AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Clean Water Act, as amended, (33 U.S.C. §§1251 et seq.; the "CWA"), and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§ 26-53),

Town of Ware
Department of Public Works

is authorized to discharge from the facility located at

Ware Wastewater Treatment Plant
30 Robbins Road
Ware, MA 01082

to receiving water named

Ware River

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

This permit will become effective on the first day of the calendar month immediately following sixty days after signature.*

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

This permit supersedes the permit issued on May 1, 2007.

This permit consists of 18 pages in Part I Part I including effluent limitations and monitoring requirements, 25 pages in Part II including General Conditions and Definitions, Attachment A – 2007 Revised Freshwater Chronic Toxicity Test Protocol, Attachment B - Reassessment of Technically Based Local Limits, Attachment C - NPDES Permit Requirement for Industrial Pretreatment Annual Report, and Attachment D - Summary of Required Report Submittals.

Signed this day of

_____	_____
Director Office of Ecosystem Protection Environmental Protection Agency Boston, MA	Director Massachusetts Wastewater Management Program Department of Environmental Protection Commonwealth of Massachusetts Boston, MA

* Pursuant to 40 CFR 124.15(b)(3), if no comments requesting a change to the draft permit are received, the permit will become effective upon the date of signature.

PART I

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

EFFLUENT CHARACTERISTIC	**EFFLUENT LIMITS**					**MONITORING REQUIREMENTS[3]**	
PARAMETER	**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**MAXIMUM DAILY**	**MEASUREMENT FREQUENCY**	**SAMPLE TYPE**
FLOW[2]	*********	*********	1.0 MGD	*********	Report MGD	CONTINUOUS	RECORDER
FLOW[2]	*********	*********	Report MGD	*********	*********	CONTINUOUS	RECORDER
BOD_5 [4]	208 lbs/Day	208 lbs/Day	25 mg/L	25 mg/L	Report mg/l	1/WEEK	24-HOUR COMPOSITE[5]
TSS[4]	208 lbs/Day	208 lbs/Day	25 mg/L	25 mg/L	Report mg/l	1/WEEK	24-HOUR COMPOSITE[5]
pH RANGE[1]	6.5 - 8.3 SU (SEE PERMIT PARAGRAPH I.A.1.b.)					1/DAY	GRAB
ESCHERICHIA COLI [1,6] April 1st – October 31st	*********	**********	126 cfu/100 mL	*********	409 cfu/100 mL	1/WEEK	GRAB
TOTAL RESIDUAL CHLORINE[1,7] April 1st – October 31st	*********	**********	116 µg/L	*********	200 µg/L	1/DAY	GRAB
TOTAL COPPER[8]	*********	**********	9.0 µg/L	*********	17.9 µg/L	1/MONTH	24-HOUR COMPOSITE[5]
TOTAL ALUMINUM[9]	*********	**********	96 µg/L	*********	*********	1/MONTH	24-HOUR COMPOSITE[5]

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

EFFLUENT CHARACTERISTIC	**EFFLUENT LIMITS**					**MONITORING REQUIREMENTS[3]**	
PARAMETER	**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**AVERAGE MONTHLY**	**AVERAGE WEEKLY**	**MAXIMUM DAILY**	**MEASUREMENT FREQUENCY**	**SAMPLE TYPE**
TOTAL PHOSPHORUS April 1st - October 31st	*********	*********	584 µg/L	1.0 mg/L	1.5 mg/L	2/WEEK	24-HOUR COMPOSITE[5]
TOTAL PHOSPHORUS November 1st - March 31st	*********	*********	1.0 mg/L	*********	Report mg/L	1/WEEK	24-HOUR COMPOSITE[5]
ORTHO-PHOSPHORUS, DISSOLVED November 1st - March 31st	*********	*********	*********	Report mg/L	*********	1/WEEK	24-HOUR COMPOSITE[5]
AMMONIA-NITROGEN June 1st – October 31st	*********	*********	1.0 mg/L	1.0 mg/L	1.5 mg/L	1/WEEK	24-HOUR COMPOSITE[5]
TOTAL KJELDAHL NITROGEN	*********	*********	Report mg/L	*********	*********	1/MONTH	24-HOUR COMPOSITE[5]
TOTAL NITRATE NITROGEN	*********	*********	Report mg/L	*********	*********	1/MONTH	24-HOUR COMPOSITE[5]
TOTAL NITRITE NITROGEN	*********	*********	Report mg/L	*********	*********	1/MONTH	24-HOUR COMPOSITE[5]
WHOLE EFFLUENT TOXICITY [10, 11, 12,13] Acute LC_{50} Chronic C-NOEC Aluminum Cadmium Chromium Copper Lead Nickel Zinc Hardness	 ≥ 100% ≥10% Report maximum daily µg/L Report maximum daily µg/L Report maximum daily µg/L Report maximum daily µg/L Report maximum daily µg/L Report maximum daily µg/L Report maximum daily µg/L Report maximum daily mg/L					4/YEAR	24-HOUR COMPOSITE[5]

Footnotes:

1. Required for State Certification.

2. Report annual average, monthly average, and the maximum daily flow. The limit is an annual average, which shall be reported as a rolling average. The value will be calculated as the arithmetic mean of the monthly average flow for the reporting month and the monthly average flows of the previous eleven months.

3. Effluent sampling shall be of the discharge from the dechlorination chamber. Any change in sampling location must be reviewed and approved in writing by EPA and MassDEP.

   A routine sampling program shall be developed in which samples are taken at the same location, same time and same days of the week each month. Occasional deviations from the routine sampling program are allowed, but the reason for the deviation shall be documented in correspondence appended to the applicable discharge monitoring report.

   All samples shall be tested using the analytical methods found in 40 CFR § 136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR § 136.

4. Sampling required for influent and effluent.

5. 24-hour composite samples will consist of at least twenty-four (24) grab samples taken during one consecutive 24 hour period, either collected at equal intervals and combined proportional to flow or continuously collected proportionally to flow.

6. The monthly average limit for *E. coli* is expressed as a geometric mean. *E. coli* monitoring shall be conducted concurrently with a total residual chlorine sample.

7. Total residual chlorine monitoring is required whenever chlorine is added to the treatment. The limitations are in effect from April 1st through October 31st. The permittee is not authorized to discharge chlorine during the winter months.

   The minimum level (ML) for total residual chlorine is defined as 20 µg/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. One of these methods must be used to determine total residual chlorine. For effluent limitations less than 20 µg/L, compliance/non-compliance will be determined based on the ML. Sample results of 20 µg/L or less shall be reported as zero on the discharge monitoring report.

   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. The minimum level (ML) for copper is defined as 3 µg/L. This value is the minimum level for copper using the Furnace Atomic Absorption analytical method (EPA Method 220.2). This method or other EPA-approved method with an equivalent or lower ML shall be used for effluent limitations less than 3 µg/L. Sampling results of 3 µg/L or less shall be reported as zero on the Discharge Monitoring Report.

9. The aluminum sample shall be taken concurrently with one of the total phosphorus samples.

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_{50} at the 48 hour exposure interval. The permittee shall test the daphnid, Ceriodaphnia dubia, only. Toxicity test samples shall be collected during 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, June 30, September 30 and December 31, respectively. The tests must be performed in accordance with test procedures and protocols specified in **Attachment A** of this permit.

Test Dates in	**Submit Results By:**	**Test Species**	**Acute Limit LC_{50}**	**Chronic Limit C-NOEC**
February May August November	March 31 June 30 September 30 December 31	Ceriodaphnia dubia (daphnid)	≥ 100%	≥ 10%

11. The LC_{50} 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,

based on a statistically significant difference from dilution control, at a specific time of observation as determined from hypothesis testing. As described in the EPA WET Method Manual EPA 821-R-02-013, Section 10.2.6.2, all test results are to be reviewed and reported in accordance with EPA guidance on the evaluation of the concentration-response relationship. The 10% or greater" limit is defined as a sample which is composed of 10% (or greater) effluent, the remainder being dilution water.

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

Part I.A.1. (Continued)

a. The discharge shall not cause a violation of the water quality standards of the receiving waters.

b. The pH of the effluent shall not be less than 6.5 or greater than 8.3 at any time.

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

d. The effluent shall not contain a visible oil sheen, foam, or floating solids at any time.

e. The permittee's treatment facility shall maintain a minimum of 85 percent removal of both total suspended solids and biochemical oxygen demand. The percent removal shall be based on monthly average values.

f. The permittee shall minimize the use of chlorine while maintaining adequate bacterial control.

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

h. If the average annual flow in any calendar year exceeds 80 percent of the facility's design flow, the permittee shall submit a report to MassDEP by March 31 of the following calendar year describing its plans for further flow increases and describing how it will maintain compliance with the flow limit and all other effluent limitations and conditions.

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

a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the Clean Water Act if it were directly discharging those pollutants; and

b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

c. For purposes of this paragraph, adequate notice shall include information on:

(1) The quantity and quality of effluent introduced into the POTW; and

(2) Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

3. Prohibitions Concerning Interference and Pass Through:

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

4. Toxics Control

   a. The permittee shall not discharge any pollutant or combination of pollutants in toxic amounts.

   b. Any toxic components of the effluent shall not result in any demonstrable harm to aquatic life or violate any state or federal water quality standard which has been or may be promulgated. Upon promulgation of any such standard, this permit may be revised or amended in accordance with such standards.

5. Numerical Effluent Limitations for Toxicants

   EPA or MassDEP may use the results of the toxicity tests and chemical analyses conducted pursuant to this permit, as well as national water quality criteria developed pursuant to Section 304(a)(1) of the Clean Water Act (CWA), state water quality criteria, and any other appropriate information or data, to develop numerical effluent limitations for any pollutants, including but not limited to those pollutants listed in Appendix D of 40 CFR Part 122.

B. UNAUTHORIZED DISCHARGES

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

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

C. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM

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

1. Maintenance Staff

The permittee shall provide an adequate staff to carry out the operation, maintenance, repair, and testing functions required to ensure compliance with the terms and conditions of this permit. Provisions to meet this requirement shall be described in the Collection System O & M Plan required pursuant to Section C.5. below.

2. Preventive Maintenance Program

The permittee shall maintain an ongoing preventive maintenance program to prevent overflows and bypasses caused by malfunctions or failures of the sewer system infrastructure. The program shall include an inspection program designed to identify all potential and actual unauthorized discharges. Plans and programs to meet this requirement shall be described in the Collection System O & M Plan required pursuant to Section C.5. below.

3. Infiltration/Inflow

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

4. Collection System Mapping

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

a. All sanitary sewer lines and related manholes;
b. All combined sewer lines, related manholes, and catch basins;
c. All combined sewer regulators and any known or suspected connections between the sanitary sewer and storm drain systems (e.g. combination manholes);
d. All outfalls, including the treatment plant outfall(s), CSOs, and any known or suspected SSOs, including stormwater outfalls that are connected to combination manholes;
e. All pump stations and force mains;
f. The wastewater treatment facility(ies);
g. All surface waters (labeled);

h. Other major appurtenances such as inverted siphons and air release valves;
i. A numbering system which uniquely identifies manholes, catch basins, overflow points, regulators and outfalls;
j. The scale and a north arrow; and
k. The pipe diameter, date of installation, type of material, distance between manholes, and the direction of flow.

5. Collection System Operation and Maintenance Plan

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

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

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

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

(1) The required submittal from paragraph 5.a. above, updated to reflect current information;
(2) A preventive maintenance and monitoring program for the collection system;
(3) Description of sufficient staffing necessary to properly operate and maintain the sanitary sewer collection system and how the operation and maintenance program is staffed;
(4) Description of funding, the source(s) of funding and provisions for funding sufficient for implementing the plan;
(5) Identification of known and suspected overflows and back-ups, including manholes. A description of the cause of the identified overflows and back-ups, corrective actions taken, and a plan for addressing the overflows and back-ups consistent with the requirements of this permit;
(6) A description of the permittee's programs for preventing I/I related effluent violations and all unauthorized discharges of wastewater, including overflows and by-passes and the ongoing program to identify

and remove sources of I/I. The program shall include an inflow identification and control program that focuses on the disconnection and redirection of illegal sump pumps and roof down spouts; and

(7) An educational public outreach program for all aspects of I/I control, particularly private inflow.

(8) An Overflow Emergency Response Plan to protect public health from overflows and unanticipated bypasses or upsets that exceed any effluent limitation in the permit.

6. Annual Reporting Requirement

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

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

7. Alternate Power Source

In order to maintain compliance with the terms and conditions of this permit, the permittee shall provide an alternative power source(s) sufficient to operate the portion of the publicly owned treatment works[1] it owns and operates.

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

D. SLUDGE CONDITIONS

1. The permittee shall comply with all existing federal and state laws and regulations that apply to sewage sludge use and disposal practices, including EPA regulations promulgated at 40 CFR Part 503, which prescribe "Standards for the Use or Disposal of Sewage Sludge" pursuant to Section 405(d) of the CWA, 33 U.S.C. § 1345(d).

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

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

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

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

   c. Sewage sludge incineration in a sludge only incinerator

4. The requirements of 40 CFR Part 503 do not apply to facilities which dispose of sludge in a municipal solid waste landfill. 40 CFR § 503.4. These requirements also do not apply to facilities which do not use or dispose of sewage sludge during the life of the permit but rather treat the sludge (e.g. lagoons, reed beds), or are otherwise excluded under 40 CFR § 503.6.

5. The 40 CFR Part 503 requirements including the following elements:

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

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

determining the applicable requirements.[2]

6. The sludge shall be monitored for pollutant concentrations (all Part 503 methods) and pathogen reduction and vector attraction reduction (land application and surface disposal) at the following frequency. This frequency is based upon the volume of sewage sludge generated at the facility in dry metric tons per year

less than 290	1/ year
290 to less than 1,500	1 /quarter
1,500 to less than 15,000	6 /year
15,000 +	1 /month

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

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

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

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

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

E. INDUSTRIAL USERS AND PRETREATMENT PROGRAM

1. 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 Limit Development Guidance (July 2004).

2. 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):

   a. 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.

   b. Issue or renew all 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.

   c. Obtain appropriate remedies for noncompliance by any industrial user with any pretreatment standard and/or requirement.

   d. Maintain an adequate revenue structure for continued implementation of the Pretreatment Program.

3. The permittee shall provide the EPA and MassDEP with an annual report describing the permittee's pretreatment program activities for the twelve (12) month period ending 60 days prior to the due date in accordance with 403.12(i). The annual report shall be consistent with the format described in Attachment D of this permit and shall be submitted no later than **March 1** of each year.

4. 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).

5. 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.

6. The permittee must modify its pretreatment program, if necessary, 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, if applicable, 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 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 1's approval under 40 CFR 403.18. This submission is separate and distinct from any local limits analysis submission described in Part I.E.1.

F. SPECIAL CONDITIONS

Optimizing Nitrogen Removal Efficiency - Within **one year of the effective date of the permit**, the permittee shall complete an evaluation of alternative methods of operating the existing wastewater treatment facility to optimize the removal of nitrogen, and submit a report to EPA and MassDEP documenting this evaluation and presenting a description of recommended operational changes. The methods to be evaluated include, but are not limited to, operational changes designed to enhance nitrification (seasonal and year round), incorporation of anoxic zones, septage receiving policies and procedures, and side stream management. The permittee shall implement the recommended operational changes to maintain the mass discharge of total nitrogen less than the existing annual average discharge load. The annual average total nitrogen load from this facility (2004-2005) is estimated to be 58 lbs/day.

After submittal of the Initial Nitrogen Optimization Report, the permittee shall also submit an annual report to EPA and MassDEP, **by February 1 each year**, that summarizes activities related to optimizing nitrogen removal efficiencies, documents the annual nitrogen discharge load from the facility, and tracks trends relative to the previous year.

G. MONITORING AND REPORTING

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

a. Submittal of Reports Using NetDMR

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

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

b. Submittal of NetDMR Opt-Out Requests

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

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

And

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

c. Submittal of Reports in Hard Copy Form

Monitoring results shall be summarized for each calendar month and reported on separate hard copy Discharge Monitoring Report Form(s) (DMRs) postmarked no later than the 15th day of the month following the completed reporting period. All reports required under this permit, including MassDEP Monthly Operation and Maintenance Reports, shall be submitted as an attachment to the DMRs. Signed and dated originals of the DMRs, and all other reports or notifications required herein or in Part II shall be submitted to the Director at the following address:

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

Duplicate signed copies of all reports or notifications required above shall be submitted to the State at the following addresses:

MassDEP – Western Region
Bureau of Resource Protection
436 Dwight Street, Suite 402
Springfield, MA 01103

Copies of toxicity tests and nitrogen optimization reports only to:

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

Any verbal reports, if required in **Parts I** and/or **II** of this permit, shall be made to both

EPA-New England and to MassDEP.

