

**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: **MA0100455**

NAME AND ADDRESS OF APPLICANT:

**Board of Selectmen
Town of South Hadley
116 Main Street
South Hadley, MA 01075**

The Massachusetts Municipalities of Granby and Chicopee are co-permittees for specific activities required the permit. See Sections VI and VII of this fact sheet and Sections I.C. (Chicopee only); I.D., I.E., I.F. and, I.G. of the draft permit. The responsible Municipal Departments are:

**Town of Granby
Granby Highway Dept.
250 State Street
Granby, MA 01033**

**City of Chicopee
Chicopee Pollution Control Dept.
Medina Street
Chicopee, MA 01013**

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

**South Hadley Wastewater Treatment Plant
and Combined Sewer Overflows (CSOs)
2 James Street
Chicopee, MA 01020**

RECEIVING WATERS: **Connecticut River, Buttery Brook, and Stoney Brook - MA34**
CLASSIFICATION: **Class B - Warm Water**

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 April 3, 2002 and became effective sixty (60) days later. The permit will expire September 30, 2005. A re-application was received on March 4, 2005. This draft permit, after it becomes effective, will expire five (5) years from the effective date of issuance to keep with the Massachusetts Watershed Cycle.

II. TYPE OF FACILITY AND DISCHARGE LOCATION

The facility is a 4.2 million gallon per day (mgd) conventional activated sludge, secondary wastewater treatment plant with chlorine disinfection, which discharges to the Connecticut River in the Connecticut River Watershed (See Figure 1). The collection system is 90% separate sanitary sewer and 10% combined storm and sanitary sewer. The facility serves a population of 17,725 from three communities: South Hadley (16,325, sanitary & combined), Chicopee (550, sanitary & combined), and Granby (850, sanitary only). There are two co-permittees, the City of Chicopee and Town of Granby, which discharge wastewater to the treatment plant owned and operated by the applicant. The draft permit establishes requirements for the permittee and co-permittees.

Currently sludge from the facility is sent off-site to a licensed incineration facility. The Town of South Hadley, however, is in the early stages of considering alternative methods for the disposal of sludge.

The facility's discharge outfalls are listed below:

| <u>Outfall</u> | <u>Description of Discharge</u> | <u>Receiving Water</u> |
|----------------|---------------------------------|------------------------|
| 001 | Treated Effluent | Connecticut River |
| 012 | Combined Sewer Overflow | Buttery Brook |
| 004 | Combined Sewer Overflow | Connecticut River |
| 010 | Combined Sewer Overflow | Stoney Brook |

III. DESCRIPTION OF DISCHARGE

Quantitative descriptions of the discharge in terms of significant effluent parameters based on recent discharge monitoring reports (DMRs), April 2003 through March 2005, and the March 2005 application, are shown in Tables 1 and 2 of this fact sheet, respectively.

IV. LIMITATIONS AND CONDITIONS

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

V. PERMIT BASIS AND EXPLANATION OF EFFLUENT LIMITATION DERIVATION

A. PROCESS DESCRIPTION

The facility is a 4.2 million gallon per day (mgd) conventional activated sludge, secondary wastewater treatment plant with chlorine disinfection, which discharges to the Connecticut River in the Connecticut River Watershed (See Figure 1). In addition to the sanitary flow from the three communities, there are three industrial dischargers which accounted for less than one percent of the of the total flow in 2004.

The following is a brief description of the treatment process (See Figure 2); raw wastewater enters the aerated grit chamber and then flows into three primary settling tanks, where floating and settleable solids are removed. The primary effluent then flows into the aeration tanks (only two

of the four tanks are in current operation) and then to the secondary clarifiers and then the secondary effluent is disinfected seasonally (April 1 - October 31) with sodium hypochlorite and is then discharged over a man-made cascade and into the Connecticut River.

The facility also currently operates two (2) Combined Sewer Overflows (CSOs) which discharge to the Connecticut River and Buttery Brook in the Connecticut River Watershed. South Hadley is currently in the process of designing a project that will reroute flows upstream of Outfalls #012 and #004 to the treatment plant for treatment. This approach is consistent with the Nine Minimum Control #4, which requires maximization of flows to the treatment. The project is expected to be completed and the two (2) remaining CSOs eliminated by December 31, 2007.

