit Application Form 2A, Part A, Section a.6. Flow is to be measured continuously. The permittee shall report the annual average monthly flow using the annual rolling average method (See Permit Footnote 1).

The maximum, minimum and total flow for each operating date shall also be reported. Discharge monitoring reports (DMRs) submitted by the Town show that the facility consistently achieves the limit. (See Attachment A of this Fact Sheet)

OUTFALL 001 - CONVENTIONAL POLLUTANTS

Biochemical Oxygen Demand to 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 BOD5 limits have been changed to CBOD5 (Carbonaceous BOD) during this permit reissuance. EPA allows the use of $CBOD_5$ limits in place of BOD_5 limits to minimize test interference as a result of nitrogenous pollutants which cause error in the BOD_5 test method. The secondary treatment limitations for $CBOD_5$ are an average monthly concentration of 25 mg/l, and a weekly average concentration of 40 mg/l. These limits are based on secondary treatment requirements at 40 CFR §133.102(a)(4)(i and ii). 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 CBOD5 mass (lbs per day) limits are required to ensure that there is no degradation of receiving waters due to the change in the flow limit from a monthly average to an annual average. 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 to ensure that there is no degradation of receiving waters due to the change in the flow limit from a monthly average to an annual average. 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.

$CBOD_5$ 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 or L = C x DF x 3.79 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.
3.79 = Factor to convert effluent concentration in mg/l and design flow in MGD to kgs/day.

<u>$CBOD_5$</u>
(Concentration limit) [40] X 8.34 (Constant) X 7.1 (design flow) = 2369 lbs/day

(Concentration limit) [40] X 3.79 (Constant) X 7.1 (design flow) = 1076 kgs/day

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

(Concentration limit) [25] X 3.79 (Constant) X 7.1 (design flow) = 673 kgs/day

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

(Concentration limit) [45] X 3.79 (Constant) X 7.1 (design flow) = 1211 kgs/day

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

(Concentration limit) [30] X 3.79 (Constant) X 7.1 (design flow) = 807 kgs/day

<u>Eighty-Five Percent (85%) $CBOD_5$ Removal</u> - 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%.

<u>Eighty-Five Percent (85%) TSS Removal</u> - 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.

<u>pH</u> - 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 waters. 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 once (1) per day.

Fecal Coliform Bacteria - The draft permit includes fecal coliform bacteria limitations which are in accordance with the Massachusetts Surface Water Quality Standards 314 CMR 4.05 (4)(b). The proposed limits in the draft permit are 200 colony forming units (cfu)/100 ml for the average monthly limit and 400 colony forming units (cfu)/100 ml for the maximum daily limit. Fecal coliform bacteria limits are seasonal from April 1 though October 31 of each year. The limits are extended from October 15th in the current permit to October 31 to be consistent with other reissued Massachusetts NPDES Permits.

E. coli - Monthly sampling and "reporting" for *E. coli* is required in anticipation of the future adoption of *E. coli* as the bacterial criteria in the Massachusetts Surface Water Quality Standards. MassDEP is requiring *E. coli* monitoring as a certification requirement under Section 401of the CWA.

OUTFALL 001 - 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 criterion states that the average total residual chlorine in the receiving water should not exceed 11 ug/l (chronic) and 19 ug/l (acute). 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 159.7 = 3034.3 ug/l /1000 = 3.03 mg/l Maximum Daily.

(chronic criteria * dilution factor) = Chronic (Average Monthly)
11 ug/l x 159.7 = 1756.7 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 limits is necessary.

The period of applicability has been changed from April 1 - October 15 to April 1 - October 31 to be consistent with other discharges in the Connecticut River and is a reflection of the increased recreational use of the river. The permittee is required to have an alarm to system to warn of a chlorination system malfunction. This 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).

Total Phosphorus - The Massachusetts Surface Water Quality Standards (314 CMR 4.00) do not contain numerical criteria for Total phosphorus. The narrative criteria for nutrients are found in 314 CMR 4.05(5) (C) which states that nutrients "shall not exceed the site specific limits necessary to control accelerated or cultural eutrophication" The standards also require that "any existing point source discharges containing nutrients in concentrations which encourage eutrophication or growth of weeds or algae shall be provided with the highest and best practicable treatment to remove such nutrients" (314 CMR 4.04). The Connecticut River at the point of discharge is not listed as impaired for pollutants associated with eutrophication.

EPA has produced several guidance documents which contain recommended total phosphorus criteria for receiving water. The 1986 Quality Criteria of Water ("Gold Book") recommends in-stream phosphorus concentration of 0.05 mg/l in any stream entering a lake or reservoir, 0.1 mg/l for any stream not discharging directly to lakes or ponds, and 0.025 mg/l within the lake or reservoir.

The Discharge Monitoring Reports (DMR) submitted by the permittee report total phosphorus values between 2.2 mg/l – 11 mg/l with an average of 6.21 mg/l.

Assuming zero in-stream background phosphorus, the calculated instream contribution for the Connecticut River at point of discharge using the Gold Book (0.1 mg/l) criteria times the dilution factor of 176.7, would afford the municipality a 17.65 mg/l limit which is higher than the maximum daily concentrations reported in the DMRs. Therefore, EPA is not recommending a phosphorus limit at this time. The permittee is required to continue monitoring and reporting total phosphorus concentrations.

Nitrogen Monitoring: Total Kjeldahl Nitrogen, Total Nitrate, Total Nitrite, and Ammonia Nitrogen: Nutrient modeling conducted as part of the Long Island Sound Program has been demonstrated that excessive nitrogen loadings are causing significant water quality problems in Long Island Sound, including dissolved oxygen. The State of Connecticut has begun to impose nitrogen limitations on Connecticut discharges to Long Island Sound and its tributaries. EPA agrees there is a need to determine the loadings of nitrogen from sources in Massachusetts which are tributary to Long Island Sound, and to help determine what limits, if any should be imposed on discharges in Massachusetts. Therefore, based on Section 308 of the Clean Water Act, EPA has maintained quarterly requirements for testing for total nitrogen as Kjeldahl nitrogen, nitrate and nitrite, and ammonia in the draft permit.