H. STATE PERMIT CONDITIONS

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

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

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

Summary of Required Report Submittals

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

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

1 U.S. Environmental Protection Agency Water Technical Unit (OES04-SMR) 5 Post Office Square - Suite 100 Boston, MA 02109-3912	**2** MassDEP Surface Water Discharge Permit Program 627 Main Street, 2nd Floor Worcester, Massachusetts 01608
3 MassDEP - Western Regional Office Bureau of Resource Protection 436 Dwight Street, Suite 402 Springfield, MA 01103	

Requirement	**Due Date**	**Addressees**
Toxicity test samples shall be collected during the months of February, May August and November [Part I.A. Footnote 9]	Results shall be submitted by March 31, June 30, September 30 and December 31of each year	1 and 2
If the average annual flow in any calendar year exceeds 80% of the facility's design flow, the permittee shall submit a report to MassDEP. [Part I.A.1.h.]	By March 31 of the following calendar year	1, 2 and 3
Notification of Sanitary Sewer Overflows [Part I.B.]	Within 24 hours of SSO event.	1 and 3
The permittee shall prepare a map of the sewer collection system it owns. [Part 1.C.4.]	Within 30 months of the effective date of this permit	1, 2, and 3
The permittee shall develop and implement a Collection System Operation and Maintenance Plan. [Part 1.C.5.a.]	Within six (6) months of the effective date of the permit, the permittee shall submit to EPA and MassDEP	1, 2, and 3

The full Collection System O&M Plan shall be submitted and implemented to EPA and MassDEP. [Part 1.C.5.b.]	Within twenty four (24) months from the effective date of this permit.	1, 2, and 3
The permittee shall submit a summary report of activities related to the implementation of its Collection System O & M Plan during the previous calendar year. [Part 1.C.6.]	The report shall be submitted to EPA and MassDEP annually by March 31	1, 2, and 3
Annual Sludge Report [Part I.D.8.]	Annually by February 19	1, 2, and 3
Initial Nitrogen Optimization Report [Part I.E] Nitrogen Optimization Annual Report	Within one year of the effective date. Annually by February 1, following submittal of Initial Nitrogen Optimization Report.	1, 2, and 3 1, 2, and 3
Annual report describing the permittee's pretreatment program activities. [Part I.E.3.]	The report shall be submitted to EPA and MassDEP annually by March 1	1, 2, and 3
Monitoring results obtained during each calendar month shall be summarized and reported on Discharge Monitoring Report Form(s) [Part I.F.1.a.]	Postmarked or submitted electronically no later than the 15th day of the following month.	1, 2, and 3

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION 1
FIVE POST OFFICE SQUARE, SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

FACT SHEET

DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES PURSUANT TO THE CLEAN WATER ACT (CWA)

NPDES PERMIT NUMBER: MA0100889

PUBLIC NOTICE START AND END DATES: March 8, 2013 – April 6, 2013

NAME AND MAILING ADDRESS OF APPLICANT:

Town of Ware
Department of Public Works
4 ½ Church Street
Ware, Massachusetts 01082

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Ware Wastewater Treatment Plant
30 Robbins Road
Ware, Massachusetts 01082

RECEIVING WATER(S):

Ware River (Segment MA 36-06)
Chicopee River Basin

RECEIVING WATER CLASSIFICATION(S): B - Warm Water Fishery, CSO*

* Although this segment is classified as a CSO (combined sewer overflow) in the 2006 standards, there are currently no CSOs in this segment. Future standards will reflect this fact.

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Figures

Appendices

1. Proposed Action, Type of Facility, and Discharge Location

The facility's discharge outfalls are listed below:

Outfall	Description of Discharge	Receiving water	Outfall Location
001	Treated Effluent	Ware River	42º 15' 1" N 72° 15' 1" W

The above named applicant has applied to the U.S. Environmental Protection Agency ("EPA") for the reissuance of its NPDES permit to discharge into the designated receiving waters. The facility collects and treats domestic wastewater, septage, and industrial wastewater. The discharge from this secondary wastewater treatment facility is via Outfall 001 to the Ware River (See Figure 1 – Facility Location Map).

The Town of Ware Wastewater Treatment Plant (WWTP) is a 1.0 million gallon per day (MGD) secondary wastewater treatment facility located in Ware, Massachusetts, serving a population of about 5,500. There is one industrial user contributing wastewater to this facility: Kanzaki Specialty Papers, which contributes approximately 54,500 gallons per day of process wastewater from paper coating operations.

The collection system is 100% separate sanitary sewers.

2. Description of Discharge

A quantitative description of the discharge based on recent monitoring data from July 2009 through June 2012 is shown in Appendix A.

3. Receiving Water Description

3.1 Designated Use

The Ware River is a Class B (Warm Water Fishery) waterbody. The Massachusetts Surface Water Quality Standards (MA SWQS) at 314 CMR 4.05(3)(b) state that Class B waters shall have the following designated uses:

"These waters are designated as a habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. Where designated in 314 CMR 4.06, they shall be suitable as a source of public water supply with appropriate treatment ("Treated Water Supply"). Class B waters shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses. These waters shall have consistently good aesthetic value."

The Chicopee River Basin 2003 Water Quality Assessment Report indicates that the river segment receiving the Ware WWTP's discharge is attaining its uses for aquatic life and aesthetics with other uses not assessed. This river segment is listed the Massachusetts Year 2010 Integrated List of Waters [Clean Water Act, Section 303(d) list] as impaired and requiring a TMDL for fecal coliform. The

2003 assessment included an "Alert" status for the aquatic life use because of ongoing chronic and acute toxicity results from Ware WWTP's WET test. The assessment also noted sedimentation, undercut banks, and trash deposits on this segment.

The limits in the draft permit are based on information in the application, the existing permit, discharge monitoring reports, and a site visit.

3.2 Flow and Dilution Factor

The design flow of the facility is 1.0 MGD (1.55 cfs) and is unchanged since issuance of the current permit.

Water quality based limitations are established with the use of a calculated available dilution. 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, recorded over a 10-year recurrence interval. EPA calculated the 7Q10 and 30Q10 based on the flow at USGS gage 01173000 plus flow from the 90 square miles between the gage and the Ware outfall. This flow was calculated as follows:

7Q10 at USGS 011723000, Ware River at Intake Works Near Barre, MA = 5.84 cubic feet per second (cfs)
Drainage Area = 96.3 square miles

7Q10 at USGS 01173500, Ware River at Gibbs Crossing, MA = 15.8 cfs
Drainage Area = 197 square miles

Flow factor for area between USGS 01173000 and USGS01173500 =

(15.8 cfs – 5.84 cfs)/(197 sq. mi. – 96.3 sq. mi.) = 10 cfs/100.7 sq. mi. = 0.099 cfs/sq. mi.

Drainage Area at Outfall = 186 square miles

7Q10 = 5.84 cfs + 0.099 cfs/sq. mi x (186 sq. mi. – 96.3 sq. mi.) = **14.7 cfs = 9.49 MGD**

Ware WWTP design flow = 1.0 MGD x 1.55 cfs/MGD = 1.55 cfs

Dilution Factor = (Facility Flow + 7Q10)/Facility Flow
Dilution Factor = (1.55 cfs + 14.7 cfs)/1.55 cfs = **10.5**

4. Limitations and Conditions

The effluent limitations of the draft permit, the monitoring requirements, and any implementation schedule (if required) may be found in the draft permit.

5. Permit Basis: Statutory and Regulatory Authority

The Clean Water Act (CWA or the Act) prohibits the discharge of pollutants to waters of the United States without an NPDES permit unless such a discharge is otherwise authorized by the Act. An NPDES permit is used to implement technology-based and water quality-based effluent limitations as well as other requirements including monitoring and reporting. This draft NPDES permit was developed in accordance with statutory and regulatory authorities established pursuant to the Act. The regulations governing the NPDES program are found in 40 CFR Parts 122, 124 and 125.

Under Section 301(b)(1)(B) of the CWA, publicly owned treatment works (POTWs) had to achieve effluent limitations based upon secondary treatment by July 1, 1977. The secondary treatment requirements are set forth in 40 CFR Part 133. The regulations describe the secondary treatment requirements for biochemical oxygen demand (BOD_5), total suspended solids (TSS), and pH. The average monthly and average weekly BOD_5 and TSS limitations are based on the requirements of 40 CFR §133.102. Numerical limitations for pH and *E. coli* are based on state certification requirements under Section 401(a)(1) of the CWA as described in 40 CFR §124.53 and state water quality standards in 314 CMR 4.05(3)(b) 3 and 4, respectively.

Under Section 301(b)(1)(C) of the CWA, discharges are subject to effluent limitations based on water quality standards. The MA SWQS, 314 CMR 4.00, include requirements for the regulation and control of toxic constituents and also require that EPA criteria, established pursuant to Section 304(a) of the CWA, shall be used unless site specific criteria are established. The State will limit or prohibit discharges of pollutants to surface waters to assure that surface water quality standards of the receiving waters are protected and maintained.

The permit must also limit any pollutant or pollutant parameter (conventional, non-conventional toxic, and whole effluent toxicity) that is or may be discharged at a level that causes, or has reasonable potential to cause or contribute to an excursion above any water quality criterion [40 CFR §122.44(d)(1)]. An excursion occurs if the projected or actual instream concentrations exceed the applicable criterion. In determining reasonable potential, EPA considers existing controls on point and non-point sources of pollution, variability of the pollutant in the effluent, sensitivity of the species to toxicity and, where appropriate, the dilution of the effluent in the receiving water.

Also note that according to EPA regulations 40 CFR §122.44(l), when a permit is reissued, effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards or conditions in the previous permit, unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued. Additionally, MassDEP has developed and adopted a statewide antidegradation policy to maintain and protect existing in-stream water quality. The Massachusetts Antidegradation Provisions are found at 314 CMR 4.04. No lowering of water quality is allowed, except in accordance with the antidegradation provisions.

The limits in the draft permit are based on information in the application, the existing permit, a site visit, discharge monitoring reports, and toxicity test results.

6. Explanation of the Permit's Effluent Limitation(s)

6.1 Facility Information

The Ware WWTP is an advanced wastewater treatment facility with a design flow of 1.0 MGD, which discharges to the Ware River. The wastewater treatment consists of a grit removal chamber, aeration tanks, chemical addition for phosphorus removal, two secondary clarifiers, chlorination and dechlorination. Liquid sludge (290 metric tons per year) is stored in a holding tank at the WWTP and is pumped directly into tankers and transported offsite for incineration.

The facility's location and flow schematic are shown on Figures 1 and 2 of this fact sheet.

6.2 Permitted Outfalls

The outfall regulated in the draft permit is named 001.

6.3 Derivation of Effluent Limits under the Federal CWA and/or the Commonwealth of Massachusetts

BOD_5 and TSS

Under Section 301(b)(1)(B) of the CWA, POTWs had to achieve effluent limitations based on secondary treatment by July 1, 1977. The secondary treatment requirements for biochemical oxygen demand (BOD_5) and total suspended solids (TSS) are in 40 CFR §133. The 30-day average percent removal limit of at least 85% for BOD_5 and TSS is based on the requirements in 40 CFR §133.102.

The limits from the current permit, which are 25 mg/L average monthly and 25 mg/L average weekly and are based on water quality considerations. These limits, which are more stringent than secondary treatment requirements, will be carried over to the draft permit. The mass limits calculations for BOD_5 and TSS are below, and are also the same as the current permit. Monitoring frequency is once per week. From July 2009 through June 2012, Ware had one exceedance of its BOD limits, when the reported value for monthly average loading was 210 lbs/day, above the permit limit of 208 lbs/day. There were no exceedances of the TSS limits during that time period.

Mass limits: Flow x Concentration x Conversion Factor = lbs/day

Average monthly/weekly limit: 1.0 MGD x 25 mg/L x 8.34(lb)(L)/(mg)(gal) = 208 lbs/day

pH

The draft permit includes pH limitations that are required by state water quality standards and are at least as stringent as pH limitations set forth at 40 CFR § 133.102(c). The pH of the effluent shall not be less than 6.5 or greater than 8.3 standard units at any time. No violations of the pH limit occurred from July 2009 through June 2012. Monitoring frequency is once per day.

Escherichia coli

The current permit includes seasonal (April 1st – October 31st) limits for fecal coliform of 200 cfu/100 mL geometric monthly mean and 400 cfu/100 mL maximum daily value. From July 2009 through June 2012, there were three violations of the maximum daily limit and one violation of the geometric monthly mean limit (see Appendix A). The current permit also requires that an *Escherichia coli (E. coli)* sample be taken once per month from April through October concurrent with the fecal coliform sample, but does not include a limit.

The Commonwealth of Massachusetts promulgated *E. coli* criteria in the SWQS (314 CMR 4.00) on December 29, 2006, replacing fecal coliform bacteria criteria. These new criteria were approved by EPA on September 19, 2007.

The draft permit therefore includes *E. coli* limits and does not include fecal coliform limits or monitoring requirements. The *E. coli* limits for Outfall 001 proposed in the draft permit are in effect from April 1st through October 31st of each year. The limits are 126 colony forming units per 100 ml (cfu/100 ml) geometric monthly mean and 409 cfu/100 ml maximum daily value (this is the 90% distribution of the geometric mean of 126 cfu/100 ml). The past monitoring indicates that these limits would have been exceeded only once (April 2011). The proposed *E. coli* monitoring frequency in the draft permit is once per week and is consistent with the prior fecal coliform monitoring.

Total Residual Chlorine

The draft permit includes total residual chlorine (TRC) limitations, which are seasonal and are based on state water quality standards. Since the draft permit includes seasonal monitoring requirements and limitations for total chlorine residual, the permittee is not authorized to use or discharge chlorine from November 1st through March 31st. Chlorine compounds produced by the chlorination of wastewater can be extremely toxic to aquatic life. The water quality criteria established for chlorine are 19 µg/L daily maximum and 11 µg/l monthly average in the receiving water (see National Recommended Water Quality Criteria: 2002). Given a dilution factor of 10.5, the residual chlorine limits have been set at 200 µg/L daily maximum and 116 µg/L monthly average.

Total Residual Chlorine Limitations:

(acute criteria * dilution factor) = Acute limit (Maximum Daily)
(19 µg/L x 10.5) = 200 µg/L

(chronic criteria * dilution factor) = Chronic limit (Monthly Average)
(11 µg/L x 10.5) = 116 µg/L

These limits are slightly more stringent than the limits in the current permit because of the reduced dilution factor. Past effluent data indicates that the facility has routinely achieved the proposed monthly average limit, but would have occasionally exceeded the more stringent maximum daily limit.

The permit also includes a requirement that the chlorination and dechlorination systems include alarms for indicating system interruptions or malfunctions and that interruptions or malfunctions be reported with the monthly compliance reports. This requirement is intended to supplement the grab

sampling requirements for chlorine and bacteria and is a recognition of the limitations of a grab sampling program for determining consistent compliance with permit limits.

Total Nitrogen

Excessive nitrogen loadings are causing significant water quality problems in Long Island Sound, including low dissolved oxygen. In December 2000, the Connecticut Department of Environmental Protection (CT DEP) completed a total maximum daily load (TMDL) for addressing nitrogen-driven eutrophication impacts in Long Island Sound. The TMDL included a waste load allocation (WLA) for point sources and a load allocation (LA) for non-point sources. The point source WLA for out-of-basin sources (Massachusetts, New Hampshire and Vermont wastewater facilities discharging to the Connecticut, Housatonic and Thames River watersheds) requires an aggregate 25% reduction from the baseline total nitrogen loading estimated in the TMDL.

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

Basin	Baseline Loading[1] (lbs/day)	TMDL Target[2] (lbs/day)	Current Loading[3] (lbs/day)
Connecticut River	21,672	16,254	13,836
Housatonic River	3,286	2,464	2,151
Thames River	1,253	940	1,015
Totals	26,211	19,657	17,002

The estimated current loading for the Ware WWTP used in the above analysis was 58 lbs/day, based upon a total nitrogen concentration of 9.4 mg/l and the average flow of 0.74 MGD (9.4 mg/L *0.74 MGD * 8.34), as indicated in the Facility's 2004 through 2005 DMRs. A review of the DMRs from July 2009 through June 2012 indicate that the monthly average total nitrogen load varied from 21 lbs/day to 154 lbs/day with an average value of 76 lbs/day, (refer to Appendix A for TKN and nitrite and nitrate monitoring results) which is more than the estimated loading of 58 lbs/day. Based on a review of the data, total nitrogen levels in the effluent have risen, and it appears that the facility is not denitrifying as effectively in recent years as it was during the baseline years. The permittee has indicated that the reduction in denitrification effectiveness indicated may be partly due to the buildup of solids from Kanzaki Specialty Papers in the aeration basins.

