

**EXHIBIT A**

Fact Sheet for Draft NPDES Permit MA0100595

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

**REVISED FACT SHEET**

PARTIALLY REVISED DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION  
SYSTEM PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

NPDES PERMIT NO.: MA0100595

NAME AND ADDRESS OF APPLICANT:

City of Attleboro  
Department of Water and Wastewater  
Government Center, 77 Park Street  
Attleboro, MA 02703

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Attleboro Water Pollution Control Facility  
Pond Street  
Attleboro, MA 02703

RECEIVING WATER: Ten Mile River

CLASSIFICATION: B (Warm Water Fishery)

**I. Proposed Action**

In response to a timely application by the City of Attleboro, Massachusetts, for reissuance of the above-referenced National Pollutant Discharge Elimination System (NPDES) permit, the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) made a draft permit and fact sheet available for public notice on August 16, 2006 and accepted comments on the proposed action until September 14, 2006. Comments received on the draft permit from the State of Rhode Island Department of Environmental Management raised substantial new questions regarding whether the monthly average total phosphorus limit of 0.2 mg/l (effective April through October) was sufficiently stringent to ensure compliance with applicable Water Quality Standards in Massachusetts and Rhode Island and relevant provisions of the Clean Water Act. Based on an analysis of the comments, as well as other technical information and guidance in the administrative record, EPA has determined that the monthly average total phosphorus limit for the months of April through October must be

reduced from 0.2 mg/l to 0.1 mg/l in order to assure that water quality standards in each affected state will be met.

The agencies have further concluded that a limited opportunity for interested persons to comment on this specific change to the draft permit will assist the agencies in their deliberations and improve the quality of the final permit decision. We are, therefore, reopening public comment on the draft permit pursuant to 40 C.F.R. § 124.14(b). In accordance with 40 C.F.R. § 124.14(c), comments filed during the reopened comment period shall be limited to the "substantial new questions that caused its reopening," which in this case pertain only to the revised monthly average total phosphorus limit.

This revised Fact Sheet sets forth the record basis for the new total phosphorus limit, which supersedes the section entitled "Phosphorus" appearing on pages 6 to 8 in Section IV.D ("Permit Limits and Explanation of Effluent Limitation Derivation"; "Limits Derivation"; "Phosphorus") of the original Fact Sheet that accompanied the August 16, 2006 draft permit. In all other respects, the original draft permit and the original Fact Sheet remain in place and are not subject to re-opened comment. Comments outside the scope of the revised total phosphorus limit shall not be considered.

#### **IV. Permit Basis and Explanation of Effluent Limitation Derivation.**

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#### **D. Limits Derivation**

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##### **Phosphorus:**

Massachusetts Water Quality Standards do not contain a numeric criterion for total phosphorus. The narrative criterion 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." Massachusetts 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." See 314 CMR 4.04(5). MassDEP construes "highest and best practical treatment" for POTWs as a monthly average total phosphorus limit of 0.2 mg/l.

In the absence of a numeric criterion for phosphorus, EPA looks to nationally recommended criteria, supplemented by other relevant materials, such as EPA technical guidance and information published under Section 304(a) of the CWA, peer-reviewed scientific literature and site-specific surveys and data. See 40 CFR § 122.44(d)(1)(vi)(B). EPA has produced several guidance documents which set forth total ambient phosphorus concentrations that are sufficiently stringent to control cultural eutrophication and other adverse nutrient-related impacts. These

guidance documents present protective in-stream phosphorus concentrations based on two different analytical approaches. An 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. Alternatively, reference-based values are statistically derived from a comparison within a population of rivers in the same eco-region class. They are a quantitative set of river characteristics (physical, chemical and biological) that represent conditions in waters in that ecoregion that are minimally impacted by human activities (*i.e.*, reference conditions), and thus by definition representative of water without cultural eutrophication. While reference conditions, which reflect minimally disturbed conditions, will meet the requirements necessary to support designated uses, they may also exceed the water quality necessary to support such requirements.