The information submitted by the permittee will help to establish a database of nitrogen loadings, which can be used quantitatively to assess the impact of loading and transport to Long Island Sound

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. These constituents include metals, chlorinated solvents, aromatic hydrocarbons and others. The Region's current policy is to include toxicity testing requirements in all permits, while Section 101(a) (3) of the CWA specifically prohibits the discharge of toxic pollutants in toxic amounts.

Based on the potential for toxicity resulting from domestic sewage, in accordance with EPA national and regional policy, and in accordance with MassDEP policy, the draft permit includes acute toxicity limitations and monitoring requirements. (See Policy for the Development of Water Quality-Based Permit Limitations for Toxic Pollutants, 50 Fed. Reg. 30,784 (July 24, 1985); EPA's Technical Support Document for Water Quality-Based Toxics Control", September, 1991; and MassDEP's Implementation Policy for the Control of Toxic Pollutants in Surface Waters (February 23, 1990).

Pursuant to EPA, Region I and MassDEP policy, discharges having a dilution factor greater than 100:1 (159.7 for this discharge) require acute toxicity testing and an acute LC_{50} limit of 50%. The draft permit requires the permittee to conduct two acute WET tests per year. The tests the use the species, Ceriodaphnia dubia, in accordance with existing permit conditions, and are to be conducted in accordance with the EPA Region I Toxicity protocol found in the draft permit Attachment A.

IV. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM

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

The draft permit includes requirements for the permittee to control infiltration and inflow (I/I). Infiltration is groundwater that enters the collection system through physical defects such as cracked pipes, or deteriorated joints. Inflow is extraneous flow entering the collection system through point sources such as roof leaders, yard and area drains, sump pumps, manhole covers, tide gates, and cross connections from storm water systems. Significant I/I in a collection system may displace sanitary flow reducing the capacity and the efficiency of the treatment works and may cause bypasses to secondary treatment. It greatly increases the potential for sanitary sewer overflows (SSO) in separate systems.

The permittee estimates the rate of I/I in the collection system to be one million gallons per day (2005 permit application). The permittee has recorded daily maximum flow rates of more than 15 mgd.

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

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

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

V. SLUDGE INFORMATION AND REQUIREMENTS

The Amherst WWTP produces approximately 9018 metric tons of sludge each year. Section 405(d) of the Clean Water Act requires that sludge conditions be included in all POTW permits. Primary and secondary thickened sludge from the Amherst WWTF is currently trucked off-site to four facilities for incineration. Casella Transportation, Inc., hauls the sludge to Fitchburg, MA, The City of Glens Falls, NY, Mattabasett Sewer District, in Cromwell, CT, and to the Upper Blackstone WPAD in Millbury, MA. If the ultimate sludge disposal method changes, the permittee must notify EPA and MassDEP and the requirements pertaining to sludge monitoring and other conditions would change accordingly (See Attached Sludge Guidance document).

VI. ESSENTIAL FISH HABITAT DETERMINATION (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 Marine Fisheries Service (NMFS) if EPA's action or proposed actions that it funds, permits, or undertakes, "may adversely impact any essential fish habitat," 16 U.S.C. § 1855(b).

The Amendments broadly define “essential fish habitat” (EFH) as: “waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity,” 16 U.S.C. § 1802(10). “Adverse 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. Id.

Essential fish habitat is only designated for fish 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.

Only Atlantic salmon are present during one or more life stages within the EFH area to which the WWTP discharges. There is no “habitat of particular concern” as defined under §600.815(a)(9) of the Magnuson-Stevens Act, designated for this site.

EPA and MassDEP have determined that a formal EFH consultation with NMFS for this discharge in not required. The proposed discharge permit is developed to meet State Surface Water Quality Standards and will not adversely impact EFH.

VII ENDANGERED SPECIES ACT CONSULTATION FOR SHORTNOSED STURGEON

Section 7(a) of the Endangered Species Act of 1973, as amended (Act") grants authority to and imposes requirements upon Federal agencies regarding endangered or threatened species of fish, wildlife, or plants (A listed species") and habitat of such species that has been designated as critical (A 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 insure that any action it authorizes, funds, or carries out, in the United States or upon the high seas, is not likely to jeopardize the continued existence of any listed species or results in the destruction or adverse modification of critical habitat. The National Marine Fisheries Service (NMFS) administers Section 7 consultations for marine species and anadromous fish. The United States Fish and Wildlife Service (USFWS) administers Section 7 consultations for freshwater species.

The Department of the Interior has listed the Shortnosed Sturgeon (Acipenser brevirostrum) as endangered for portions of the Connecticut River. Therefore, EPA has entered into consultation with NMFS and USFWS regarding the reissuance of the NPDES permits to be reissued in the Connecticut River Watershed.

VIII. 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 the permit and shall be reported in accordance with Section D.1.e. (1) of the General Requirements of the permit (Twenty-four hour reporting).

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

IX. MONITORING AND REPORTING

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

X. STATE PERMIT CONDITIONS

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

XI. GENERAL CONDITIONS

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

XII. STATE CERTIFICATION REQUIREMENTS

EPA may not issue a permit unless the State Water Pollution Control Agency 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.

Comment Period, Hearing Requests, and Procedures for Final Decisions

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

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

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

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:

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Date:
August 10, 2006

Linda M. Murphy, Director
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