To ensure that the aggregate nitrogen loading from out-of-basin point sources does not exceed the TMDL target of a 25% reduction over 2004-2005 baseline loadings, EPA intends to include a permit condition for all existing treatment facilities in Massachusetts and New Hampshire that discharge to the Connecticut, Housatonic, and Thames River watersheds, requiring the permittees to evaluate alternative methods of operating their treatment plants to optimize the removal of nitrogen, and to

[1] Estimated loading from TMDL (see Appendix 3 to CT DEP "Report on Nitrogen Loads to Long Island Sound", April 1998).
[2] 25% reduction
[3] Estimated current loading from 2004 – 2005 DMR data.

describe previous and ongoing optimization efforts. Facilities not currently engaged in optimization efforts will also be required to implement optimization measures sufficient to ensure that their nitrogen loads do not increase above the 2004-2005 baseline, and that their aggregate 25% reduction is maintained. Such a requirement has been included in this permit.

Specifically, the permit requires an evaluation of alternative methods of operating the existing wastewater treatment facility to control total nitrogen levels, including, but not limited to, operational changes designed to enhance nitrification (seasonal and year-round), incorporation of anoxic zones, septage receiving policies and procedures, and side stream management. This evaluation is required to be completed and submitted to EPA and MassDEP within one year of the effective date of the permit, along with a description of past and ongoing optimization efforts. The permit also requires implementation of optimization methods sufficient to ensure that there is no increase in total nitrogen compared to the existing average daily load. The permit requires annual reports to be submitted that summarize progress and activities related to optimizing nitrogen removal efficiencies, document the annual nitrogen discharge load from the facility, and track trends relative to previous years.

The agencies will annually update the estimate of all out-of-basin total nitrogen loads and may incorporate total nitrogen limits in future permit modifications or reissuances as necessary to address increases in discharge loads, a revised TMDL, or other new information that may warrant the incorporation of numeric permit limits. There have been significant efforts by the New England Water Pollution Control Commission (NEIWPCC) work group and others since completion of the 2000 TMDL, which are anticipated to result in revised wasteload allocations for in-basin and out-of-basin facilities. Although not a permit requirement, EPA strongly recommends that permittees consider alternatives for further enhancing nitrogen reduction in their facility planning.

Ammonia-Nitrogen

High levels of ammonia in the water column can be toxic to fish by making it more difficult for fish to excrete this chemical via passive diffusion from gill tissues. Ammonia toxicity varies with pH and temperature. Ammonia can also lower dissolved oxygen levels by conversion to nitrate/nitrate, which consumes oxygen.

The current permit includes a monthly average limit of 1 mg/l, a weekly average limit of 1 mg/l and a maximum daily limit of 1.5 mg/l during the period from June through October. These limits were established to limit the instream oxygen demand resulting from the nitrification of ammonia to nitrates. The 2007 Fact Sheet evaluated these limits and verified that they were in accordance with the 1999 Update of Ambient Water Quality Criteria for Ammonia (EPA-822-R-014, December 1999 and 64 FR 71974). Monitoring data indicates that these limits are consistently achieved (one violation of the weekly average limit- September 2011).

The limits proposed in the draft permit are the same as those in the current permit. The draft permit includes a monthly average limit of 1 mg/l, a weekly average limit of 1 mg/l and a maximum daily limit of 1.5 mg/l during the period from June through October, and the proposed monitoring frequency is once per week.

Phosphorus

State water quality standards require any point source discharge containing nutrients in concentrations that encourage eutrophication or growth of weeds or algae be provided with the highest and best practicable treatment to remove such nutrients. Phosphorus and other nutrients promote the growth of nuisance algae and aquatic plants. When these plants and algae undergo their decay processes, they generate strong odors, depress dissolved oxygen levels in the river, and impair benthic habitat.

The MA SWQS (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

> *"Unless naturally occurring, all surface waters shall be free from nutrients in concentrations that would cause or contribute to impairment of existing or designated uses and shall not exceed the site specific criteria developed in a TMDL or as otherwise established by the Department pursuant to 314 CMR 4.00. Any existing point source discharge containing nutrients in concentrations that would cause or contribute to cultural eutrophication, including the excessive growth of aquatic plants or algae, in any surface water shall be provided with the most appropriate treatment as determined by the Department, including, where necessary, highest and best practical treatment (HBPT) for POTWs and BAT for non POTWs, to remove such nutrients to ensure protection of existing and designated uses".*

EPA has published national guidance documents that contain recommended total phosphorus criteria and other indicators of eutrophication. EPA's Quality Criteria for Water 1986 (the Gold Book) recommends, to control eutrophication, that in-stream phosphorus concentrations should be less than 100 µg/l (0.100 mg/l) in streams or other flowing waters not discharging directly to lakes or impoundments and less than 50 µg/l in flowing waters discharging to lakes or impoundments.

More recently, EPA released Ecoregional Nutrient Criteria, established as part of an effort to reduce problems associated with excess nutrients in water bodies in specific areas of the country. The ecoregion-specific criteria represent conditions in waters minimally impacted by human activities, and thus representative of water without cultural eutrophication. The Ware Wastewater Treatment Plant is within Ecoregion XIV, Eastern Coastal Plain, Northeastern Coastal Zone. Recommended criteria for this Ecoregion[4] include a total phosphorus criteria of 23.75 µg/l (0.024 mg/l).

EPA has typically applied the Gold Book criterion because it was developed from an effects-based approach versus the reference conditions-based approach used to develop the ecoregion criteria. The effects-based approach is taken because it is more directly associated with an impairment to a designated use (e.g. fishing). The effects-based approach provides a threshold value above which water quality impairments are likely to occur. It applies empirical observations of a causal variable (i.e. phosphorus) and a response variable (i.e. algal growth) associated with designated use impairments. Referenced-base values are statistically derived from a comparison within a population of rivers in the same ecoregional class. They are a quantitative set of river characteristics (physical, chemical, and biological) that represent minimally impacted conditions.

[4] Ambient Water Quality Criteria Recommendations, Information Supporting the Development of State and Tribal Nutrient Criteria, Rivers and Streams in Ecoregion XIV, published in December, 2001

The current permit limits the Ware WWTP effluent to 1 mg/L total phosphorus as a monthly average year-round. The current permit also includes limits of 1.0 mg/L as a weekly average and 1.5 mg/L maximum daily from April through October. From July 2009 through June 2012, there was one violation of the weekly average and daily maximum phosphorus limits, in June 2012 when both results were reported as 1.6 mg/L.

The phosphorus limit calculated for the current permit did not account for upstream concentration of phosphorus when setting effluent limitations. Accounting for upstream concentrations is necessary to ensure that the discharge from the Ware treatment plant does not cause or contribute to an exceedance of water quality standards. The limit has been recalculated to account for the upstream concentration.

The 2003 Chicopee River Watershed Water Quality Assessment (2003 WQA) presented ambient phosphorus concentrations at Upper Church Street, Ware, upstream on the Ware River from the Ware WWTP. During low flow conditions that year, the instream phosphorus concentration was 49 µg/l.

The box below shows the necessary water quality based effluent limitation at an upstream concentration of 49 µg/l under 7Q10 conditions. This analysis shows that an effluent average monthly limitation of 584 µg/L is necessary. The maximum daily seasonal limitation of 1.5 mg/l from the current permit has been maintained to avoid backsliding as has the winter average monthly limitation of 1.0 mg/l.

Average Monthly Phosphorus Limit

$$Q_sC_s = Q_dC_d + Q_rC_r$$

Where

C_s	=	Concentration below outfall	=	100 µg/l
Q_s	=	Streamflow below outfall (effluent + upstream)	=	16.25 cfs
Q_d	=	Discharge flow	=	1.55 cfs
C_d	=	Discharge concentration	=	?
Q_r	=	Upstream flow	=	14.7 cfs
C_r	=	Upstream concentration	=	49 µg/l

Therefore,

$$C_d = \frac{(16.25 \text{ cfs} \times 100 \text{ µg/l}) - (14.7 \text{ cfs} \times 49 \text{ µg/l})}{1.55 \text{ cfs}}$$

$$= 584 \text{ µg/l}$$

To ensure attainment of water quality standards, the draft permit contains a monthly average limit of 584 µg/L, a weekly average limit of 1.0 mg/L, and a maximum daily limit of 1.5 mg/l for the growing season months of April through October, with a monitoring frequency of twice per week. The draft permit carries forward the monthly average limit of 1 mg/l for the non-growing season months of November through March. The monitoring frequency from November through March is once per

week. Past performance indicates that Ware WWTP already meets the new summer phosphorus limit on a routine basis.

If new water quality data or the completion of a total maximum daily load analysis (TMDL) indicates the need for more stringent limits, EPA and DEP may exercise the reopener clause of Part II A.4. of this permit and modify the phosphorus numerical limits.

The current permit includes a monitoring requirement for ortho-phosphorus during the winter period of November through March. The draft permit continues this required monitoring as it is necessary to identify whether the particulate fraction remains low and to further understand the physical dynamics of phosphorus in the non-growing season. Without the continued ortho-phosphate monitoring requirement, EPA and MassDEP cannot ensure that the loads authorized in the winter period are sufficiently protective of standards, specifically that the higher loads will not cause or contribute to instream eutrophication.

Metals

Certain metals in water can be toxic to aquatic life. The Clean Water Act requires EPA to limit toxic metal concentrations in the effluent when metal discharges may result in an exceedance of water quality criteria. An evaluation of the concentration of metals in the facility's effluent (from Whole Effluent Toxicity reports submitted between November 2008 and February 2012) was used to determine reasonable potential for toxicity caused by aluminum, cadmium, chromium, copper, lead, nickel and zinc.

Metals may be present in both dissolved and particulate forms in the water column. However, extensive studies suggest that it is the dissolved fraction that is biologically available, and therefore, presents the greatest risk of toxicity to aquatic life inhabiting the water column. This conclusion is widely accepted by the scientific community both within and outside of EPA (Water Quality Standards Handbook: Second Edition, Chapter 3.6 and Appendix J, EPA 1994 [EPA 823-B-94-005a]. Also see http://www.epa.gov/waterscience/standards/ handbook/chapter03.html#section6). As a result, water quality criteria are established in terms of dissolved metals.

However, many inorganic components of domestic wastewater, including metals, are in the particulate form, and differences in the chemical composition between the effluent and the receiving water affects the partitioning of metals between the particulate and dissolved fractions as the effluent mixes with the receiving water, often resulting in a transition from the particulate to dissolved form (*The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion* (USEPA 1996 [EPA-823-B96-007]). Consequently, quantifying only the dissolved fraction of metals in the effluent prior to discharge may not accurately reflect the biologically-available portion of metals in the receiving water. Regulations at 40 CFR 122.45(c) require, with limited exceptions, that metals limits in NPDES permits be expressed as total recoverable metals.

The facility's effluent concentrations (from Appendix A) were characterized assuming a lognormal distribution in order to determine the estimated 95^{th} percentile of the daily maximum. For metals with hardness-based water quality criteria, the criteria were determined using the equations in 2002 National Recommended Water Quality Criteria, using the appropriate factors for the individual metals (see table below). The downstream hardness was calculated to be 23.1 mg/l as $CaCO_3$, using

a mass balance equation with the design flow, receiving water at 7Q10, an upstream median hardness of 20 mg/l as $CaCO_3$ and an effluent median hardness of 52 mg/l as $CaCO_3$.

Hardness Analysis

$$Q_sC_s = Q_dC_d + Q_rC_r$$

Where

C_r	=	Concentration below outfall		
Q_d	=	Discharge flow	=	1.55 cfs
C_d	=	Discharge concentration	=	52 mg/L
Q_s	=	Upstream flow	=	14.7 cfs
C_s	=	Upstream concentration	=	20 mg/L
Q_r	=	Streamflow below outfall (effluent + upstream)	=	16.25 cfs

Therefore,

$$C_r = \frac{(1.55 \text{ cfs} \times 52 \text{ mg/L}) + (14.7 \text{ cfs} \times 20 \text{ mg/L})}{16.25 \text{ cfs}}$$

$$= 23.1 \text{ mg/l}$$

The following table presents the factors used to determine the acute and chronic total recoverable criteria for each metal:

Table 1. Parameters for Calculating Total Recoverable Metals Criteria
Hardness = 23.1 mg/L

Metal	Parameters				Total Recoverable Criteria	
	ma	ba	mc	bc	Acute Criteria (CMC) (ug/L)	Chronic Criteria (CCC) (ug/L)
Aluminum	—	—	—	—	750.00	87.00
Cadmium	1.1280	3.6867	0.7852	2.7150	0.87	0.78
Chromium III	0.819	3.7256	0.819	0.6848	543.01	25.95
Copper	0.9422	1.7000	0.8545	-1.702	3.52	2.67
Lead	1.273	-1.46	1.273	-4.705	12.64	0.49
Nickel	0.846	2.255	0.846	0.0584	135.82	15.10
Zinc	0.8473	0.884	0.8473	0.884	34.62	34.62

*Acute Criteria (CMC) = exp{ma*ln(hardness)+ba}
**Chronic Criteria (CCC) = exp{mc*ln(hardness)+bc}

In order to determine whether the effluent has the reasonable potential to cause or contribute to an exceedance above the in-stream water quality criteria for each metal, the following mass balance is used to project in-stream metal concentrations downstream from the discharge.

$$Q_d C_d + Q_S C_S = Q_r C_r$$

rewritten as:

$$C_r = \frac{Q_d C_d + Q_S C_S}{Q_r}$$

where:

Q_d = effluent flow (design flow = 1.0 MGD = 1.55 cfs)
C_d = effluent metals concentration in µg/L (95th percentile)
Q_S = stream flow upstream (7Q10 upstream = 14.7 cfs)
C_S = background in-stream metals concentration in µg/L (median)
Q_r = resultant in-stream flow, after discharge ($Q_S + Q_d$ = 16.25 cfs)
C_r = resultant in-stream concentration in µg/L

Reasonable potential is then determined by comparing this resultant in-stream concentration (for both acute and chronic conditions) with the criteria for each metal. In EPA's Technical Support Document for Water Quality Based Toxics Control, EPA/505/2-90-001, March 1991, commonly known as the "TSD", box 3-2 describes the statistical approach in determining if there is reasonable potential for an excursion above the maximum allowable concentration (criteria). If there is reasonable potential (for either acute or chronic conditions), the appropriate limit is then calculated by rearranging the above mass balance to solve for the effluent concentration (C_d) using the criterion as the resultant in-stream concentration (C_r). See the table below for the results of this analysis with respect to aluminum, cadmium, chromium, copper, lead, nickel and zinc.

Because there is reasonable potential for the discharge of aluminum and copper from Ware WWTP to cause or contribute to a violation of water quality standards, the draft permit includes limits for these two metals. The draft permit proposes a monthly average aluminum limit of 96 µg/L. For copper, the draft permit contains a maximum daily effluent limit of 17.9 µg/L and an average monthly limit of 9.0 µg/L. The proposed monitoring frequency for both metals is once per month. Also, see Appendix B for the aluminum calculations, and Appendix C for the copper calculations.

Table 2. Reasonable Potential Analysis for Metals

Metal	Qd	Cd (95th Percentile)	Qs	Cs (Median)	Qr = Qs + Qd	Cr = (QdCd+QsCs)/Q_R	Criteria		Reasonable Potential	Limit = (QrCr-QsCs)/Qd	
	cfs	µg/L	cfs	µg/L	cfs	µg/L	Acute (µg/L)	Chronic (µg/L)	Cr > Criteria	Acute (µg/L)	Chronic (µg/L)
Aluminum		200.7		86		96.9	750	87	**Y**	N/A	**96**
Cadmium		0		0		0	0.865	0.779	N	N/A	N/A
Chromium		0		0		0	543.01	25.95	N	N/A	N/A
Copper	1.55	23.1	14.7	2	16.25	4.01	3.52	2.67	**Y**	**17.9**	**9.0**
Lead		0		0		0	12.64	0.49	N	N/A	N/A
Nickel		5		0		0.48	135.82	15.10	N	N/A	N/A
Zinc		140		16		27.8	34.62	34.62	N	N/A	N/A

Whole Effluent Toxicity

Under Section 301(b)(1)(C) of the CWA, discharges are subject to effluent limitations based on water quality standards. The MA SWQS at 314 CMR 4.05(5)(c) include the following narrative and require 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.

The toxicity limits in the current permit are C-NOEC ≥ 7% and LC50 ≥ 100% and were established using the MassDEP *Implementation Policy for the Control of Toxic Pollutants in Surface* Waters, dated February 23, 1990 (the "Policy"). The Policy requires that the C-NOEC must equal or exceed the receiving water concentration (RWC) of the effluent, which is the inverse of the dilution factor. From August 2009 through February 2012, there were no exceedances of the acute toxicity limit. There were two violations of the chronic toxicity limit, in May 2010 and February 2011, when the C-NOEC was 6.25% effluent.