CSO #014 - Mount Holyoke College which discharged to Stoney Brook was eliminated and permanently sealed on May 4, 2005. The Stoney Brook Pump Station, CSO #010, was upgraded and the CSO was sealed on June 7, 2005 on a trial basis.

Grit is trucked off-site and disposed of in a sanitary landfill. Solids from the primary clarifiers and the activated sludge treatment process are thickened, dewatered via a belt press and then transported offsite by Synagro to their Waterbury, CT facility for incineration.

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. Overview of Federal and State Regulations

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.

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.

2. Water Quality Standards; Designated Use; Outfall 001

The Connecticut River in the vicinity of the discharges is classified as a Class B-warm water fishery in the Massachusetts Surface Water Quality Standards (314 CMR 4.00). Class B waters are designated as a 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.

Section 303(d) of the Federal Clean Water Act (CWA) requires states to identify those waterbodies that are not expected to meet surface water quality standards after the implementation of technology-based controls and, as such require the development of total maximum daily loads (TMDL). The segment of the river (MA34-05), Connecticut River, downstream of the Holyoke Dam to the Connecticut state line, is listed as impaired and requiring the development of a TMDL on the Massachusetts 2002 Integrated List of Waters (303d). The listed impairments for this segment are priority organics (PAHs), pathogens and settleable solids.

The MA DEP 1998 Water Quality Assessment Report for the Connecticut River, which is the basis for the 303(d) list, indicates that sediment within the vicinity of the former Holyoke Gas Works are contaminated with coal tar which contains PAHs. The former Holyoke Gas Works facility is a Tier 1A hazardous waste site currently undergoing remediation and is the probable source of PAHs in the river.

This segment of the Connecticut River is subject to discharge from numerous CSOs from several communities which impairs the primary contact recreational use. The town of South Hadley is currently separating the combined sewers in the collection system.

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.

The facility design flow is 4.2 million gallons per day or 6.5 cubic feet per second (cfs). The 7Q10 flow used in the previous permit is 1770 cfs (1144 MGD) cited in the 1998 Water Quality Assessment Report for the Connecticut River, Appendix C. As noted in the 2001 Reissuance, the updated USGS data for gage 01172003 below the Holyoke Dam at Holyoke was not used to calculate the dilution factor because the 7Q10 estimates were based on only 11 data points during the period 1985-1996. The dilution ratio for the South Hadley WWTP discharge to the Connecticut River is 273:1.

$$\frac{\text{River flow (7Q10)} + \text{Daily average design effluent flow}}{\text{River Flow (7Q10)}} = \text{Dilution}$$

$$\frac{1770 \text{ cfs} + 6.5 \text{ cfs}}{6.5 \text{ cfs}} = 273$$

Flow - The flow limit is based on the annual average design flow of the treatment plant, which is 4.2 mgd. 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.

OUTFALL 001 - CONVENTIONAL POLLUTANTS

Biological Oxygen Demand (BOD₅) - Publicly Owned Treatment Works (POTWs) are subject to the secondary treatment requirements set forth at 40 CFR 133.102 (a)(1), (2) and 40 CFR 122.45 (f). The secondary treatment limitations are monthly average BOD₅ concentration of 30 mg/l, weekly average concentration of 45 mg/l. The maximum daily concentration shall be reported. The mass limitations for BOD₅ are based on the 4.2 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 monthly average TSS concentration of 30 mg/l, weekly average concentration of 45 mg/l. The maximum daily concentration shall be reported. The mass limitations for TSS are based on the 4.2 MGD design flow.

BOD₅ and TSS Mass Loading Calculations:

Calculations of maximum allowable loads for average monthly BOD₅ and TSS are based on the following equation:

$L = C \times DF \times 8.34$ or $L = C \times DF \times 3.79$ 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.