The 1986 Quality Criteria of Water ("Gold Book") follows an effects-based approach. It sets forth maximum threshold concentrations that are designed to prevent or control adverse nutrient-related impacts from occurring. Specifically, the Gold Book recommends in-stream phosphorus concentrations of no greater than 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 impoundments, and 0.025 mg/l within the lake or reservoir. A more recent technical guidance manual, the Nutrient Criteria Technical Guidance Manual: Rivers and Streams (EPA 2000) ("Nutrient Criteria Technical Guidance Manual"), cites to a range of ambient concentrations drawn from the peer-reviewed scientific literature that are sufficiently stringent to control periphyton and plankton (two types of aquatic plant growth commonly associated with eutrophication). This guidance indicates in-stream phosphorus concentrations between 0.01 mg/l and 0.09 mg/l will be sufficient to control periphyton growth and concentrations between 0.035 mg/l and 0.070 mg/l will be sufficient to control plankton (see Table 4 on page 101).

EPA has also released recommended 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 that ecoregion that are minimally impacted by human activities, and thus free from cultural eutrophication. Attleboro is within Ecoregion XIV, Eastern Coastal Plains. The recommended total phosphorus criterion for this ecoregion, found in Ambient Water Quality Criteria Recommendations, Information Supporting the Development of State and Tribal Nutrient Criteria, Rivers and Streams in Ecoregion XIV (2000), is 24 ug/l (0.024 mg/l).

Unlike Massachusetts, Rhode Island Water Quality Regulations establish a numeric criterion for nutrients for certain bodies of water:

"Average Total Phosphorus shall not exceed 0.025 mg/l in any lake, pond, kettlehole or reservoir, and average Total P in tributaries at the point where they enter such bodies of water shall not cause exceedance of this phosphorus criteria, except as naturally occurs, unless the Director determines, on a site specific basis, that a different value for phosphorus is necessary to prevent cultural eutrophication." Rule 8.D.(2).

The current permit has a monthly average total phosphorus limit of 1.0 mg/l and a daily maximum limit of 1.5 mg/l, each in effect from May 1 to October 31. Total phosphorus effluent data from DMRs submitted in 2003 and 2004 for the months of April through October ranged from 0.1 to 0.3 mg/l.

The impacts associated with the excessive loading of phosphorus are documented in the Ten Mile River Basin 1997 Water Quality Assessment Report published by MassDEP in March 2000, the Massachusetts Year 2004 Integrated List of Waters and the RI 2004 303(d) List of Impaired Waters. The Ten Mile River is listed on the Massachusetts Year 2004 Integrated List of Waters (which incorporates the CWA § 303(d) list) as a water that is impaired (not meeting water quality standards) and requires one or more Total Maximum Daily Loads (TMDL) to be prepared to reduce pollutant loadings into the River so that it can attain water quality standards. The segment of the Ten Mile River from the North Attleborough WWTP to the MA/RI border, which includes the discharge from the Attleboro treatment plant, is listed as impaired due to unknown toxicity, metals, nutrients, organic enrichment/low dissolved oxygen, pathogens, and noxious aquatic plants. No TMDL has been completed nor is any underway. The free flowing segments of the Ten Mile River in RI are listed on the State's 2004 CWA § 303(d) List of Impaired Waters as waters needing a TMDL for copper, lead, and cadmium. Two impoundments are also listed. Turner Reservoir is listed for copper, lead, low dissolved oxygen, and phosphorus. Omega Pond is listed for copper, lead and phosphorus.

Due to the absence of any significant dilution under 7Q10 conditions in the receiving waters, the monthly average limit of 1.0 mg/l in the current permit would be expected to significantly exceed the protective values contained in EPA's national technical guidance and the available scientific literature in the record, as well as the EPA recommended criterion.<sup>1</sup> Within this range of concentrations (e.g., 0.01 mg/l to 0.1 mg/l), eutrophication is expected to be controlled. To effectively address the documented eutrophication in the Ten Mile River and downstream impoundments, ambient phosphorus concentrations must be brought within this protective range. In order to do so, the Permittee's existing phosphorus effluent limits must be made more stringent.

Given the lack of effective dilution under 7Q10 flow conditions, a monthly average total phosphorus effluent limit of 0.1 mg/l has been established to ensure that the Gold Book recommended value of 0.1 mg/l will not be exceeded in the Massachusetts reaches of the river below the discharge. In addition to being consistent with the Gold Book, 0.1 mg/l limit also falls within the range of effects-based values cited in the Nutrient Criteria Technical Guidance Manual and in the peer-reviewed scientific literature after adjustments are made to account for the differing flow assumptions used to determine those values (i.e., 7Q10 versus 2 or 3-month

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<sup>1</sup> What little dilution is available (see Attachment B of the original Fact Sheet) consists almost entirely of flow from the North Attleborough Wastewater Treatment Facility, which itself contains significant quantities of phosphorus.

summer seasonal flows). See, e.g., *Developing Nutrient Targets to Control Benthic Chlorophyll Levels in Streams: A Case Study of the Clark Fork River* (Dodds et al., 1997) at p. 1739 (citing use of flows from June 21 to September 21 to calculate recommended values); *Suggested Classification of Stream Trophic States: Distributions of Temperate Stream Types by Chlorophyll, Total Nitrogen, and Phosphorus*, (Dodds et al., 1998) (citing use of 2-3 month seasonal means).