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 whole effluent chronic and acute toxicity limitations. (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.)

C-NOEC ≥ RWC = 1/dilution factor

=1/10.5
=0.095 (10%)

The draft permit requires quarterly chronic and acute toxicity tests using only the species *Ceriodaphnia dubia*. The acute toxicity endpoint, expressed as LC50, must equal or exceed 100% effluent. The chronic toxicity endpoint, expressed as C-NOEC (no effect concentration), must equal or exceed 10% effluent. The chronic toxicity limit in the draft permit is more stringent than that of the current permit due to the change in dilution factor. The tests must be performed in accordance with the test procedures and protocols specified in **Permit Attachment A**. The tests will be conducted four times a year, during the following months: February, May, August, and November.

Although the Ware WWTP has only two chronic toxicity exceedances, several other chronic tests have indicated chronic toxicity in the 50% and 25% effluent samples. EPA expects that POTWs with secondary treatment should have no chronic toxicity in the 100% effluent sample on a regular basis. The agencies will be monitoring the Ware WWTP's WET test results over the next permit term to determine if the pattern of chronic toxicity continues, and if so, require additional evaluation or WET testing to determine the source of toxicity. These requirements may include a toxicity identification evaluation (TIE) and/or a toxicity reduction evaluation (TRE).

7. Sludge

Section 405(d) of the Clean Water Act (CWA) requires that EPA develop technical standards regulating the use and disposal of sewage sludge. These regulations were signed on November 25, 1992, published in the Federal Register on February 19, 1993, and became effective on March 22, 1993. Domestic sludge that is land applied, disposed of in a surface disposal unit, or fired in a sewage sludge incinerator is subject to Part 503 technical standards and to State Env-Wq 800 standards. Part 503 regulations have a self-implementing provision, however, the CWA requires implementation through permits. Domestic sludge which is disposed of in municipal solid waste landfills are in compliance with Part 503 regulations provided the sludge meets the quality criteria of the landfill and the landfill meets the requirements of 40 CFR Part 258.

The draft permit has been conditioned to ensure that sewage sludge use and disposal practices meet the CWA Section 405(d) Technical Standards. In addition, EPA-New England has prepared a 72-page document entitled "EPA Region I NPDES Permit Sludge Compliance Guidance" for use by the permittee in determining their appropriate sludge conditions for their chosen method of sewage sludge use or disposal practices. This guidance document is available upon request from EPA Region 1 and may be found at: http://www.epa.gov/region1/npdes/permits/generic/sludgeguidance.pdf. The permittee is required to submit an annual report to EPA-New England and NHDES-WD, by February 19th each year, containing the information specified in the Sludge Compliance Guidance document for their chosen method of sewage sludge use or disposal practices.

8. Pretreatment

Ware WWTP has one non-categorical significant industrial user (SIU), Kanzaki Specialty Papers (Kanzaki). Kanzaki is considered non-categorical because it is not within any of the industries for which EPA has promulgated pretreatment standards. Ware WWTP reported in its reissuance application that influent from this user causes problems with the treatment works, due to large amounts of inorganic solids. Planned upgrades to the WWTP, partially financed by Kanzaki, will improve solids handling at the facility. A new tertiary treatment system will remove solids with less interference to the treatment system. Also, Kanzaki plans to install a flow equalization tank, which will reduce the variability in the flow they contribute to the Ware WWTP.

The permittee is required to administer a pretreatment program based on the authority granted under 40 § 122.44(j), 40 CFR § 403 and section 307 of the CWA. In accordance with 40 § 403, the permittee is obligated to modify, if necessary, its pretreatment program plan, to be consistent with current Federal Pretreatment Regulations. The permittee is also required to implement its pretreatment program in accordance with the requirements at 40 C.F.R. Part 403 (General Pretreatment Regulations). These requirements are necessary to ensure continued compliance with the POTW's NPDES permit and its sludge use or disposal practices. Those activities that the permittee must perform include, but are not limited to, the following: (1) develop and enforce EPA approved specific effluent limits (technically-based local limits); (2) issue industrial user discharge permits, (3) conduct compliance monitoring activities (e.g., sampling and inspections at industrial users), and (4) initiate enforcement actions against non-complying industrial users.

Lastly, the permittee must submit an annual pretreatment report on **March 1**, which describes the permittee's pretreatment program activities for the twelve month period ending 60 days prior to the due date.

9. Operations and Maintenance

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

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

Proper operation of collection systems is critical to prevent blockages and equipment failures that would cause overflows of the collection system (sanitary sewer overflows, or SSOs), and to limit the amount of non-wastewater flow entering the collection system (inflow and infiltration or I/I). I/I in a collection system can pose a significant environmental problem because it may displace wastewater flow and thereby cause, or contribute to causing, SSOs. Moreover, I/I could reduce the capacity and efficiency of the treatment plant and cause bypasses of secondary treatment. Therefore, reducing I/I will help to minimize any SSOs and maximize the flow receiving proper treatment at the treatment plant. There is presently estimated to be approximately 75,000 gpd of I/I in the sewer system. In its September 6, 2001 Infiltration and Inflow Policy, MassDEP specified that certain conditions related to I/I control be established in NPDES municipal permits.

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

10. 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 Services (NMFS) if EPA's action or proposed actions that it funds, permits, or undertakes; may adversely impact any essential fish habitat as: waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (16 U.S.C. § 1802 (10)). Adversely impact means any impact which reduces the quality and/or quantity of EFH (50 CFR § 600.910 (a)). Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

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

The Ware River is a tributary of the Chicopee River, which flows into the Connecticut River, which ultimately drains into the Long Island Sound. The Connecticut River system has been designated as EFH for Atlantic salmon. Although EFH has been designated for this general location, EPA has concluded that this activity is not likely to affect EFH or its associated species for the following reasons:

- The quantity of the discharge from the WWTP is 1.0 MGD, and the effluent receives advanced treatment;
- The facility withdraws no water from the Ware River; therefore no life stages of Atlantic salmon are vulnerable to impingement or entrainment from this facility;
- Limits specifically protective of aquatic organisms have been established for phosphorus, chlorine, aluminum, and copper, based on EPA water quality criteria;
- Acute and chronic toxicity testing on *Ceriodaphnia dubia* is required four (4) times per year.
- The permit prohibits any violation of state water quality standards.

EPA believes that the conditions and limitations contained within the draft permit adequately protect all aquatic life, including those species with EFH designation. Impacts associated with issuance of this permit to the EFH species, their habitat and forage, have been minimized to the extent that no significant adverse impacts are expected. Further mitigation is not warranted.

11. Endangered Species Act

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

EPA has reviewed the federal endangered or threatened species of fish, wildlife, or plants to see if any such listed species might potentially be impacted by the re-issuance of this NPDES permit. No federally endangered species have been identified within 30 miles of the Town of Ware. Therefore, EPA concludes that the limits and conditions contained in this draft permit reissuance are not likely to adversely affect species of concern or their habitats. No consultation is necessary.

12. Monitoring

The effluent monitoring requirements have been established to yield data representative of the discharge under authority of Section 308(a) of the CWA in accordance with 40 CFR §§122.41(j), 122.44(l), and 122.48.

The Draft Permit includes new provisions related to Discharge Monitoring Report (DMR) submittals to EPA and the State. The Draft Permit requires that, no later than one year after the effective date of the permit, the permittee submit all monitoring data and other reports required by the permit to EPA using NetDMR, unless the permittee is able to demonstrate a reasonable basis, such as technical or administrative infeasibility, that precludes the use of NetDMR for submitting DMRs and reports ("opt-out request").

In the interim (until one year from the effective date of the permit), the permittee may either submit monitoring data and other reports to EPA in hard copy form, or report electronically using NetDMR.

NetDMR is a national web-based tool for regulated CWA permittees to submit discharge monitoring reports (DMRs) electronically via a secure Internet application to U.S. EPA through the Environmental Information Exchange Network. NetDMR allows participants to discontinue mailing in hard copy forms under 40 CFR § 122.41 and § 403.12. NetDMR is accessed from the following url: http://www.epa.gov/netdmr. Further information about NetDMR, including contacts for EPA Region 1, is provided on this website.

EPA currently conducts free training on the use of NetDMR, and anticipates that the availability of this training will continue to assist permittees with the transition to use of NetDMR. To participate in upcoming trainings, visit http://www.epa.gov/netdmr for contact information for Massachusetts.

The Draft Permit requires the permittee to report monitoring results obtained during each calendar month using NetDMR, no later than the 15th day of the month following the completed reporting period. All reports required under the permit shall be submitted to EPA as an electronic attachment to the DMR. Once a permittee begins submitting reports using NetDMR, it will no longer be required to submit hard copies of DMRs or other reports to EPA and will no longer be required to submit hard copies of DMRs to MassDEP. However, permittees must continue to send hard copies of reports other than DMRs to MassDEP until further notice from MassDEP.

The Draft Permit also includes an "opt-out" request process. Permittees who believe they cannot use NetDMR due to technical or administrative infeasibilities, or other logical reasons, must demonstrate the reasonable basis that precludes the use of NetDMR. These permittees must submit the justification, in writing, to EPA at least sixty (60) days prior to the date the facility would otherwise be required to begin using NetDMR. Opt-outs become effective upon the date of written approval by EPA and are valid for twelve (12) months from the date of EPA approval. The opt-outs expire at the end of this twelve (12) month period. Upon expiration, the permittee must submit DMRs and reports to EPA using NetDMR, unless the permittee submits a renewed opt-out request sixty (60) days prior to expiration of its opt-out, and such a request is approved by EPA.

Until electronic reporting using NetDMR begins, or for those permittees that receive written approval from EPA to continue to submit hard copies of DMRs, the Draft Permit requires that submittal of DMRs and other reports required by the permit continue in hard copy format. Hard copies of DMRs must be postmarked no later than the 15th day of the month following the completed reporting period.

13. State Certification Requirements

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.

14. 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 the U.S. EPA, Office of Ecosystem Protection, 5 Post Office Square, Suite 100, Boston, Massachusetts 02109-3912. Any person, prior to such date, may submit a request in writing 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.

15. 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.

16. State Certification Requirements

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

17. EPA & 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:

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EPA New England – Region 1

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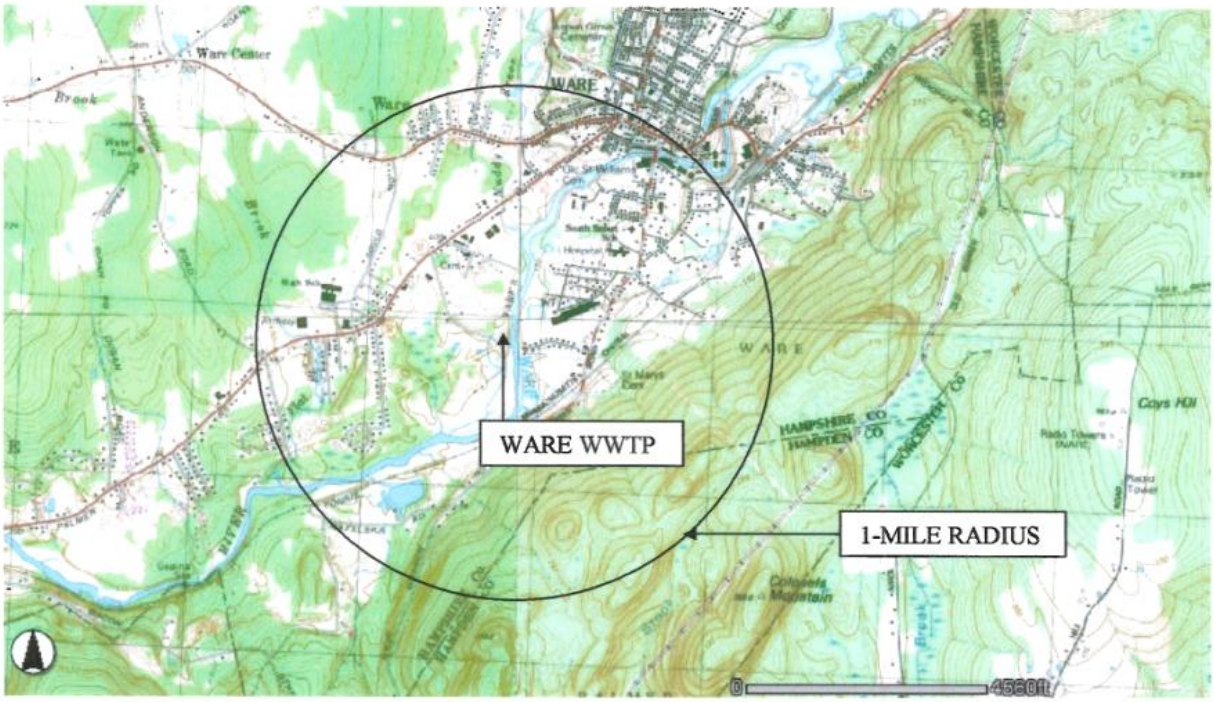
February 21, 2013
Date

Ken Moraff, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency



A-5

TOPOGRAPHIC MAP

WARE WASTEWATER TREATMENT PLANT

SECTION OF USGS MAP
SCALE 1 IN. = 3,400 FT. +/-

THERE ARE NO WELLS, SPRINGS, OR SURFACE WATER BODIES, OTHER THAN THE WARE RIVER, WITHIN ¼ MILE OF THE WARE WASTEWATER TREATMENT PLANT.