(Concentration limit) [45] X 8.34 (Constant) X 4.2 (design flow) = 1576 lb/day

(Concentration limit) [45] X 3.79 (Constant) X 4.2 (design flow) = 716 lb/day

(Concentration limit) [30] X 8.34 (Constant) X 4.2 (design flow) = 1051 lb/day

(Concentration limit) [30] X 3.79 (Constant) X 4.2 (design flow) = 478 kg/day

Eighty-Five Percent (85%) BOD₅ and TSS Removal Requirement - the provisions of 40 CFR §133.102(a)(3) & (b)(3) requires that the 30 day average percent removal for BOD and TSS be not less than 85%. These limits are maintained in the draft permit.

pH - The draft permit includes pH limitations which are required by state water quality standards, and are at least as stringent as pH limitations set forth at 40 C.F.R. §133.102(c). Class B waters shall be in a range of 6.5 through 8.3 standard units and not more than 0.5 standard units outside of the normally occurring range (314 CMR 4.0 (4)(a)3). There shall be no change from background conditions that would impair any use assigned to this class. The monitoring frequency is once (1) per day.

The previous permit had pH limitations of 6.0-8.3 S.U. which are found at 40 CFR 133.102 (c). This wider pH range was established due to past industrial dischargers, however, these discharges have been addressed through pretreatment requirements. Review of recent DMRs indicates that the effluent pH has been within the more stringent range of 6.5-8.3 S.U. for the past 24 months, and therefore, the more stringent limit is proposed in the draft permit.

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. The limits are seasonal and are in effect from April 1 to October 31. These limits are the same as the previous permit, however, the monitoring frequency has been increased to twice (2) per week. The increased monitoring frequency is necessary to better represent the effluent quality from the facility especially given the significant high flows to the facility. It is noted that the facility reported a "too numerous to count (TNTC)" fecal coliform bacteria result in June 2003, a month when the maximum daily flow was 7.65 mgd (median maximum flow for the 24 month period was 5.3).

OUTFALL 001 - NON-CONVENTIONAL POLLUTANTS

Total Residual Chlorine - Chlorine is a toxic chemical. DMRs show chlorine residual levels below the minimum detection level for the past 24 months. The discharge is only disinfected on a seasonal basis, April 1 through October 31.

The draft permit includes Total Residual Chlorine (TRC) limitations which are based on state water quality standards [Title 314 CMR 4.05(5)(e)]. Chlorine compounds produced by the chlorination of wastewater can be extremely toxic to aquatic life.

The water quality standards for chlorine defined in the 2002 EPA National Recommended Water Quality Criteria for freshwater are 19 ug/l acute and 11 ug/l chronic in the receiving water. Given the dilution of 273, TRC limits have been calculated as 5.2 mg/l maximum daily and 3.0 mg/l average monthly. However, the State's Implementation Policy for the Control of Toxic Pollutants in Surface Waters, February 23, 1990 limits the maximum effluent concentration TRC shall be collected daily during the seasonal disinfection period, April 1 through October 31. One sample per week shall be collected concurrent with the weekly fecal coliform bacteria sample.

Total Residual Chlorine Limitations:

(acute criteria * dilution factor) = Acute (Maximum Daily)

(19 ug/l x 273) = 5187 ug/l = 5.2 mg/l

(chronic criteria * dilution factor) = Chronic (Monthly Average)

(11 ug/l x 273) = 3003 ug/l = 3 mg/l

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 is found at 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 the growth of weeds or algae shall be provided with the highest and best practicable treatment to

remove such nutrients (314 CMR 4.04). MADEP has established that a monthly average total phosphorus limit of 0.2 mg/l represents highest and best practical treatment for POTWs.

EPA has produced several guidance documents which contain recommended total phosphorus criteria for receiving waters. The 1986 Quality Criteria of Water ("the Gold Book") recommends in-stream phosphorus concentrations 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 impounds, and 0.025 mg/l within the lake or reservoir.