EPA also believes that the limit of 0.1 mg/l will ensure attainment of Rhode Island water quality criteria of 25 ug/l, which applies to Turner Reservoir downstream of the state line. The Ten Mile River below the discharge flows into an impoundment at the Massachusetts/Rhode Island border and then, from the outlet of this impoundment, flows approximately one mile before entering Turner Reservoir. The additional drainage area between the Attleboro discharge and Turner Reservoir of approximately 18 square miles adds approximately 3 cfs of additional dilution under 7Q10 flow conditions. Additionally, there will be some natural uptake of phosphorus by the aquatic plant biomass, as will occur even in a high quality receiving water.

The limit of 0.1 mg/l will be in effect from April 1 to October 31. The application of the lower seasonal limit has been extended to the month of April in order to encompass the entire season when there is active aquatic plant growth.

In addition to the monthly average total phosphorus limit of 0.1 mg/l proposed for the months of April through October, the draft permit contains a winter period total phosphorus limit of 1.0 mg/l for November through March. No change is being made to this limit, and it is not subject to re-opened comment.

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#### **V. State Certification Requirements**

The staff of the Massachusetts Department of Environmental Protection has reviewed the partially revised draft permit. EPA has requested permit certification by the State pursuant to CWA § 401(a)(1) and 40 CFR § 124.53 and expects that the draft permit, as revised, will be certified.

#### **VI. Public Comment Period, Public Hearing, and Procedures for Final Decision**

All persons, including applicants, who believe the revised seasonal phosphorus limit of the new draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full before the close of the public comment period, to the U.S. EPA, Office of Ecosystem Protection "CMP", Region 1, 1 Congress Street, Suite 1100, Boston, MA 02114-2023. Any person, prior to such date, may submit a request in writing to EPA and the state agency for a public hearing to consider the revised seasonal phosphorus limit of 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. Permits may be appealed to the Environmental Appeals Board in the manner described at 40 CFR § 124.19.

#### **VII. EPA and MassDEP Contacts**

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:

David Pincumbe  
Municipal Permits Branch (CMP)  
Office Of Ecosystem Protection  
US Environmental Protection Agency  
Congress Street, Suite 1100  
Boston, MA 02114-2023  
Tele: (617) 918-1695

Paul Hogan, Chief  
Surface Water Permit Program  
Division of Watershed Management  
Department of Environmental Protection  
627 Main Street, Second Floor  
Worcester, MA 01608  
Tele: (508) 767-2796

July , 2007  
Date

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

**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),

**City of Attleboro  
Department of Water and Wastewater  
Government Center, 77 Park Street  
Attleboro, MA 02703**

8/16/2006  
draft permit

Is authorized to discharge from a facility located at

**Attleboro Water Pollution Control Facility  
Pond Street  
Attleboro, MA 02703**

To receiving water named **Ten Mile River,**

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 years from the effective date.

This Permit supersedes the permit issued on September 30, 1999.

This Permit consists of 14 pages in Part I including effluent limitations, monitoring requirements, etc., Attachments A, B, and C, and 35 pages in Part II including General Conditions and Definitions.

Signed this    day of

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Director  
Office of Ecosystem Protection  
Environmental Protection Agency  
Boston, MA

\_\_\_\_\_  
Director  
Division of Watershed Management  
Department of Environmental Protection  
Commonwealth of Massachusetts  
Boston, MA

\*\* If no comments are received during public notice, this permit will become effective on the date of signature.  
If comments are received during public notice, this permit will become effective 60 days after signature.



**PART I**

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

1. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge from outfall serial number 001 (May 1 - October 31 unless otherwise noted). Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirement</u>	
	<u>Average Monthly</u>	<u>Average Weekly</u>	<u>Maximum Daily</u>	<u>Frequency Type</u>
Flow, MGD	8.6 <sup>1</sup>	---	---	daily continuous
Flow, MGD <sup>1</sup>	Report	Report	Report	daily continuous
CBOD, mg/l (lbs/day) <sup>2</sup>	5 (359)	5 (359)	15 (1,077)	3/week 24-hr.comp. <sup>3</sup>
TSS, mg/l (lbs/day) <sup>2</sup>	5 (359)	5 (359)	15 (1,077)	3/week 24-hr.comp. <sup>3</sup>
pH, s.u. <sup>4</sup>	200	See I.A.4.b.	400	daily grab
Fecal Coliform, CFU/100 ml <sup>4,5</sup>	15.4	---	26.6	3/week grab
Total Residual Chlorine, ug/l <sup>6,7</sup>	---	---	---	3/day grab
Ammonia-Nitrogen, mg/l (lbs/day)	---	---	---	---
(May 1 - May 31)	4.2	---	---	3/week 24-hr.comp. <sup>3</sup>
(June 1 - October 31)	1.5 (108)	1.5 (108)	2.5	3/week 24-hr.comp. <sup>3</sup>
Total Phosphorus, mg/l (April 1 - October 31) <sup>8</sup>	0.2	---	Report	3/week 24-hr.comp. <sup>3</sup>
Total Nitrogen, mg/l <sup>9</sup>	8.0	---	Report	3/week 24-hr.comp. <sup>3</sup>
Dissolved Oxygen, mg/l <sup>4</sup>	---	See I.A.4.c.	---	---
LC50 <sup>10,11</sup>	---	---	100%	4/year 24-hr.comp. <sup>3</sup>
C-NOEC <sup>10,12</sup>	---	---	71%	4/year 24-hr.comp. <sup>3</sup>

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

2. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge from outfall serial number 001 (November 1 - April 30 unless otherwise noted). Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirement</u>		
	<u>Average Monthly</u>	<u>Average Weekly</u>	<u>Maximum Daily</u>	<u>Frequency</u>	<u>Sample Type</u>	<u>Frequency</u>
Flow, MGD	8.6 <sup>1</sup>	---	---	daily	continuous	continuous
Flow, MGD <sup>1</sup>	Report	---	Report	daily	continuous	continuous
CBOD, mg/l (lbs/day) <sup>2</sup>	15 (1077)	25 (1794)	30 (2,153)	3/week	24-hr. comp. <sup>3</sup>	24-hr. comp. <sup>3</sup>
TSS, mg/l (lbs/day) <sup>2</sup>	15 (1077)	25 (1794)	30 (2,153)	3/week	24-hr. comp. <sup>3</sup>	24-hr. comp. <sup>3</sup>
pH, s.u. <sup>4</sup>	---	See I.A.4.b.	---	daily	grab	grab
Fecal Coliform <sup>4,5</sup>	200	---	400	3/week	grab	grab
Total Residual Chlorine, ug/l <sup>6,7</sup>	15.4	---	26.6	3/day	grab	grab
Ammonia Nitrogen, mg/l (November 1 - November 30)	8.3	---	---	2/week	24-hr. comp. <sup>3</sup>	24-hr. comp. <sup>3</sup>
(December 1 - April 30)	12.5	---	---	2/week	24-hr. comp. <sup>3</sup>	24-hr. comp. <sup>3</sup>
Total Nitrogen, mg/l <sup>9</sup>	Report	---	Report	1/week	24-hr. comp. <sup>3</sup>	24-hr. comp. <sup>3</sup>
Total Phosphorus, mg/l <sup>13</sup> (November 1 - March 31)	1.0	---	Report	2/week	24-hr. comp. <sup>3</sup>	24-hr. comp. <sup>3</sup>
Dissolved Ortho Phosphorus <sup>13</sup> (November 1 - March 31)	Report	---	Report	2/week	24-hr. comp. <sup>3</sup>	24-hr. comp. <sup>3</sup>
Dissolved Oxygen, mg/l <sup>4</sup>	---	See I.A.4.c.	Report	daily	grab	grab
LC50 <sup>10,11</sup>	---	---	100%	4/year	24-hr. comp. <sup>3</sup>	24-hr. comp. <sup>3</sup>
C-NOEC <sup>10,12</sup>	---	---	>71%	4/year	24-hr. comp. <sup>3</sup>	24-hr. comp. <sup>3</sup>

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

3. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge from outfall serial number 001.

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirement</u>		<u>Sample Type</u>
	<u>Average Monthly</u>	<u>Average Weekly</u>	<u>Maximum Daily</u>	<u>Frequency</u>	
Total Recoverable Metals ug/l <sup>14</sup>					
Copper	13.0		19.6	2/month	24-hr. comp.
Zinc	167.7		167.7	2/month	24-hr. comp.
Silver	---		5.3	2/month	24-hr. comp.
Nickel	73.1		---	2/month	24-hr. comp.
Lead	4.5		---	2/month	24-hr. comp.
Aluminum	122		950	2/month	24-hr. comp.
Cadmium	0.4		2.9	2/month	24-hr. comp.
Cyanide	6.3		30.8	1/month	24-hr. comp.

All sampling shall be representative of the effluent that is discharged through outfall 001 to the Ten Mile River. A routine sampling program shall be developed in which samples are taken at the same location, same time and same days of every month. Any deviations from the routine sampling program shall be documented in correspondence appended to the applicable discharge monitoring report that is submitted to EPA. In addition, all samples shall be analyzed using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136.

**Footnotes:**

1. This is an annual average limit, which shall be reported as a rolling average. The first value will be calculated using the monthly average flow for the first full month ending after the effective date of the permit and the eleven previous monthly average flows. Each subsequent month's DMR will report the annual average flow that is calculated from that month and the previous 11 months. The monthly average and maximum daily flows for each month shall also be reported.
2. Sampling required for influent and effluent.
3. A 24-hour composite sample will consist of at least twenty four (24) grab samples taken during one working day, either collected at equal intervals and combined proportional to flow or continuously collected proportionally to flow.
4. Required for state certification.
5. Fecal coliform discharges shall not exceed a monthly geometric mean of 200 colony forming units (cfu) per 100 ml, nor shall they exceed 400 cfu per 100 ml as a daily maximum. This monitoring shall be conducted concurrently with the TRC sampling.
6. The minimum level (ML) for total residual chlorine is defined as 20 ug/l. This value is the minimum level for chlorine using EPA approved methods found in the most currently approved version of Standard Methods for the Examination of Water and Wastewater, Method 4500 CL-E and G, or USEPA Manual of Methods of Analysis of Water and Wastes, Method 330.5. One of these methods must be used to determine total residual chlorine. For effluent limitations less than 20 ug/l, compliance/non-compliance will be determined based on the ML. Sample results of 20 ug/l or less shall be reported as zero on the discharge monitoring report.  
  
The monthly DMR shall include an attachment documenting the individual grab sample results for each day, including the date and time of each sample, and a summary of any operational modifications implemented in response to sample results. All test results shall be used in the calculation and reporting of the monthly average and maximum daily data submitted on the DMR (see Part II. Section D.1.d.(2)).
7. Chlorination and dechlorination systems 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.
8. Consistent with Section B.1 of Part II of the Permit, the Permittee shall properly operate and maintain the phosphorus removal facilities in order to obtain the lowest effluent concentration possible.

9. This permit limit is a requirement of the U. S. Environmental Protection Agency (EPA) permit and is not a requirement of the Massachusetts Department of Environmental Protection (MassDEP) permit. Total Nitrogen is the sum of TKN, NO<sub>2</sub>, and NO<sub>3</sub>. The permittee shall operate the treatment facility to reduce the discharge of total nitrogen during the months of November - April to the maximum extent possible, using all available treatment equipment in place at the facility. The addition of a carbon source that may be necessary in order to meet the total nitrogen limit during the months of May - October is not required during the months of November - April.
  
10. The permittee shall conduct chronic (and modified acute) toxicity tests four times per year. The chronic test may be used to calculate the acute LC<sub>50</sub> at the 48 hour exposure interval. The permittee shall test the daphnid, Ceriodaphnia dubia, only. Toxicity test samples shall be collected during the second week of the months of February, May, August, and November. The test results shall be submitted by the last day of the month following the completion of the test. The results are due March 31<sup>st</sup>, June 30<sup>th</sup>, September 30<sup>th</sup>, and December 31<sup>st</sup> 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 <sub>50</sub>	Chronic Limit C-NOEC
February	March 31st	<u>Ceriodaphnia dubia</u> (daphnid)	≥ 100%	≥ 94%
May	June 30th			
August	September 30th	See <b>Attachment A</b>		
November	December 31st			

Toxicity tests shall be performed using receiving water collected from the Ten Mile River upstream of the Attleboro discharge and downstream of the North Attleboro discharge for dilution. If toxicity test(s) using receiving water as diluent show the receiving water to be toxic or unreliable, the permittee shall follow procedures outlined in **Attachment A Section IV., DILUTION WATER** in order to obtain permission to use an alternate dilution water. In lieu of individual approvals for alternate dilution water required in **Attachment A**, EPA-New England has developed a Self-Implementing Alternative Dilution Water Guidance document (called "Guidance Document") which may be used to obtain automatic approval of an alternate dilution water, including the appropriate species for use with that water. If this Guidance document is revoked, the permittee shall revert to obtaining approval as outlined in **Attachment A**. The "Guidance Document" has been sent to all permittees with their annual set of DMRs and Revised Updated Instructions for Completing EPA's Pre-Printed NPDES Discharge Monitoring Report (DMR) Form 3320-1 and is not intended as a direct attachment to this permit. Any modification or revocation to this "Guidance Document" will be transmitted to the permittees as part of the annual DMR instruction package. However, at any time, the permittee may choose to contact EPA-New England directly using the approach outlined in **Attachment A**.

11. The LC<sub>50</sub> is the concentration of effluent which causes mortality to 50% of the test organisms. Therefore, a 100% limit means that a sample of 100% effluent (no dilution) shall cause no more than a 50% mortality rate.

12. C-NOEC (chronic-no observed effect concentration) is defined as the highest concentration of toxicant or effluent to which organisms are exposed in a life cycle or partial life cycle test which causes no adverse effect on growth, survival, or reproduction at a specific time of observation as determined from hypothesis testing where the test results exhibit a linear dose-response relationship. However, where the test results do not exhibit a linear dose-response relationship, the permittee must report the lowest concentration where there is no observable effect. The "100% or greater" limit is defined as a sample which is composed of 100% (or greater) effluent, the remainder being dilution water.
13. The Permittee shall comply with the 1.0 mg/l monthly average total phosphorus limit within one year of the issuance date of the permit. The maximum daily concentration value reported for dissolved ortho phosphorus shall be the value from the same day that the maximum daily total phosphorus concentration was measured.
14. Total recoverable silver, lead, copper, and cadmium shall be measured using the Furnace Atomic Absorption method and total cyanide shall be measured using the Flame Atomic Absorption method. The MLs for silver, lead, copper, cadmium, and cyanide, respectively, are 2 ug/l, 3 ug/l, 3 ug/l, 0.5 ug/l, and 10 ug/l. Any effluent value for these five parameters which is below its respective ML shall be reported as zero.

Total recoverable values of all other metals may be measured using either the Inductively Coupled Plasma ICP method or the Furnace AA method.

#### Part I.A.4.

- a. The discharge shall not cause a violation of the water quality standards of the receiving waters.
- b. The pH of the effluent shall not be less than 6.5 nor greater than 8.3 at any time.
- c. The discharge shall maintain a minimum dissolved oxygen of 6.0 mg/l at all times.
- d. The discharge shall not cause objectionable discoloration of the receiving waters.
- e. The effluent shall contain neither a visible oil sheen, foam, nor floating solids at any time.
- f. The permittee's treatment facility shall maintain a minimum of 85 percent removal of both total suspended solids and carbonaceous biochemical oxygen demand. The percent removal shall be based on monthly average values.
- g. The results of sampling for any parameter above its required frequency must also be reported.
- h. The permittee shall, when the average annual flow exceeds eighty percent (80%) of the permitted facility's design flow, submit a report to the MassDEP describing what steps the permittee will take in order to remain in compliance with the limitations and conditions in its permit, including in particular, limitations on the amount of flow

authorized to be discharged under the permit.

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

- a. Any new introduction of pollutants into that POTW from an indirect discharger in a primary industry category discharging process water; and
- b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
- c. For purposes of this paragraph, adequate notice shall include information on:
  - (1) the quantity and quality of effluent introduced into the POTW; and
  - (2) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

6. 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.

7. 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. DEVELOPMENT OF LIMITATIONS FOR INDUSTRIAL USERS**

- 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.
- b. The permittee shall develop and enforce specific effluent limits (local limits) for Industrial User(s), and all other users, as appropriate, which together with appropriate changes in the POTW Treatment Plant's Facilities or operation, are necessary to ensure continued compliance with the POTW's NPDES permit or sludge use or disposal practices. Specific local limits shall not be developed and enforced without individual notice to persons or groups who have requested such notice and an opportunity to respond. Within 120 days of the effective date of this permit, the permittee shall prepare and submit a written technical evaluation to the EPA

analyzing the need to revise local limits. As part of this evaluation, the permittee shall assess how the POTW performs with respect to influent and effluent of pollutants, water quality concerns, sludge quality, sludge processing concerns/inhibition, biomonitoring results, activated sludge inhibition, worker health and safety and collection system concerns. In preparing this evaluation, the permittee shall complete and submit the attached form **Attachment B** with the technical evaluation to assist in determining whether existing local limits need to be revised. Justifications and conclusions should be based on actual plant data if available and should be included in the report. Should the evaluation reveal the need to revise local limits, the permittee shall complete the revisions within 120 days of notification by EPA and submit the revisions to EPA for approval. The Permittee shall carry out the local limits revisions in accordance with EPA's Local Limits Development Guidance (July 2004).

### C. INDUSTRIAL PRETREATMENT PROGRAM

- a. The permittee shall implement the Industrial Pretreatment Program in accordance with the legal authorities, policies, procedures, and financial provisions described in the permittee's approved Pretreatment Program, and the General Pretreatment Regulations, 40 CFR 403. At a minimum, the permittee must perform the following duties to properly implement the Industrial Pretreatment Program (IPP):
  1. Carry out inspection, surveillance, and monitoring procedures which will determine, independent of information supplied by the industrial user, whether the industrial user is in compliance with the Pretreatment Standards. At a minimum, all significant industrial users shall be sampled and inspected at the frequency established in the approved IPP but in no case less than once per year and maintain adequate records.
  2. Issue or renew necessary industrial user control mechanisms within 90 days of their expiration date or within 180 days after the industry has been determined to be a significant industrial user.
  3. Obtain appropriate remedies for noncompliance by any industrial user with any pretreatment standard and/or requirement.
  4. Maintain an adequate revenue structure for continued implementation of the Pretreatment Program.
- b. In accordance with 40 CFR Part 403.12(i), the permittee shall provide the EPA and the MassDEP with an annual report describing the permittee's pretreatment program activities for the twelve month period ending December 31. The annual report shall be consistent with the format described in **Attachment C** of this permit and shall be submitted no later than March 1st of each year.
- c. The permittee must obtain approval from EPA prior to making any significant changes to the industrial pretreatment program in accordance with 40 CFR 403.18(c).
- d. The permittee must assure that applicable National Categorical Pretreatment Standards are met by all categorical industrial users of the POTW. These standards are published in the Federal



Regulations at 40 CFR 405 et. seq.

- e. The permittee must modify its pretreatment program to conform to all changes in the Federal Regulations that pertain to the implementation and enforcement of the industrial pretreatment program. The permittee must provide EPA, in writing, within 180 days of this permit's effective date proposed changes to the permittee's pretreatment program deemed necessary to assure conformity with current Federal Regulations. At a minimum, the permittee must address in its written submission, if applicable, the following areas: (1) Enforcement response plan; (2) revised sewer use ordinances; and (3) slug control evaluations. The permittee will implement these proposed changes pending EPA Region I's approval under 40 CFR 403.18. This submission is separate and distinct from any local limits analysis submission described above.

#### D. UNAUTHORIZED DISCHARGES

The permit only authorizes discharges in accordance with its terms and conditions and only from the outfall listed in Part I A. of this permit. Discharges of wastewater from any other point sources, including sanitary sewer overflows (SSOs) are not authorized by this permit and shall be reported in accordance with Section D.1.e. (1) of the General Requirements of this permit (Twenty-four hour reporting).

#### E. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM

Operation and maintenance of the sewer system shall be in compliance with the General Requirements of Part II and the following terms and conditions:

##### 1. Maintenance Staff

The permittee shall provide an adequate staff to carry out the operation, maintenance, repair, and testing functions required to ensure compliance with the terms and conditions of this permit.

##### 2. Preventative Maintenance Program

The permittee shall maintain an ongoing preventative maintenance program to prevent overflows and bypasses caused by malfunctions or failures of the sewer system infrastructure. The program shall include an inspection program designed to identify all potential and actual unauthorized discharges.