Figure 1 – Facility Location Map

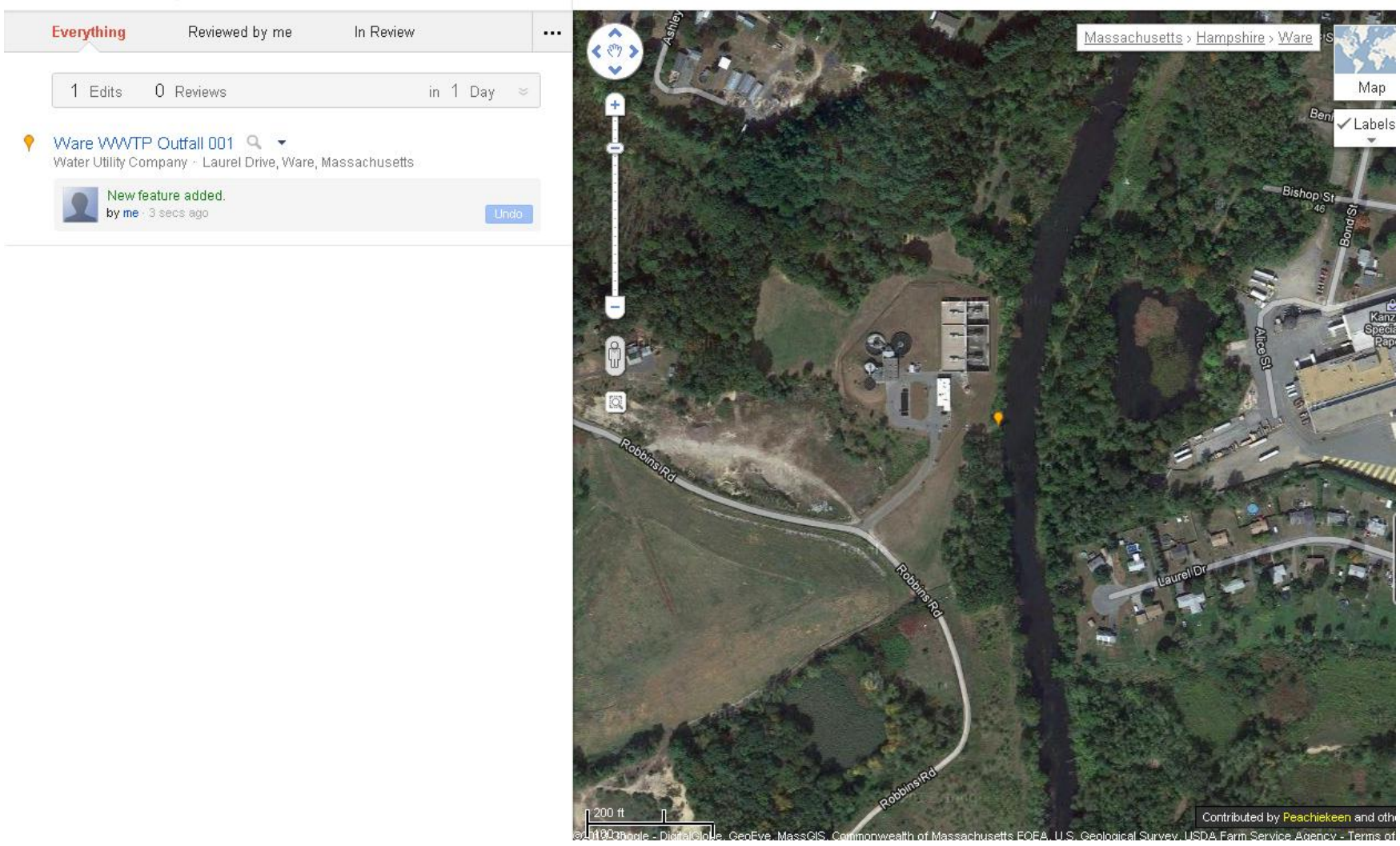


Figure 2 – Outfall Location Map

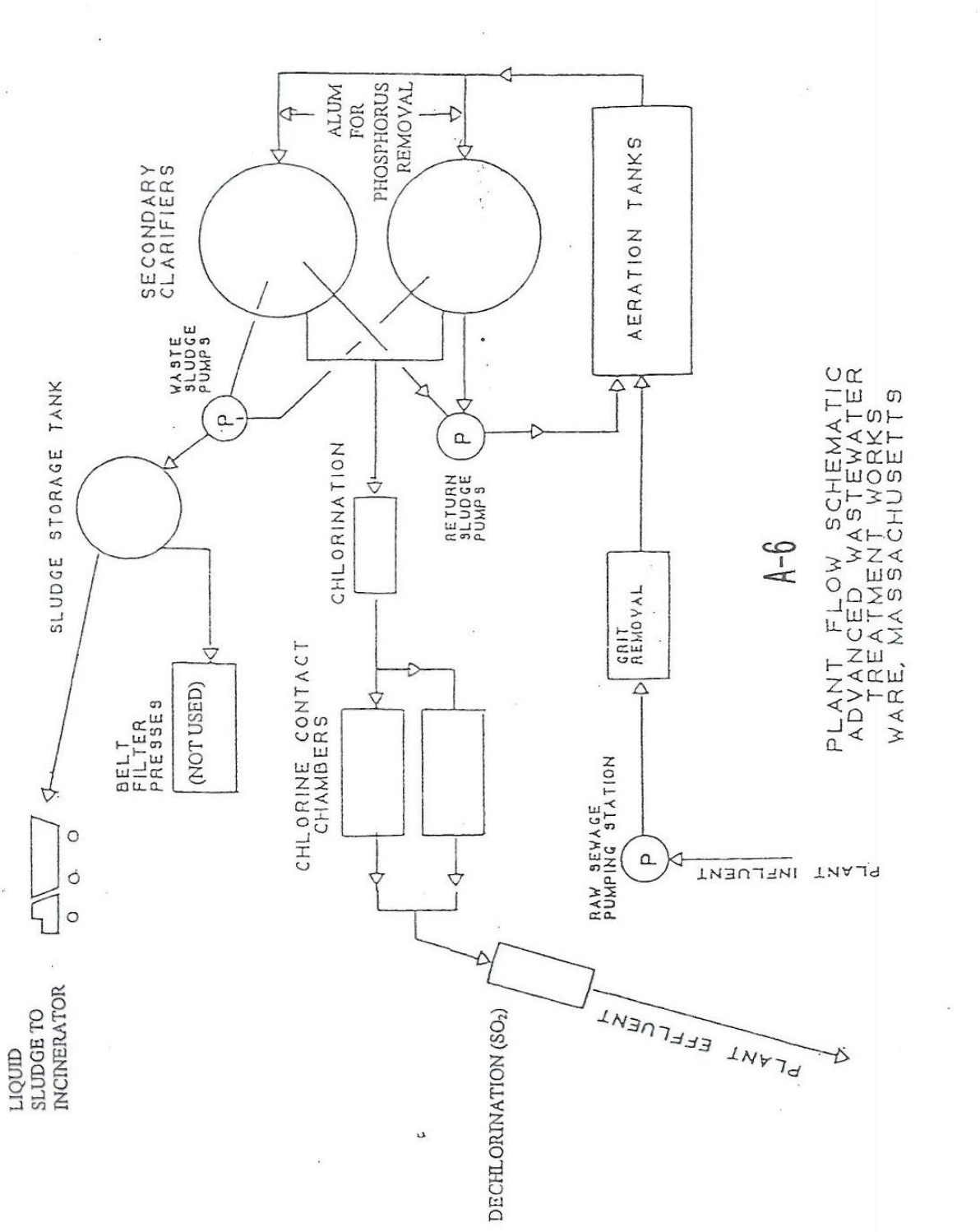


Figure 3 – Facility Schematic

001A

BOD, 5-day, 20 deg. C
Limit Start Date = 7/1/07
Season = 0

Pram	MP Dt	Rec Dt	Q1 208 lb/d MO AVG	Q2 208 lb/d WKLY AVG	C1 25 mg/L MO AVG	C2 25 mg/L WKLY AVG	C3 Req. Mon. mg/L DAILY MX
00310	07/31/2009	8/11/2009	32 lb/d	86 lb/d	6 mg/L	10 mg/L	10 mg/L
00310	08/31/2009	9/12/2009	39 lb/d	90 lb/d	7 mg/L	15 mg/L	15 mg/L
00310	09/30/2009	10/14/2009	18 lb/d	28 lb/d	4 mg/L	6 mg/L	6 mg/L
00310	10/31/2009	11/13/2009	28.7 lb/d	58.1 lb/d	6.6 mg/L	11 mg/L	11 mg/L
00310	11/30/2009	12/8/2009	14.1 lb/d	56.7 lb/d	3 mg/L	10.8 mg/L	18 mg/L
00310	12/31/2009	1/14/2010	34.2 lb/d	53.2 lb/d	6.3 mg/L	8.5 mg/L	11 mg/L
00310	01/31/2010	2/12/2010	30.1 lb/d	71 lb/d	6 mg/L	8.7 mg/L	18 mg/L
00310	02/28/2010	3/11/2010	27.7 lb/d	40.7 lb/d	5.3 mg/L	7.8 mg/L	7.8 mg/L
00310	03/31/2010	4/13/2010	72 lb/d	154 lb/d	10 mg/L	18 mg/L	18 mg/L
00310	04/30/2010	5/13/2010	23 lb/d	38 lb/d	3 mg/L	6 mg/L	6 mg/L
00310	05/31/2010	6/8/2010	14 lb/d	16 lb/d	3 mg/L	3 mg/L	3 mg/L
00310	06/30/2010	7/13/2010	13 lb/d	14 lb/d	3 mg/L	3 mg/L	3 mg/L
00310	07/31/2010	8/11/2010	39 lb/d	65 lb/d	10 mg/L	15 mg/L	15 mg/L
00310	08/31/2010	9/13/2010	23 lb/d	41 lb/d	6 mg/L	10 mg/L	10 mg/L
00310	09/30/2010	10/14/2010	34.4 lb/d	87.9 lb/d	4 mg/L	20 mg/L	20 mg/L
00310	10/31/2010	11/8/2010	210 lb/d	40 lb/d	5 mg/L	9 mg/L	9 mg/L
00310	11/30/2010	12/7/2010	25 lb/d	37 lb/d	6 mg/L	8 mg/L	8 mg/L
00310	12/31/2010	1/11/2011	16 lb/d	30 lb/d	4 mg/L	7 mg/L	7 mg/L
00310	01/31/2011	2/8/2011	28 lb/d	48 lb/d	7 mg/L	12 mg/L	12 mg/L
00310	02/28/2011	3/3/2011	35 lb/d	57 lb/d	8 mg/L	13 mg/L	13 mg/L
00310	03/31/2011	4/11/2011	23 lb/d	45 lb/d	2 mg/L	2 mg/L	2 mg/L
00310	04/30/2011	5/9/2011	39 lb/d	69 lb/d	5 mg/L	9 mg/L	9 mg/L
00310	05/31/2011	6/7/2011	13 lb/d	13 lb/d	2 mg/L	2 mg/L	2 mg/L
00310	06/30/2011	7/7/2011	18 lb/d	48 lb/d	3 mg/L	8 mg/L	8 mg/L
00310	07/31/2011	8/5/2011	19 lb/d	33 lb/d	4 mg/L	7 mg/L	7 mg/L
00310	08/31/2011	9/6/2011	16 lb/d	37 lb/d	3 mg/L	7 mg/L	7 mg/L
00310	09/30/2011	10/7/2011	24 lb/d	40 lb/d	3 mg/L	5 mg/L	5 mg/L
00310	10/31/2011	11/3/2011	13 lb/d	13 lb/d	2 mg/L	2 mg/L	2 mg/L
00310	11/30/2011	12/7/2011	23 lb/d	53 lb/d	3 mg/L	7 mg/L	7 mg/L
00310	12/31/2011	1/4/2012	16 lb/d	25 lb/d	2 mg/L	3 mg/L	3 mg/L
00310	01/31/2012	2/2/2012	23 lb/d	35 lb/d	4 mg/L	6 mg/L	6 mg/L
00310	02/29/2012	3/7/2012	35 lb/d	71 lb/d	7 mg/L	14 mg/L	14 mg/L
00310	03/31/2012	4/4/2012	26 lb/d	45 lb/d	4 mg/L	7 mg/L	7 mg/L
00310	04/30/2012	5/2/2012	13 lb/d	13 lb/d	3 mg/L	3 mg/L	3 mg/L
00310	05/31/2012	6/5/2012	19 lb/d	28 lb/d	4 mg/L	6 mg/L	6 mg/L
00310	06/30/2012	7/3/2012	19 lb/d	38 lb/d	4 mg/L	8 mg/L	2 mg/L

Chlorine, total residual
Limit Start Date = 7/1/07
Season = 0

Pram	MP Dt	Rec Dt	C1 160 ug/L MO AVG	C3 277 ug/L DAILY MX
50060	07/31/2009	8/11/2009	20 ug/L	60 ug/L
50060	08/31/2009	9/11/2009	60 ug/L	90 ug/L
50060	09/30/2009	10/14/2009	45 ug/L	70 ug/L
50060	10/31/2009	11/13/2009	26 ug/L	70 ug/L
50060	04/30/2010	5/13/2010	18 ug/L	90 ug/L
50060	05/31/2010	6/8/2010	36 ug/L	80 ug/L
50060	06/30/2010	7/13/2010	31 ug/L	70 ug/L
50060	07/31/2010	8/11/2010	29 ug/L	50 ug/L
50060	08/31/2010	9/13/2010	28 ug/L	50 ug/L
50060	09/30/2010	10/14/2010	25 ug/L	40 ug/L
50060	10/31/2010	11/8/2010	20 ug/L	30 ug/L
50060	04/30/2011	5/9/2011	24 ug/L	40 ug/L
50060	05/31/2011	6/7/2011	119 ug/L	260 ug/L
50060	06/30/2011	7/7/2011	81 ug/L	120 ug/L
50060	07/31/2011	8/5/2011	42 ug/L	240 ug/L
50060	08/31/2011	9/6/2011	69 ug/L	250 ug/L

50060	**09/30/2011**	**10/7/2011**	70 ug/L	220 ug/L
50060	**10/31/2011**	**11/3/2011**	65 ug/L	240 ug/L
50060	**04/30/2012**	**5/2/2012**	51 ug/L	170 ug/L
50060	**05/31/2012**	**6/5/2012**	56 ug/L	230 ug/L
50060	**06/30/2012**	**7/3/2012**	45 ug/L	280 ug/L

Coliform, fecal general
Limit Start Date = 7/1/07
Season = 0

			C1	**C3**
			200 CFU/100mL	**400 CFU/100mL**
Pram	**MP Dt**	**Rec Dt**	**MO GEO**	**DAILY MX**
74055	**07/31/2009**	**8/11/2009**	41.4 CFU/100mL	1,500 CFU/100mL
74055	**08/31/2009**	**9/11/2009**	14.8 CFU/100mL	30 CFU/100mL
74055	**09/30/2009**	**10/14/2009**	13.6 CFU/100mL	70 CFU/100mL
74055	**10/31/2009**	**11/13/2009**	31.7 CFU/100mL	20 CFU/100mL
74055	**04/30/2010**	**5/13/2010**	30.5 CFU/100mL	80 CFU/100mL
74055	**05/31/2010**	**6/8/2010**	10 CFU/100mL	10 CFU/100mL
74055	**06/30/2010**	**7/13/2010**	9.4 CFU/100mL	10 CFU/100mL
74055	**07/31/2010**	**8/11/2010**	9 CFU/100mL	9 CFU/100mL
74055	**08/31/2010**	**9/13/2010**	9 CFU/100mL	10 CFU/100mL
74055	**09/30/2010**	**10/14/2010**	24.4 CFU/100mL	120 CFU/100mL
74055	**10/31/2010**	**11/8/2010**	9.5 CFU/100mL	10 CFU/100mL
74055	**04/30/2011**	**5/9/2011**	264 CFU/100mL	22,200 CFU/100mL
74055	**05/31/2011**	**6/7/2011**	9 CFU/100mL	9 CFU/100mL
74055	**06/30/2011**	**7/7/2011**	11 CFU/100mL	20 CFU/100mL
74055	**07/31/2011**	**8/5/2011**	24 CFU/100mL	450 CFU/100mL
74055	**08/31/2011**	**9/6/2011**	16 CFU/100mL	140 CFU/100mL
74055	**09/30/2011**	**10/7/2011**	17 CFU/100mL	50 CFU/100mL
74055	**10/31/2011**	**11/3/2011**	10 CFU/100mL	10 CFU/100mL
74055	**04/30/2012**	**5/2/2012**	10 CFU/100mL	10 CFU/100mL
74055	**05/31/2012**	**6/5/2012**	17 CFU/100mL	80 CFU/100mL
74055	**06/30/2012**	**7/3/2012**	10 CFU/100mL	10 CFU/100mL

E. coli, thermotol, MF, MTEC
Limit Start Date = 7/1/07
Season = 0

			C1	**C3**
			Req. Mon. CFU/100mL	**Req. Mon. CFU/100mL**
Pram	**MP Dt**	**Rec Dt**	**MO AVG**	**DAILY MX**
31633	**07/31/2009**	**8/11/2009**	0 CFU/100mL	0 CFU/100mL
31633	**08/31/2009**	**9/11/2009**	0 CFU/100mL	0 CFU/100mL
31633	**09/30/2009**	**10/14/2009**	0 CFU/100mL	0 CFU/100mL
31633	**10/31/2009**	**11/13/2009**	0 CFU/100mL	0 CFU/100mL
31633	**11/30/2009**	**12/8/2009**	NODI Code = 9	NODI Code = 9
31633	**12/31/2009**	**1/14/2010**	NODI Code = 9	NODI Code = 9

Limit Start Date = 1/1/10
Season = 0

			C1	**C3**
			Req. Mon. CFU/100mL	**Req. Mon. CFU/100mL**
Pram	**MP Dt**	**Rec Dt**	**MOAV GEO**	**DAILY MX**
31633	**04/30/2010**	**5/13/2010**	8 CFU/100mL	8 CFU/100mL
31633	**05/31/2010**	**6/8/2010**	8 CFU/100mL	8 CFU/100mL
31633	**06/30/2010**	**7/13/2010**	1 CFU/100mL	1 CFU/100mL
31633	**07/31/2010**	**8/11/2010**	0 CFU/100mL	0 CFU/100mL
31633	**08/31/2010**	**9/13/2010**	4 CFU/100mL	4 CFU/100mL
31633	**09/30/2010**	**10/14/2010**	0 CFU/100mL	0 CFU/100mL
31633	**10/31/2010**	**11/8/2010**	1 CFU/100mL	10 CFU/100mL
31633	**04/30/2011**	**5/9/2011**	4,300 CFU/100mL	4,300 CFU/100mL
31633	**05/31/2011**	**6/7/2011**	1 CFU/100mL	1 CFU/100mL
31633	**06/30/2011**	**7/7/2011**	1 CFU/100mL	1 CFU/100mL
31633	**07/31/2011**	**8/5/2011**	1 CFU/100mL	1 CFU/100mL
31633	**08/31/2011**	**9/6/2011**	1 CFU/100mL	1 CFU/100mL
31633	**09/30/2011**	**10/7/2011**	1 CFU/100mL	1 CFU/100mL
31633	**10/31/2011**	**11/3/2011**	1 CFU/100mL	1 CFU/100mL
31633	**04/30/2012**	**5/2/2012**	0 CFU/100mL	0 CFU/100mL
31633	**05/31/2012**	**6/5/2012**	2 CFU/100mL	2 CFU/100mL

31633	**06/30/2012**	**7/3/2012**	8 CFU/100mL	8 CFU/100mL

Flow, in conduit or thru treatment plant
Limit Start Date = 7/1/07
Season = 0

			Q1 Req. Mon. MGD	**Q2 Req. Mon. MGD**
Pram	**MP Dt**	**Rec Dt**	**MO AVG**	**DAILY MX**
50050	**07/31/2009**	**8/11/2009**	0.63	1.11 MGD
50050	**08/31/2009**	**9/11/2009**	0.72	1.24 MGD
50050	**09/30/2009**	**10/14/2009**	0.55	0.69 MGD
50050	**10/31/2009**	**11/13/2009**	0.52	0.64 MGD
50050	**11/30/2009**	**12/8/2009**	0.56	0.63 MGD
50050	**12/31/2009**	**1/14/2010**	0.65	0.75 MGD
50050	**01/31/2010**	**2/12/2010**	0.6	0.98 MGD
50050	**02/28/2010**	**3/11/2010**	0.63	1 MGD
50050	**03/31/2010**	**4/13/2010**	0.86	1.7 MGD
50050	**04/30/2010**	**5/13/2010**	0.92	1.7 MGD
50050	**05/31/2010**	**6/8/2010**	0.56	0.62 MGD
50050	**06/30/2010**	**7/13/2010**	0.52	0.58 MGD
50050	**07/31/2010**	**8/11/2010**	0.47	0.54 MGD
50050	**08/31/2010**	**9/13/2010**	0.45	0.57 MGD
50050	**09/30/2010**	**10/14/2010**	0.46	0.53 MGD
50050	**10/31/2010**	**11/8/2010**	0.5	0.65 MGD
50050	**11/30/2010**	**12/7/2010**	0.51	0.62 MGD
50050	**12/31/2010**	**1/11/2011**	0.51	0.61 MGD
50050	**01/31/2011**	**2/8/2011**	0.48	0.54 MGD
50050	**02/28/2011**	**3/3/2011**	0.52	0.79 MGD
50050	**03/31/2011**	**4/11/2011**	1.35	2.7 MGD
50050	**04/30/2011**	**5/9/2011**	0.93	1.13 MGD
50050	**05/31/2011**	**6/7/2011**	0.8	0.96 MGD
50050	**06/30/2011**	**7/7/2011**	0.71	0.83 MGD
50050	**07/31/2011**	**8/5/2011**	0.57	0.69 MGD
50050	**08/31/2011**	**9/6/2011**	0.64	1.84 MGD
50050	**09/30/2011**	**10/7/2011**	0.95	2.03 MGD
50050	**10/31/2011**	**11/3/2011**	0.77	0.9 MGD
50050	**11/30/2011**	**12/7/2011**	0.91	1.03 MGD
50050	**12/31/2011**	**1/4/2012**	0.99	1.54 MGD
50050	**01/31/2012**	**2/2/2012**	0.7	0.79 MGD
50050	**02/29/2012**	**3/7/2012**	0.61	0.78 MGD
50050	**03/31/2012**	**4/4/2012**	0.6	0.68 MGD
50050	**04/30/2012**	**5/2/2012**	0.51	0.61 MGD
50050	**05/31/2012**	**6/5/2012**	0.56	0.68 MGD
50050	**06/30/2012**	**7/3/2012**	0.57	0.68 MGD
		AVG	0.660833333	
		MED	0.6	

Flow, total
Limit Start Date = 7/1/07
Season = 0

Pram	MP Dt	Rec Dt	Q1 1 MGD ROLL AVG
82220	07/31/2009	8/11/2009	0.72 MGD
82220	08/31/2009	9/11/2009	0.72 MGD
82220	09/30/2009	10/14/2009	0.69 MGD
82220	10/31/2009	11/13/2009	0.68 MGD
82220	11/30/2009	12/8/2009	0.68 MGD
82220	12/31/2009	1/14/2010	0.66 MGD
82220	01/31/2010	2/12/2010	0.64 MGD
82220	02/28/2010	3/11/2010	0.64 MGD
82220	03/31/2010	4/13/2010	0.65 MGD
82220	04/30/2010	5/13/2010	0.67 MGD
82220	05/31/2010	6/8/2010	0.65 MGD
82220	06/30/2010	7/13/2010	0.69 MGD
82220	07/31/2010	8/11/2010	0.63 MGD
82220	08/31/2010	9/13/2010	0.61 MGD
82220	09/30/2010	10/14/2010	0.6 MGD
82220	10/31/2010	11/8/2010	0.6 MGD
82220	11/30/2010	12/7/2010	0.59 MGD
82220	12/31/2010	1/11/2011	0.57 MGD
82220	01/31/2011	2/8/2011	0.57 MGD
82220	02/28/2011	3/3/2011	0.56 MGD
82220	03/31/2011	4/11/2011	0.61 MGD
82220	04/30/2011	5/9/2011	0.61 MGD
82220	05/31/2011	6/7/2011	0.63 MGD
82220	06/30/2011	7/7/2011	0.64 MGD
82220	07/31/2011	8/5/2011	0.65 MGD
82220	08/31/2011	9/6/2011	0.67 MGD
82220	09/30/2011	10/7/2011	0.71 MGD
82220	10/31/2011	11/3/2011	0.73 MGD
82220	11/30/2011	12/7/2011	0.76 MGD
82220	12/31/2011	1/4/2012	0.8 MGD
82220	01/31/2012	2/2/2012	0.82 MGD
82220	02/29/2012	3/7/2012	0.83 MGD
82220	03/31/2012	4/4/2012	0.77 MGD
82220	04/30/2012	5/2/2012	0.73 MGD
82220	05/31/2012	6/5/2012	0.71 MGD
82220	06/30/2012	7/3/2012	0.7 MGD

Nitrite plus nitrate total 1 det. (as N)
Limit Start Date = 7/1/07
Season = 0

Pram	MP Dt	Rec Dt	C1 Req. Mon. mg/L MO AV MN
00630	07/31/2009	8/11/2009	14
00630	08/31/2009	9/11/2009	9.3
00630	09/30/2009	10/14/2009	13
00630	10/31/2009	11/13/2009	16
00630	11/30/2009	12/8/2009	12
00630	12/31/2009	1/14/2010	15
00630	01/31/2010	2/12/2010	17
00630	02/28/2010	3/11/2010	5.8
00630	03/31/2010	4/13/2010	8.8
00630	04/30/2010	5/13/2010	3
00630	05/31/2010	6/8/2010	2.5
00630	06/30/2010	7/13/2010	15
00630	07/31/2010	8/11/2010	6.8
00630	08/31/2010	9/13/2010	13
00630	09/30/2010	10/14/2010	15
00630	10/31/2010	11/8/2010	18
00630	11/30/2010	12/7/2010	15
00630	12/31/2010	1/11/2011	19
00630	01/31/2011	2/8/2011	13

00630	**02/28/2011**	**3/3/2011**	17
00630	**03/31/2011**	**4/11/2011**	10
00630	**04/30/2011**	**5/9/2011**	12
00630	**05/31/2011**	**6/7/2011**	9.9
00630	**06/30/2011**	**7/7/2011**	6.8
00630	**07/31/2011**	**8/5/2011**	12
00630	**08/31/2011**	**9/6/2011**	8.7
00630	**09/30/2011**	**10/7/2011**	12
00630	**10/31/2011**	**11/3/2011**	10
00630	**11/30/2011**	**12/7/2011**	7
00630	**12/31/2011**	**1/4/2012**	9.9
00630	**01/31/2012**	**2/2/2012**	9.8
00630	**02/29/2012**	**3/7/2012**	10.9
00630	**03/31/2012**	**4/4/2012**	15
00630	**04/30/2012**	**5/2/2012**	16
00630	**05/31/2012**	**6/5/2012**	9.4
00630	**06/30/2012**	**7/3/2012**	7.4
		AVG	11.52777778
		MED	12

Nitrogen, ammonia total (as N)
Limit Start Date = 7/1/07
Season = 2

			C1	**C2**	**C3**
			1 mg/L	**1 mg/L**	**1.5 mg/L**
Pram	**MP Dt**	**Rec Dt**	**MO AVG**	**WKLY AVG**	**DAILY MX**
00610	**07/31/2009**	**8/11/2009**	0.23 mg/L	0.6 mg/L	0.6 mg/L
00610	**08/31/2009**	**9/12/2009**	0.55 mg/L	0.98 mg/L	0.98 mg/L
00610	**09/30/2009**	**10/14/2009**	0.46 mg/L	0.56 mg/L	0.56 mg/L
00610	**10/31/2009**	**11/13/2009**	0.2 mg/L	0.32 mg/L	0.32 mg/L
00610	**06/30/2010**	**7/13/2010**	0.34 mg/L	0.74 mg/L	0.74 mg/L
00610	**07/31/2010**	**8/11/2010**	0.59 mg/L	0.85 mg/L	0.85 mg/L
00610	**08/31/2010**	**9/13/2010**	0.2 mg/L	0.25 mg/L	0.25 mg/L
00610	**09/30/2010**	**10/14/2010**	0.48 mg/L	0.89 mg/L	0.89 mg/L
00610	**10/31/2010**	**11/8/2010**	0.4 mg/L	0.96 mg/L	0.96 mg/L
00610	**06/30/2011**	**7/7/2011**	0.42 mg/L	0.72 mg/L	0.72 mg/L
00610	**07/31/2011**	**8/5/2011**	0.23 mg/L	0.34 mg/L	0.34 mg/L
00610	**08/31/2011**	**9/6/2011**	0.24 mg/L	0.49 mg/L	0.49 mg/L
00610	**09/30/2011**	**10/7/2011**	0.47 mg/L	1.2 mg/L	1.2 mg/L
00610	**10/31/2011**	**11/3/2011**	0.2 mg/L	0.32 mg/L	0.32 mg/L
00610	**06/30/2012**	**7/3/2012**	0.45 mg/L	0.62 mg/L	0.62 mg/L

Nitrogen, Kjeldahl, total (as N)
Limit Start Date = 7/1/07
Season = 0

			C1
			Req. Mon. mg/L
Pram	**MP Dt**	**Rec Dt**	**MO AV MN**
00625	**07/31/2009**	**8/11/2009**	0.28
00625	**08/31/2009**	**9/12/2009**	1.1
00625	**09/30/2009**	**10/14/2009**	0.99
00625	**10/31/2009**	**11/13/2009**	1.3
00625	**11/30/2009**	**12/8/2009**	1.5
00625	**12/31/2009**	**1/14/2010**	1.5
00625	**01/31/2010**	**2/12/2010**	1.6
00625	**02/28/2010**	**3/11/2010**	4.9
00625	**03/31/2010**	**4/13/2010**	1.9
00625	**04/30/2010**	**5/13/2010**	4.2
00625	**05/31/2010**	**6/8/2010**	1.4
00625	**06/30/2010**	**7/13/2010**	1.6
00625	**07/31/2010**	**8/11/2010**	1.6
00625	**08/31/2010**	**9/13/2010**	1.7
00625	**09/30/2010**	**10/14/2010**	1.8
00625	**10/31/2010**	**11/8/2010**	1.4
00625	**11/30/2010**	**12/7/2010**	16
00625	**12/31/2010**	**1/11/2011**	2
00625	**01/31/2011**	**2/8/2011**	2
00625	**02/28/2011**	**3/3/2011**	2.7

00625	**03/31/2011**	**4/11/2011**	4.3
00625	**04/30/2011**	**5/9/2011**	2.3
00625	**05/31/2011**	**6/7/2011**	2.2
00625	**06/30/2011**	**7/7/2011**	1.1
00625	**07/31/2011**	**8/5/2011**	2.1
00625	**08/31/2011**	**9/6/2011**	1.7
00625	**09/30/2011**	**10/7/2011**	0.9
00625	**10/31/2011**	**11/3/2011**	1.2
00625	**11/30/2011**	**12/7/2011**	0.88
00625	**12/31/2011**	**1/4/2012**	0.95
00625	**01/31/2012**	**2/2/2012**	1.3
00625	**02/29/2012**	**3/7/2012**	1.6
00625	**03/31/2012**	**4/4/2012**	2.5
00625	**04/30/2012**	**5/2/2012**	1.4
00625	**05/31/2012**	**6/5/2012**	1.5
00625	**06/30/2012**	**7/3/2012**	1.5
		AVE	2.191666667
		MED	1.6

pH
Limit Start Date = 7/1/07
Season = 0

			C1	**C3**
			6.5 SU	**8.3 SU**
Pram	**MP Dt**	**Rec Dt**	**MINIMUM**	**MAXIMUM**
00400	**07/31/2009**	**8/11/2009**	6.5 SU	6.8 SU
00400	**08/31/2009**	**9/12/2009**	6.5 SU	6.7 SU
00400	**09/30/2009**	**10/14/2009**	6.5 SU	6.7 SU
00400	**10/31/2009**	**11/13/2009**	6.5 SU	6.9 SU
00400	**11/30/2009**	**12/8/2009**	6.5 SU	6.9 SU
00400	**12/31/2009**	**1/14/2010**	6.6 SU	6.8 SU
00400	**01/31/2010**	**2/12/2010**	6.5 SU	6.8 SU
00400	**02/28/2010**	**3/11/2010**	6.5 SU	7 SU
00400	**03/31/2010**	**4/13/2010**	6.5 SU	6.7 SU
00400	**04/30/2010**	**5/13/2010**	6.5 SU	6.8 SU
00400	**05/31/2010**	**6/8/2010**	6.5 SU	7.3 SU
00400	**06/30/2010**	**7/13/2010**	6.5 SU	7.4 SU
00400	**07/31/2010**	**8/11/2010**	6.5 SU	6.9 SU
00400	**08/31/2010**	**9/13/2010**	6.5 SU	6.8 SU
00400	**09/30/2010**	**10/14/2010**	6.5 SU	7 SU
00400	**10/31/2010**	**11/8/2010**	6.5 SU	6.8 SU
00400	**11/30/2010**	**12/7/2010**	6.5 SU	6.8 SU
00400	**12/31/2010**	**1/11/2011**	6.5 SU	7.2 SU
00400	**01/31/2011**	**2/8/2011**	6.7 SU	7 SU
00400	**02/28/2011**	**3/3/2011**	6.8 SU	6.9 SU
00400	**03/31/2011**	**4/11/2011**	6.6 SU	6.9 SU
00400	**04/30/2011**	**5/9/2011**	6.5 SU	7.1 SU
00400	**05/31/2011**	**6/7/2011**	6.9 SU	7.1 SU
00400	**06/30/2011**	**7/7/2011**	6.8 SU	7.4 SU
00400	**07/31/2011**	**8/5/2011**	6.9 SU	7.2 SU
00400	**08/31/2011**	**9/6/2011**	6.8 SU	7.1 SU
00400	**09/30/2011**	**10/7/2011**	6.8 SU	7.1 SU
00400	**10/31/2011**	**11/3/2011**	6.9 SU	7.2 SU
00400	**11/30/2011**	**12/7/2011**	6.9 SU	7.2 SU
00400	**12/31/2011**	**1/4/2012**	6.9 SU	7 SU
00400	**01/31/2012**	**2/2/2012**	6.8 SU	7 SU
00400	**02/29/2012**	**3/7/2012**	6.8 SU	7 SU
00400	**03/31/2012**	**4/4/2012**	6.8 SU	7 SU
00400	**04/30/2012**	**5/2/2012**	6.8 SU	7 SU
00400	**05/31/2012**	**6/5/2012**	6.9 SU	7.1 SU
00400	**06/30/2012**	**7/3/2012**	6.9 SU	7.2 SU

Phosphate, ortho, dissolved (as P)
Limit Start Date = 7/1/07
Season = 0

			Q1	**Q2**	**C1**	**C3**
			Req. Mon. lb/d	**Req. Mon. lb/d**	**Req. Mon. mg/L**	**Req. Mon. mg/L**
Pram	**MP Dt**	**Rec Dt**	**MO AVG**	**DAILY MX**	**MO AVG**	**DAILY MX**

00671	**11/30/2009**	**12/8/2009**	0.42 lb/d	0.66 lb/d	0.09 mg/L	0.14 mg/L
00671	**12/31/2009**	**1/14/2010**	0.49 lb/d	1.19 lb/d	0.09 mg/L	0.19 mg/L
00671	**01/31/2010**	**2/12/2010**	6.13 lb/d	30.99 lb/d	1.22 mg/L	3.8 mg/L
00671	**02/28/2010**	**3/11/2010**	3.3 lb/d	4.3 lb/d	0.63 mg/L	0.8 mg/L
00671	**03/31/2010**	**4/13/2010**	3 lb/d	3.6 lb/d	0.4 mg/L	0.47 mg/L
00671	**11/30/2010**	**12/7/2010**	3.3 lb/d	5.1 lb/d	0.79 mg/L	1.2 mg/L
00671	**12/31/2010**	**1/11/2011**	3.1 lb/d	3.7 lb/d	0.73 mg/L	0.86 mg/L
00671	**01/31/2011**	**2/8/2011**	3.9 lb/d	7.6 lb/d	0.99 mg/L	1.9 mg/L
00671	**02/28/2011**	**3/3/2011**	3.2 lb/d	3.7 lb/d	0.73 mg/L	0.86 mg/L
00671	**03/31/2011**	**4/11/2011**	4.6 lb/d	6.9 lb/d	0.41 mg/L	0.61 mg/L
00671	**11/30/2011**	**12/7/2011**	2.9 lb/d	4.4 lb/d	0.38 mg/L	0.58 mg/L
00671	**12/31/2011**	**1/4/2012**	3 lb/d	4 lb/d	0.37 mg/L	0.49 mg/L
00671	**01/31/2012**	**2/2/2012**	2 lb/d	4 lb/d	0.34 mg/L	0.68 mg/L
00671	**02/29/2012**	**3/7/2012**	1.6 lb/d	1.9 lb/d	0.31 mg/L	0.37 mg/L
00671	**03/31/2012**	**4/4/2012**	2 lb/d	2.7 lb/d	0.4 mg/L	0.53 mg/L

Phosphorus, total (as P)
Limit Start Date = 7/1/07
Season = 0

			C1	**C2**	**C3**
			1 mg/L	**1 mg/L**	**1.5 mg/L**
Pram	**MP Dt**	**Rec Dt**	**MO AVG**	**WKLY AVG**	**DAILY MX**
00665	**07/31/2009**	**8/11/2009**	0.32 mg/L	0.36 mg/L	0.36 mg/L
00665	**08/31/2009**	**9/11/2009**	0.36 mg/L	0.42 mg/L	0.42 mg/L
00665	**09/30/2009**	**10/14/2009**	0.31 mg/L	0.46 mg/L	0.46 mg/L
00665	**10/31/2009**	**11/13/2009**	0.21 mg/L	0.28 mg/L	0.28 mg/L
00665	**04/30/2010**	**5/13/2010**	0.23 mg/L	0.3 mg/L	0.3 mg/L
00665	**05/31/2010**	**6/8/2010**	0.24 mg/L	0.36 mg/L	0.36 mg/L
00665	**06/30/2010**	**7/13/2010**	0.29 mg/L	0.38 mg/L	0.38 mg/L
00665	**07/31/2010**	**8/11/2010**	0.48 mg/L	0.55 mg/L	0.55 mg/L
00665	**08/31/2010**	**9/13/2010**	0.63 mg/L	0.76 mg/L	0.76 mg/L
00665	**09/30/2010**	**10/14/2010**	0.66 mg/L	0.7 mg/L	0.7 mg/L
00665	**10/31/2010**	**11/8/2010**	0.64 mg/L	0.64 mg/L	0.64 mg/L
00665	**04/30/2011**	**5/9/2011**	0.45 mg/L	0.64 mg/L	0.64 mg/L
00665	**05/31/2011**	**6/7/2011**	0.4 mg/L	0.47 mg/L	0.47 mg/L
00665	**06/30/2011**	**7/7/2011**	0.37 mg/L	0.54 mg/L	0.54 mg/L
00665	**07/31/2011**	**8/5/2011**	0.45 mg/L	0.7 mg/L	0.7 mg/L
00665	**08/31/2011**	**9/6/2011**	0.46 mg/L	0.74 mg/L	0.74 mg/L
00665	**09/30/2011**	**10/7/2011**	0.6 mg/L	0.81 mg/L	0.81 mg/L
00665	**10/31/2011**	**11/3/2011**	0.53 mg/L	0.65 mg/L	0.65 mg/L
00665	**04/30/2012**	**5/2/2012**	0.43 mg/L	0.54 mg/L	0.54 mg/L
00665	**05/31/2012**	**6/5/2012**	0.6 mg/L	0.91 mg/L	0.91 mg/L
00665	**06/30/2012**	**7/3/2012**	0.98 mg/L	1.6 mg/L	1.6 mg/L

Season = 1

Pram	MP Dt	Rec Dt	C1 Req. Mon. mg/L MO AVG
00665	11/30/2009	12/8/2009	0.13 mg/L
00665	12/31/2009	1/14/2010	0.2 mg/L
00665	01/31/2010	2/12/2010	1.44 mg/L
00665	02/28/2010	3/11/2010	0.68 mg/L
00665	03/31/2010	4/13/2010	0.46 mg/L
00665	11/30/2010	12/7/2010	0.78 mg/L
00665	12/31/2010	1/11/2011	0.88 mg/L
00665	01/31/2011	2/8/2011	1.23 mg/L
00665	02/28/2011	3/3/2011	1 mg/L
00665	03/31/2011	4/11/2011	0.6 mg/L
00665	11/30/2011	12/7/2011	0.51 mg/L
00665	12/31/2011	1/4/2012	0.6 mg/L
00665	01/31/2012	2/2/2012	0.42 mg/L
00665	02/29/2012	3/7/2012	0.48 mg/L
00665	03/31/2012	4/4/2012	0.67 mg/L

Solids, total suspended
Limit Start Date = 7/1/07
Season = 0

Pram	MP Dt	Rec Dt	Q1 208 lb/d MO AVG	Q2 208 lb/d WKLY AVG	C1 25 mg/L MO AVG	C2 25 mg/L WKLY AVG	C3 Req. Mon. mg/L DAILY MX
00530	07/31/2009	8/11/2009	5 lb/d	11 lb/d	1 mg/L	2 mg/L	2 mg/L
00530	08/31/2009	9/12/2009	1 lb/d	6 lb/d	0 mg/L	1 mg/L	1 mg/L
00530	09/30/2009	10/14/2009	5 lb/d	19 lb/d	1 mg/L	4 mg/L	4 mg/L
00530	10/31/2009	11/13/2009	0 lb/d	0 lb/d	0 mg/L	0 mg/L	0 mg/L
00530	11/30/2009	12/8/2009	3.76 lb/d	NODI Code =	0.8 mg/L	3 mg/L	3 mg/L
00530	11/30/2009	1/13/2010	NODI Code =	14.1 lb/d	NODI Code =	NODI Code =	NODI Code =
00530	12/31/2009	1/14/2010	22.8 lb/d	32.6 lb/d	4.2 mg/L	6 mg/L	6 mg/L
00530	01/31/2010	2/12/2010	10.04 lb/d	47.31 lb/d	2 mg/L	5.8 mg/L	9 mg/L
00530	02/28/2010	3/11/2010	36.6 lb/d	52.3 lb/d	7 mg/L	10 mg/L	10 mg/L
00530	03/31/2010	4/13/2010	43 lb/d	69 lb/d	6 mg/L	8 mg/L	8 mg/L
00530	04/30/2010	5/13/2010	15 lb/d	21 lb/d	2 mg/L	4 mg/L	4 mg/L
00530	05/31/2010	6/8/2010	19 lb/d	31 lb/d	4 mg/L	6 mg/L	6 mg/L
00530	06/30/2010	7/13/2010	13 lb/d	14 lb/d	3 mg/L	3 mg/L	3 mg/L
00530	07/31/2010	8/11/2010	9 lb/d	13 lb/d	2 mg/L	3 mg/L	3 mg/L
00530	08/31/2010	9/13/2010	15 lb/d	24 lb/d	4 mg/L	6 mg/L	6 mg/L
00530	09/30/2010	10/14/2010	11.5 lb/d	17.6 lb/d	3 mg/L	4 mg/L	4 mg/L
00530	10/31/2010	11/8/2010	10 lb/d	13 lb/d	2 mg/L	3 mg/L	3 mg/L
00530	11/30/2010	12/7/2010	17 lb/d	29 lb/d	4 mg/L	6 mg/L	6 mg/L
00530	12/31/2010	1/11/2011	22 lb/d	26 lb/d	5 mg/L	6 mg/L	6 mg/L
00530	01/31/2011	2/8/2011	28 lb/d	64 lb/d	7 mg/L	16 mg/L	16 mg/L
00530	02/28/2011	3/3/2011	30 lb/d	44 lb/d	6 mg/L	10 mg/L	10 mg/L
00530	03/31/2011	4/11/2011	68 lb/d	90 lb/d	6 mg/L	8 mg/L	8 mg/L
00530	04/30/2011	5/9/2011	31 lb/d	62 lb/d	4 mg/L	8 mg/L	8 mg/L
00530	05/31/2011	6/7/2011	27 lb/d	33 lb/d	4 mg/L	5 mg/L	5 mg/L
00530	06/30/2011	7/7/2011	12 lb/d	12 lb/d	2 mg/L	2 mg/L	2 mg/L
00530	07/31/2011	8/5/2011	5 lb/d	10 lb/d	1 mg/L	2 mg/L	2 mg/L
00530	08/31/2011	9/6/2011	16 lb/d	21 lb/d	3 mg/L	4 mg/L	4 mg/L
00530	09/30/2011	10/7/2011	55 lb/d	95 lb/d	7 mg/L	12 mg/L	12 mg/L
00530	10/31/2011	11/3/2011	19 lb/d	32 lb/d	3 mg/L	5 mg/L	5 mg/L
00530	11/30/2011	12/7/2011	23 lb/d	45 lb/d	3 mg/L	6 mg/L	6 mg/L
00530	12/31/2011	1/4/2012	16 lb/d	25 lb/d	2 mg/L	3 mg/L	3 mg/L
00530	01/31/2012	2/2/2012	18 lb/d	23 lb/d	3 mg/L	4 mg/L	4 mg/L
00530	02/29/2012	3/7/2012	25 lb/d	50 lb/d	5 mg/L	10 mg/L	10 mg/L
00530	03/31/2012	4/4/2012	25 lb/d	35 lb/d	5 mg/L	7 mg/L	7 mg/L
00530	04/30/2012	5/2/2012	13 lb/d	17 lb/d	3 mg/L	4 mg/L	4 mg/L
00530	05/31/2012	6/5/2012	14 lb/d	19 lb/d	2 mg/L	4 mg/L	4 mg/L
00530	06/30/2012	7/3/2012	10 lb/d	14 lb/d	2 mg/L	3 mg/L	3 mg/L

Monitoring Location = K

BOD, 5-day, percent removal
Limit Start Date = 7/1/07
Season = 0

			C1

Pram	MP Dt	Rec Dt	85 % MO AV MN
81010	07/31/2009	8/11/2009	96.5 %
81010	08/31/2009	9/11/2009	95.8 %
81010	09/30/2009	10/14/2009	98.5 %
81010	10/31/2009	11/13/2009	97 %
81010	11/30/2009	12/8/2009	96.5 %
81010	12/31/2009	1/14/2010	94.5 %
81010	01/31/2010	2/12/2010	96 %
81010	02/28/2010	3/11/2010	97 %
81010	03/31/2010	4/13/2010	93.6 %
81010	04/30/2010	5/13/2010	98 %
81010	05/31/2010	6/8/2010	98.9 %
81010	06/30/2010	7/13/2010	98.3 %
81010	07/31/2010	8/11/2010	97.3 %
81010	08/31/2010	9/13/2010	98.3 %
81010	09/30/2010	10/14/2010	96.8 %
81010	10/31/2010	11/8/2010	97.4 %
81010	11/30/2010	12/7/2010	97.7 %
81010	12/31/2010	1/11/2011	98.6 %
81010	01/31/2011	2/8/2011	96.8 %
81010	02/28/2011	3/3/2011	96.7 %
81010	03/31/2011	4/11/2011	97.8 %
81010	04/30/2011	5/9/2011	96 %
81010	05/31/2011	6/7/2011	99 %
81010	06/30/2011	7/7/2011	98 %
81010	07/31/2011	8/5/2011	98 %
81010	08/31/2011	9/6/2011	99 %
81010	09/30/2011	10/7/2011	98.4 %
81010	10/31/2011	11/3/2011	99 %
81010	11/30/2011	12/7/2011	98.7 %
81010	12/31/2011	1/4/2012	98.7 %
81010	01/31/2012	2/2/2012	97.4 %
81010	02/29/2012	3/7/2012	95.8 %
81010	03/31/2012	4/4/2012	97.8 %
81010	04/30/2012	5/2/2012	98.5 %
81010	05/31/2012	6/5/2012	98.4 %
81010	06/30/2012	7/3/2012	97.3 %

Solids, suspended percent removal
Limit Start Date = 7/1/07
Season = 0

Pram	MP Dt	Rec Dt	C1 85 % MO AV MN
81011	07/31/2009	8/11/2009	99.4 %
81011	08/31/2009	9/11/2009	99.9 %
81011	09/30/2009	10/14/2009	99.4 %
81011	10/31/2009	11/13/2009	100 %
81011	11/30/2009	12/8/2009	100 %
81011	12/31/2009	1/14/2010	98 %
81011	01/31/2010	2/12/2010	96 %
81011	02/28/2010	3/11/2010	96 %
81011	03/31/2010	4/13/2010	96 %
81011	04/30/2010	5/13/2010	98 %
81011	05/31/2010	6/8/2010	98 %
81011	06/30/2010	7/13/2010	99 %
81011	07/31/2010	8/11/2010	99 %
81011	08/31/2010	9/13/2010	99 %
81011	09/30/2010	10/14/2010	99 %
81011	10/31/2010	11/8/2010	99 %
81011	11/30/2010	12/7/2010	99 %
81011	12/31/2010	1/11/2011	98 %
81011	01/31/2011	2/8/2011	96.5 %
81011	02/28/2011	3/3/2011	97 %
81011	03/31/2011	4/11/2011	94 %
81011	04/30/2011	5/9/2011	98 %
81011	05/31/2011	6/7/2011	99 %

81011	**06/30/2011**	**7/7/2011**	99 %
81011	**07/31/2011**	**8/5/2011**	99.4 %
81011	**08/31/2011**	**9/6/2011**	98.6 %
81011	**09/30/2011**	**10/7/2011**	94.9 %
81011	**10/31/2011**	**11/3/2011**	98.6 %
81011	**11/30/2011**	**12/7/2011**	98.4 %
81011	**12/31/2011**	**1/4/2012**	98.2 %
81011	**01/31/2012**	**2/2/2012**	98.3 %
81011	**02/29/2012**	**3/7/2012**	97.6 %
81011	**03/31/2012**	**4/4/2012**	97.7 %
81011	**04/30/2012**	**5/2/2012**	99.1 %
81011	**05/31/2012**	**6/5/2012**	99.1 %
81011	**06/30/2012**	**7/3/2012**	98.8 %

001B

Monitoring Location = 1

LC50 Static 48Hr Acute Ceriodaphnia

Limit Start Date = 8/1/07

Season = 0

			C1
			100 %
Pram	**MP Dt**	**Rec Dt**	**DAILY MN**
TAA3B	**08/31/2009**	**9/21/2009**	100 %
TAA3B	**11/30/2009**	**1/13/2010**	100 %
TAA3B	**02/28/2010**	**3/11/2010**	100 %
TAA3B	**05/31/2010**	**6/16/2010**	100 %
TAA3B	**08/31/2010**	**8/31/2010**	100 %
TAA3B	**11/30/2010**	**12/9/2010**	100 %
TAA3B	**02/28/2011**	**3/29/2011**	100 %
TAA3B	**05/31/2011**	**6/7/2011**	100 %
TAA3B	**08/31/2011**	**9/6/2011**	100 %
TAA3B	**11/30/2011**	**12/12/2011**	100 %
TAA3B	**02/29/2012**	**3/9/2012**	100 %
TAA3B	**05/31/2012**	**6/12/2012**	100 %

Noel Statre 7Day Chronic Ceriodaphnia

Limit Start Date = 8/1/07

Season = 0

			C1
			7 %
Pram	**MP Dt**	**Rec Dt**	**DAILY MN**
TBP3B	**08/31/2009**	**9/21/2009**	100 %
TBP3B	**11/30/2009**	**1/13/2010**	100 %
TBP3B	**02/28/2010**	**3/11/2010**	7 %
TBP3B	**05/31/2010**	**6/16/2010**	6.25 %
TBP3B	**08/31/2010**	**8/31/2010**	25 %
TBP3B	**11/30/2010**	**12/9/2010**	25 %
TBP3B	**02/28/2011**	**3/29/2011**	6.25 %
TBP3B	**05/31/2011**	**6/7/2011**	25 %
TBP3B	**08/31/2011**	**9/6/2011**	100 %
TBP3B	**11/30/2011**	**12/12/2011**	50 %
TBP3B	**02/29/2012**	**3/9/2012**	50 %
TBP3B	**05/31/2012**	**6/12/2012**	100 %

Appendix B

Aluminum Data from Whole Effluent Toxicity Tests

Date	Effluent (µg/L)	River (µg/L)
11/9/2009	71	94
2/8/2010	243	82
5/10/2010	93	138
8/10/2010	100	90
11/18/2010	99	109
2/7/2011	108	74
5/9/2011	48	47
8/8/2011	77	38
11/14/2011	53	146
2/20/2012	140	70
median	96	86

Reasonable Potential Analysis
no ND, >10 data points, Lognormal distribution

Dilution Factor:	10

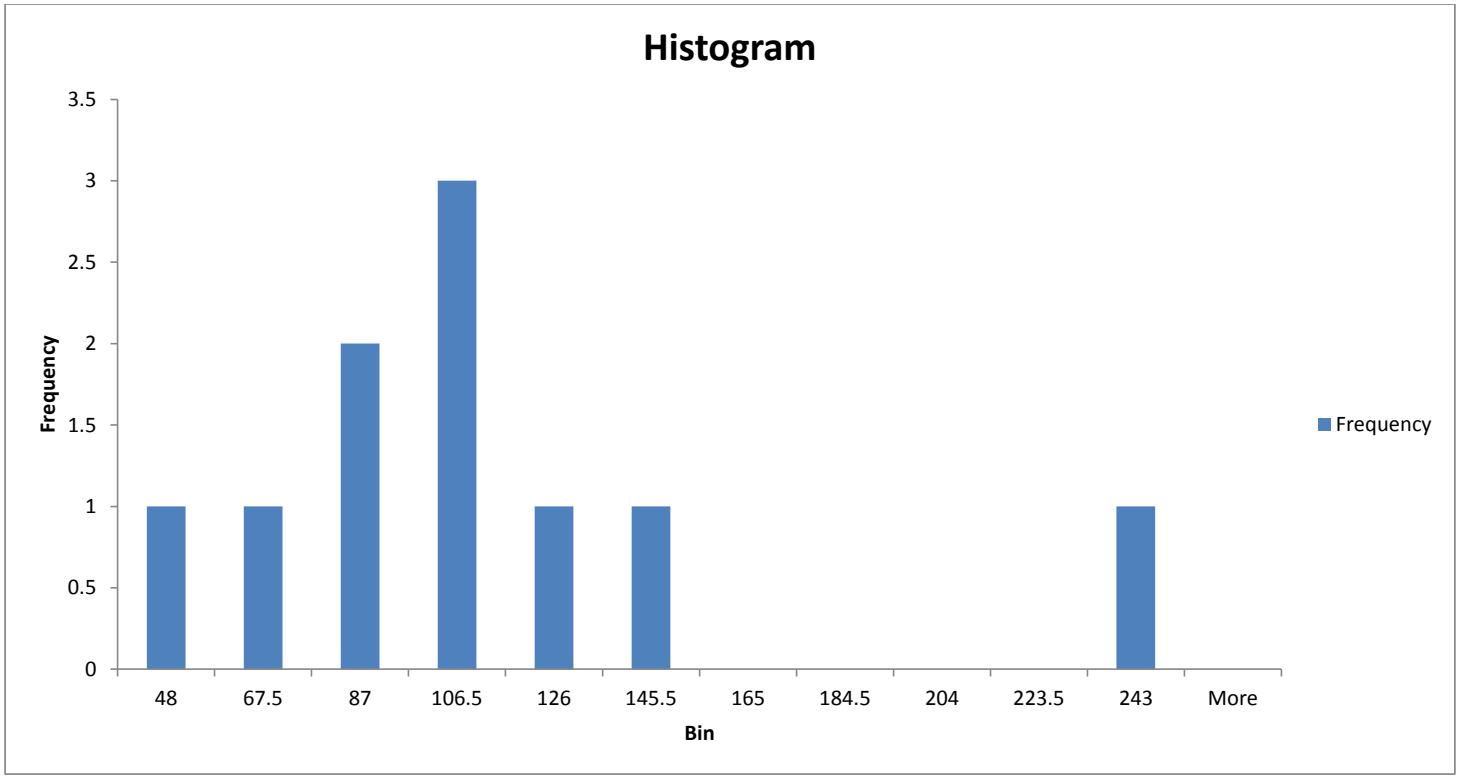
Date	Al (ug/L)	*Yi* lnAl (ug/L)
8/10/2009	71	4.2627
11/9/2009	243	5.4931
2/8/2010	93	4.5326
5/10/2010	100	4.6052
8/10/2010	99	4.5951
11/18/2010	108	4.6821
2/7/2011	48	3.8712
5/9/2011	77	4.3438
8/8/2011	53	3.9703
11/14/2011	140	4.9416

Al - (Lognormal distribution, no ND)

Estimated Daily Maximum Effluent Concentration

k = number of daily samples =	10	
u_y = Avg of Nat. Log of daily Discharge =	4.52977	
s_y = Std Dev. of Nat Log of daily discharge =	0.46944	
σ_y^2 = estimated variance = (SUM[$(y_i - u_y)^2$]) / (k-1) =	0.220377315	
cv(x)= Coefficient of Variation =	0.103635194	
99th Percentile Daily Max Estimate = exp (u_y + 2.326*s_y)		
Estimated Daily Max 99th percentile =	**276.3577**	**ug/L**
Estimated Daily Max including Dilution Factor =		**ug/L**
95th Percentile Daily Max Estimate = exp (u_y + 1.645*s_y)		
Estimated Daily Max =	**200.7389**	**ug/L**
Estimated Daily Max including Dilution Factor =		**ug/L**

Bin	*Frequency*
48	1
67.5	1
87	2
106.5	3
126	1
145.5	1
165	0
184.5	0
204	0
223.5	0
243	1
More	0



Aluminum Reasonable Potential Analysis

Acute					
	Downstream conc = (QeCe + QsCs)/Qr			96.94432585	Water Quality Criterion 750.00
					There is NO reasonable potential
Qr =	16.25	cfs	7Q10 + design flow		
Qs =	14.7	cfs	7Q10		
Cs =	86	ug/l	Background conc		
Qe =	1.55	cfs	design flow		
Ce =	200.74	ug/l	maximum concentration		

Chronic					
	Downstream conc = (QeCe + QsCs)/Qr			96.94443077	Water Quality Criterion 87.00
					There is reasonable potential
Qr =	16.25	cfs	7Q10 + design flow		
Qs =	14.7	cfs	7Q10		
Cs =	86	ug/l	Background conc		
Qe =	1.55	cfs	design flow		
Ce =	200.74	ug/l	95th percentile projection		

Permit Limit Calculation

$$Q_sC_s + Q_dC_d = Q_rC_r$$

Monthly Average
Permit Limit = $[C_r \times (Q_d + Q_s) - Q_sC_s]/Q_d =$ **96.48387 mg/L**

			Units
Where			
C_s=	background concentration	86.00	µg/L
Q_s=	critical streamflow	14.7	cfs
Qd=	critical effluent flow	1.55	cfs
Cr=	water quality criterion	87	µg/L

Appendix C

Copper Data from Whole Effluent Toxicity Tests

Date	Effluent (µg/L)	River (µg/L)
8/10/2009	12	4
11/9/2009	12	2
2/8/2010	20	<1
5/10/2010	9	2
8/10/2010	14	2
11/18/2010	12	3
2/7/2011	12	1
5/9/2011	10	10
8/8/2011	11	1
11/14/2011	7	<1
2/20/2012	6	1
median	12	2

Reasonable Potential Analysis
no ND, >10 data points, Lognormal distribution

Dilution Factor:	10

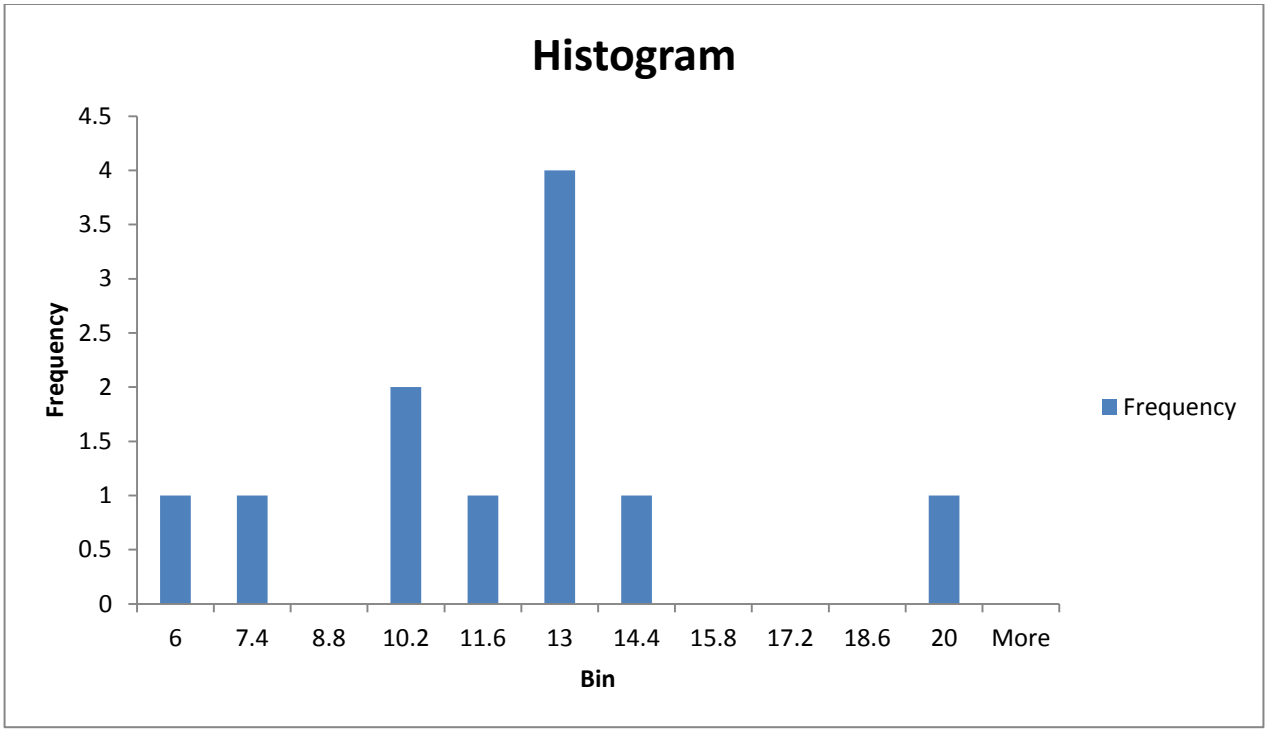
Date	Cu (ug/L)	*Yi* lnCu (ug/L)
8/10/2009	12	2.4849
11/9/2009	12	2.4849
2/8/2010	20	2.9957
5/10/2010	9	2.1972
8/10/2010	14	2.6391
11/18/2010	12	2.4849
2/7/2011	12	2.4849
5/9/2011	10	2.3026
8/8/2011	11	2.3979
11/14/2011	7	1.9459
2/20/2012	6	1.7918

Al - (Lognormal distribution, no ND)

Estimated Daily Maximum Effluent Concentration

k = number of daily samples =	11	
u_y = Avg of Nat. Log of daily Discharge =	2.38271	
s_y = Std Dev. of Nat Log of daily discharge =	0.32625	
σ_y^2 = estimated variance = (SUM[$(y_i - u_y)^2$]) / (k-1) =	0.106435896	
cv(x)= Coefficient of Variation =	0.136921986	
99th Percentile Daily Max Estimate = exp (u_y + 2.326*s_y)		
Estimated Daily Max 99th percentile =	**23.1398**	**ug/L**
Estimated Daily Max including Dilution Factor =		**ug/L**
95th Percentile Daily Max Estimate = exp (u_y + 1.645*s_y)		
Estimated Daily Max =	**18.5298**	**ug/L**
Estimated Daily Max including Dilution Factor =		**ug/L**

Bin	*Frequency*
6	1
7.4	1
8.8	0
10.2	2
11.6	1
13	4
14.4	1
15.8	0
17.2	0
18.6	0
20	1
More	0



Acute					
	Downstream conc = (QeCe + QsCs)/Qr			3.716923077	Water Quality Criterion 3.52
					There is reasonable potential
Qr =	16.25	cfs	7Q10 + design flow		
Qs =	14.7	cfs	7Q10		
Cs =	2	ug/l	Background conc		
Qe =	1.55	cfs	design flow		
Ce =	20.00	ug/l	maximum concentration		

Chronic					
	Downstream conc = (QeCe + QsCs)/Qr			3.576690861	Water Quality Criterion 2.67
					There is reasonable potential
Qr =	16.25	cfs	7Q10 + design flow		
Qs =	14.7	cfs	7Q10		
Cs =	2	ug/l	Background conc		
Qe =	1.55	cfs	design flow		
Ce =	18.53	ug/l	95th percentile projection		

Permit Limit Calculation

$Q_sC_s + Q_dC_d = Q_rC_r$

Maximum Daily
Permit Limit = $[C_r \times (Q_d + Q_s) - Q_sC_s]/Q_d =$ **17.93548 µg/L**

			Units
Where			
C_s=	background concentration	2.00	µg/L
Q_s=	critical streamflow	14.7	cfs
Qd=	critical effluent flow	1.55	cfs
Cr=	acute water quality criterion	3.52	µg/L

$Q_sC_s + Q_dC_d = Q_rC_r$

Monthly Average
Permit Limit = $[C_r \times (Q_d + Q_s) - Q_sC_s]/Q_d =$ **9.024194 µg/L**

			Units
Where			
C_s=	background concentration	2.00	µg/L
Q_s=	critical streamflow	14.7	cfs
Qd=	critical effluent flow	1.55	cfs
Cr=	chronic water quality criterion	2.67	µg/L

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

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

JOINT PUBLIC NOTICE OF A DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE INTO THE WATERS OF THE UNITED STATES UNDER SECTIONS 301 AND 402 OF THE CLEAN WATER ACT, AS AMENDED, AND UNDER SECTIONS 27 AND 43 OF THE MASSACHUSETTS CLEAN WATERS ACT, AS AMENDED, AND REQUEST FOR STATE CERTIFICATION UNDER SECTION 401 OF THE CLEAN WATER ACT.

DATE OF NOTICE: March 8, 2013

NPDES PERMIT NUMBER: MA0100889

PUBLIC NOTICE NUMBER: MA-007-13

NAME AND MAILING ADDRESS OF APPLICANT:

Town of Ware
Department of Public Works
4 ½ Church Street
Ware, Massachusetts 01082

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Ware Wastewater Treatment Plant
30 Robbins Road
Ware, Massachusetts 01082

RECEIVING WATER(S):

Ware River (Segment MA 36-06)
Chicopee River Basin

RECEIVING WATER CLASSIFICATION(S): B - Warm Water Fishery, CSO*

* Although this segment is classified as a CSO (combined sewer overflow) in the 2006 standards, there are currently no CSOs in this segment. Future standards will reflect this fact.

PREPARATION OF THE DRAFT PERMIT:

The U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) have cooperated in the development of a permit for the above identified facility. The effluent limits and permit conditions imposed have been drafted to assure compliance with the Clean Water Act, 33 U.S.C. sections 1251 et seq., the Massachusetts

Clean Waters Act, G.L. c. 21, §§ 26-53, 314 CMR 3.00 and State Surface Water Quality Standards at 314 CMR 4.00. EPA has formally requested that the State certify this draft permit pursuant to Section 401 of the Clean Water Act and expects that the draft permit will be certified. However, sludge conditions in the draft permit are not subject to State certification requirements.

INFORMATION ABOUT THE DRAFT PERMIT:

A fact sheet (describing the type of facility; type and quantities of wastes; a brief summary of the basis for the draft permit conditions; and significant factual, legal and policy questions considered in preparing this draft permit) and the draft permit may be obtained at no cost at http://www.epa.gov/region1/npdes/draft_permits_listing_ma.html or by writing or calling EPA's contact person named below:

Robin L. Johnson
U.S. Environmental Protection Agency – Region 1
5 Post Office Square, Suite 100 (OEP06-1)
Boston, MA 02109-3912
Telephone: (617) 918-1045

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

PUBLIC COMMENT AND REQUEST FOR PUBLIC HEARING:

All persons, including applicants, who believe any condition of this draft permit is inappropriate, must raise all issues and submit all available arguments and all supporting material for their arguments in full by **April 6, 2013**, to the U.S. EPA, 5 Post Office Square, Boston, Massachusetts 02109-3912. Any person, prior to such date, may submit a request in writing to EPA and the State Agency for a public hearing to consider this draft permit. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on this draft permit, the Regional Administrator will respond to all significant comments and make the responses available to the public at EPA's Boston office.

FINAL PERMIT DECISION:

Following the close of the comment period, and after a public hearing, if such hearing is held, the Regional Administrator will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice.

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

KEN MORAFF, ACTING DIRECTOR
OFFICE OF ECOSYSTEM PROTECTION
ENVIRONMENTAL PROTECTION AGENCY – REGION 1