More recently, EPA has 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 criteria represent conditions in waters in each specific ecoregion which are minimally impacted by human activities, and thus representative of waters without cultural eutrophication. South Hadley is within Ecoregion XIV, Eastern Coastal Plains. The total phosphorus criteria for this Ecoregion XIV is 24 ug/l (0.024 mg/l) and can be found in the Ambient Water Quality Criteria Recommendations, Information Supporting the Development of State and Tribal Nutrient Criteria, Rivers and Streams in Ecoregion XIV, published in December 2000.

Discharge Monitoring Reports (DMRs) submitted by the permittee report total phosphorus values between 0.21 mg/l and 1.03 mg/l with an average concentration of 0.47 mg/l. The calculated instream contribution with a limit of 1 mg/l (1 mg/l divided by the dilution factor of 273) would be 0.0036 mg/l (3.6 ug/l), which is lower than both the ecoregion criteria and the "Gold Book" criteria. Therefore, EPA has determined that a limit for phosphorus is not required at this time.

Nitrogen - The Long Island Sound Study has determined that excessive nitrogen loadings are causing significant water quality problems in Long Island Sound, including low dissolved oxygen. The State of Connecticut has begun to impose nitrogen limitations on Connecticut River discharges to Long Island Sound and its tributaries. There is a need to determine the loadings of nitrogen from sources in Massachusetts which are tributary to Long Island Sound, to determine whether these loadings are impacting the water quality in Long Island Sound, and to help determine what limits, if any, should ultimately be imposed on discharges in Massachusetts. Therefore, EPA has included report requirements for total kjeldahl nitrogen, nitrite plus nitrate based on provisions of Section 308 of the Clean Water Act. The information submitted by the permittee will help to establish a database of nitrogen loadings, which can be used to quantitatively assess the impact of loading and transport of nitrogen to Long Island Sound. The data will provide a more sound basis for future decisions relating to nitrogen loadings to the Sound. The results of this monitoring will be reviewed to determine if further steps are needed to reduce, and control nitrogen inputs impacting coastal waters in Connecticut from the facility. No numerical limitations for these pollutants are established in the draft permit.

OUTFALL 001 - 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 POTWs. These constituents include metals, chlorinated solvents, aromatic

hydrocarbons and others. Based on the potential for toxicity from domestic sources, the state narrative water quality criterion, the limited dilution at the discharge location, 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 (LC50 \geq 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.)

The draft permit carries forward the requirement for Semi-annual Acute toxicity tests using the species Ceriodaphnia dubia. The tests must be performed in accordance with the test procedures and protocols specified in **Permit Attachment A**. The tests will be conducted twice a year, during the second week of the months of June and September to be consistent with other facilities in the Connecticut River Watershed.

The LC₅₀ limit of \geq 50% is established by EPA/MADEP policy for facilities with a dilution greater than 100 to 1 (See MADEP's "Implementation Policy for the Control of Toxic Pollutants in Surface Waters, February 23, 1990).

VI. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM

The permit standard conditions for "Proper Operation and Maintenance" are found at 40 CFR 122.41(e). These require proper operation and maintenance of permitted wastewater systems and related facilities to achieve permit conditions. Similarly, the permittee has a 'duty to mitigate' 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 affecting human health or the environment. EPA and MADEP maintain that these programs are an integral component of ensuring permit compliance under both these provisions.

VII. PRETREATMENT

The facility accepts industrial wastewater from two (2) significant industrial users (SIUs) and one (1) categorical industrial user (CIU).

The permittee is required to administer a pretreatment program based on the authority granted under 40 CFR §122.44(j), 40 CFR Part 403 and section 307 of the Act. The Permittee's pretreatment program received EPA approval on July 16, 1985 and, as a result, appropriate pretreatment program requirements were incorporated into the previous permit which were consistent with that approval and federal pretreatment regulations in effect when the permit was issued.

Upon reissuance of this NPDES permit, the permittee is required to review its pretreatment and modify it as necessary to ensure that it is consistent with current Federal Regulations. Those activities that the permittee must address include, but are not limited to, the following: (1) develop and enforce EPA approved specific effluent limits (technically-based local limits); (2) revise the local sewer-use ordinance or regulation, as appropriate, to be consistent with Federal Regulations; (3) develop an enforcement response plan; (4) implement a slug control evaluation program; (5) track significant noncompliance for industrial users; and (6) establish a definition of and track significant industrial users.