##### 3. Infiltration/Inflow Control Plan:

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

The plan shall include:

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

#### Reporting Requirements:

A summary report of all actions taken to minimize I/I during the previous calendar year shall be submitted to EPA and the MassDEP annually, **by March 31**. The summary report shall, at a minimum, include:

- A map and a description of inspection and maintenance activities conducted and corrective actions taken during the previous year.
- Expenditures for any I/I related maintenance activities and corrective actions taken during the previous year.
- A map with areas identified for I/I related investigation/action in the coming year.
- A calculation of the annual average I/I, the maximum month I/I for the reporting year.
- A report of any I/I related corrective actions taken as a result of unauthorized discharges reported pursuant to 314 CMR 3.19(20) and reported pursuant to the Unauthorized Discharges section of this permit.

#### F. ALTERNATE POWER SOURCE

In order to maintain compliance with the terms and conditions of this permit, the permittee shall continue to provide an alternative power source with which to sufficiently operate the Publicly Owned Treatment Works as defined at 40 CFR §403.3.

#### G. SLUDGE CONDITIONS

1. The permittee shall comply with all existing federal and state laws and regulations that apply to sewage sludge use and disposal practices and with the CWA Section 405(d) technical standards.
2. The permittee shall comply with the more stringent of either the state or federal (40 CFR part

503), requirements.

3. The requirements and technical standards of 40 CFR part 503 apply to facilities which perform one or more of the following use or disposal practices.
  - a. Land application - the use of sewage sludge to condition or fertilize the soil.
  - b. Surface disposal - the placement of sewage sludge in a sludge only landfill.
  - c. Sewage sludge incineration in a sludge only incinerator.
4. The 40 CFR part 503 conditions do not apply to facilities which place sludge within a municipal solid waste landfill. These conditions also do not apply to facilities which do not dispose of sewage sludge during the life of the permit but rather treat the sludge (e.g. lagoons and reed beds), or are otherwise excluded under 40 CFR 503.6.
5. The permittee shall comply with the 40 CFR, Part 503 regulations. Appropriate conditions contain the following elements:
  - General requirements
  - Pollutant limitations
  - Operational Standards (pathogen reduction requirements and vector attraction reduction requirements)
  - Management practices
  - Record keeping
  - Monitoring
  - Reporting

Depending upon the quality of material produced by a facility, all conditions may not apply to the facility.

6. The permittee shall monitor the pollutant concentrations, pathogen reduction and vector attraction reduction at the following frequency. This frequency is based upon the volume of sewage sludge generated at the facility in dry metric tons per year:

less than 290	1/ year
290 to less than 1500	1 /quarter
1500 to less than 15000	6 /year
15000 +	1 /month

7. The permittee shall sample the sewage sludge using the procedures detailed in 40 CFR 503.8.
8. The permittee shall **submit an annual report containing the information specified in the regulations by February 19**. Reports shall be submitted to the address contained in the reporting section of the permit. Sludge monitoring is not required by the permittee when the permittee is not responsible for the ultimate sludge disposal.

**I. MONITORING AND REPORTING**

## 1. Reporting

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

Signed and dated originals of these, and all other reports required herein, shall be submitted to the Director and the State at the following addresses:

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

The State Agency is:

Massachusetts Department of Environmental Protection  
Southeast Regional Office - Bureau of Resource Protection  
20 Riverside Drive  
Lakeville, MA 02347

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

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

Reports required in Sections B and C (local limits and pretreatment program) shall also be submitted to the State at:

Massachusetts Department of Environmental Protection  
Bureau of Waste Prevention - Industrial Wastewater Section  
One Winter Street  
Boston, MA 02108

**J. STATE PERMIT CONDITIONS**

1. This discharge permit is issued jointly by the U. S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) under Federal and State law, respectively. As such, all the terms and conditions of this permit (unless otherwise noted) are hereby incorporated into and constitute a discharge permit issued by the Commissioner of the MassDEP pursuant to M.G.L. Chap. 21, §43.

2. Each Agency shall have the independent right to enforce the terms and conditions of this permit. Any modification, suspension or revocation of this permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of this permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this permit is declared, invalid, illegal or otherwise issued in violation of State law such permit shall remain in full force and effect under Federal law as an NPDES permit issued by the U.S. Environmental Protection Agency. In the event this permit is declared invalid, illegal or otherwise issued in violation of Federal law, this permit shall remain in full force and effect under State law as a permit issued by the Commonwealth of Massachusetts.