These requirements are necessary to ensure continued compliance with the POTW's NPDES permit and its sludge use or disposal practices.

Lastly, the permittee must continue to submit, annually, **by March 1**, a pretreatment report detailing the activities of the program for the twelve month period ending 60 days prior to the due date.

VIII. INFLOW/INFILTRATION REQUIREMENTS

The draft permit includes requirements for the permittee to control infiltration and inflow (I/I). Infiltration/inflow is extraneous water entering the wastewater collection system through a variety of sources. 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.

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, and combined sewer overflows in combined systems.

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

The MADEP 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).

The town is continuing to address I/I issues through their Stormwater Management Program and implementing the recommendations in their I/I Control Plan.

IX. COMBINED SEWER OVERFLOWS (CSOs)

Current CSO Status

As stated above, the Town of South Hadley is in the process of eliminating CSOs. In the Spring of 2005, the Town sealed two (2) CSOs. CSO #014 - Mount Holyoke College which discharged to Stoney Brook was permanently sealed on May 4, 2005 and the Stoney Brook Pump Station, CSO #010, was upgraded and the CSO was sealed with brick on June 7, 2005 on a trial basis. If no problems occur at CSO #010 by the end of May 2006, the permittee will consider the closure to be permanent.

The Town of South Hadley has evaluated the Judd Brook Interceptor and identified approximately 2 mgd of I/I, however, the town has chosen to build a parallel sewer to alleviate the stormwater flow in this line. This approach allowed the town to eliminate CSO #040 and #012. The re-routed flows will go to the WWTF for treatment. In the Fall of 2004, the town made repairs to the Center Interceptor Sewer which removed 50,000 gallons per day (gpd) of I/I.

Background

Combined Sewer Overflows (CSOs) are overflows from a combined sewer system that are discharged into a receiving water without going to the headworks of a publicly owned treatment works (POTWs). CSOs occur when the flow in the combined sewer system exceeds interceptor or regulator capacity. CSOs are distinguished from bypasses which are "intentional diversions of waste streams from any portion of a treatment facility" (40 CFR §122.41(m)).

Flows in combined sewers can be classified into two categories: wet weather flow and dry weather flow. Wet weather flow is a combination of domestic and industrial sewage, infiltration from groundwater, and storm water flow including snow melt. Dry weather flow is the flow in a combined sewer that results from domestic sewage, groundwater infiltration and industrial wastes with no contribution from storm water runoff or storm water induced infiltration.

Dry weather overflows from CSOs are illegal. They must be reported immediately to EPA and the MADEP and eliminated as expeditiously as possible. The objectives of the National CSO Control Policy are:

- 1) to ensure that if the CSO discharges occur, they are only as a result of wet weather,
- 2) to bring all wet weather CSO discharge points into compliance with the technology based requirements of the CWA and applicable federal and state water quality standards and,
- 3) to minimize water quality, aquatic biota, and human health impacts from wet weather flows.

Effluent Standards

CSOs are point sources subject to NPDES permit requirements for both water quality based, and technology based requirements but are not subject to secondary treatment regulations applicable to publicly owned treatment works.

Section 301(b)(1)(C) of the Clean Water Act (CWA) of 1977 mandates compliance with water quality standards by July 1, 1977. Technology based permit limits must be established for best conventional pollutant control technology (BCT) and best available technology economically achievable (BAT) based on best professional judgment (BPJ) in accordance with Section 301(b) and Section 402(a) of the Water Quality Act Amendments of 1987 (WQA).

Conditions for Discharge

The draft permit prohibits dry weather discharges from CSO outfalls. During wet weather, the discharges must not cause any exceedance of water quality standards. Dry weather discharges must be reported immediately to EPA and the MADEP. Wet weather discharges must be monitored and reported as specified in the permit.

Nine Minimum Controls (NMC)

The permittee must comply with BPJ derived BCT/BAT controls, which at a minimum include the following: (1) proper operation and maintenance of the sewer system and outfalls; (2) maximum use of the collection systems for storage; (3) review pretreatment programs to assure CSO impacts are minimized; (4) maximization of flow to the POTW for treatment; (5) prohibition of dry weather overflows; (6) control of solid and floatable materials in the discharge; (7) pollution prevention programs which focus on contaminant reduction activities; (8) public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts; and (9) monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.

Nine Minimum Controls Documentation

The town of South Hadley submitted a Nine Minimum Controls report to EPA in April 1997.

Reopener/Additional CSO Control Measures

The permit is conditioned to require an annual certification, no later than March 31st of each year, that states that all discharges from combined sewer outfalls were recorded, and other appropriate records and reports maintained for the previous calendar year.

The town of South Hadley plans to eliminate all CSOs by December 2007 by maximizing flows to the wastewater treatment facility.

The permit may be modified or reissued upon the completion of a long-term CSO control plan. Such modification may include performance standards for the selected controls, a post construction water quality assessment program, monitoring for compliance with water quality standards, and a reopener clause to be used in the event that the selected CSO controls fail to meet water quality standards. Section 301(b)(1)(C) requires that a permit include limits that may be necessary to protect water quality standards.

X. SLUDGE INFORMATION AND REQUIREMENTS

Section 405(d) of the Clean Water Act requires that sludge conditions be included in all POTW permits. Sludge from the South Hadley WWTF is currently sent to an off-site facility for incineration. If the ultimate sludge disposal method changes, the permit would be modified and the requirements pertaining to sludge monitoring and other conditions would change accordingly.

XI. ANTI-BACKSLIDING

Anti-backsliding as defined at 40 CFR §122.44(l)(1) requires reissued permits to contain limitations as stringent or more stringent than those of the previous permit unless the circumstances allow application of one of the defined exceptions to this regulation. Anti-backsliding does not apply when changes to limits are based on new information not available at the time of the previous permit reissuance (40 CFR §122.44 (l)(2)(i)(B)(1)) or when limits are changed as a result of material and substantial additions or alterations to the permitted facility which occurred after permit issuance which justify the application of less stringent limitations, as defined 40 CFR § 122.44 (l)(2)(i)(A).

XII. ANTIDegradation

The Massachusetts Antidegradation Policy is found at Title 314 CMR 4.04. 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 the current permit with the same parameter coverage. There is no change in outfall location. The public is invited to participate in the anti-degradation finding through the permit public notice procedure.

XIII. ESSENTIAL FISH HABITAT

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801 et seq.(1998)), EPA is required to consult with the National 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.

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

IX. ENDANGERED SPECIES ACT CONSULTATION FOR SHORTRNOSED 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.

XIV. UNAUTHORIZED DISCHARGES

The permittee is not authorized to discharge wastewater from any pump station emergency overflow. Overflows must be reported in accordance with reporting requirements found in Section D.1.e. of Part II of the permit (24-hour reporting). If a discharge does occur, the permittee must notify the EPA, the MA DEP, and others, as appropriate (i.e. local Public Health Department), both orally and in writing as specified in the draft permit.

XV. MONITORING AND REPORTING

The permittee is obliged to monitor and report sampling results to EPA and the MA DEP 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 122.441(j), 122.44, and 122.48.

The remaining 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.

XVI. 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 MA DEP Commissioner.

XVII. GENERAL CONDITIONS

The general conditions of the permit are based on 40 CFR Parts 122, Subparts A and D and 40 CFR 124, Subparts A, D, E, and F and are consistent with management requirements common to other permits.

XVIII. STATE CERTIFICATION REQUIREMENTS

The staff of the Massachusetts Department of Environmental Protection ("MADEP") 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.

XIX. PUBLIC COMMENT PERIOD 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 all supporting material for their arguments in full by the close of the public comment period, to the U.S. EPA, Office of Ecosystem Protection, MA Unit, One Congress Street, Suite-1100, Boston, Massachusetts 02114. 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. Public hearings may be held after at least thirty days public notice whenever the Regional Administrator finds that response to this notice indicates a 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 a 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.

XX. 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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June 21, 2006
Date

Linda M. Murphy, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency