

**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),

Massachusetts Water Resources Authority

is authorized to discharge from the facility located at:

**Clinton Wastewater Treatment Plant
677 High Street
Clinton, MA 01510**

to receiving water named:

South Branch Nashua River (Class B Warm Water Fishery)

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

Operation and maintenance of the sewer system shall be in compliance with the General Requirements of Part II and the terms and conditions of Part D and Part E of this permit. The permittee and each co-permittee are severally liable under Part D and Part E for their own activities and required reporting with respect to the portions of the collection system that they own or operate. They are not liable for violations of Part D and Part E committed by others relative to the portions of the collection system owned and operated by others. Nor are they responsible for any reporting that is required of other permittees under Part D and Part E.

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 last day of the month preceding the effective date.

The responsible Town Departments are:

**Town of Clinton
Department of Public Works
242 Church Street
Clinton, MA 01510**

**Lancaster Sewer District
P.O. Box 773
226 Main Street
South Lancaster, MA 01561**

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 last day of the month preceding the effective date.

This permit supersedes the permit issued on September 27, 2000.

This permit consists of Part I including effluent limitations and monitoring requirements, Part II including General Conditions and Definitions, Attachment A. USEPA Region 1 Freshwater Acute Toxicity Test Procedure and Protocol, February 2011; Attachment B. USEPA Region 1 Freshwater Chronic Toxicity Test Procedure and Protocol, March 2013; Attachment C. Reassessment of Technically Based Industrial Discharge Limits; and Attachment D. Industrial Pretreatment Program Annual Report.

Signed this 21st day of December, 2016

/S/SIGNATURE ON FILE

Ken Moraff, Acting Director
Office of Ecosystem Protection
Environmental Protection Agency
Boston, MA

/S/SIGNATURE ON FILE

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

PART I A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge treated effluent to the South Branch of the Nashua River from outfall serial number 001. Such discharge shall be limited and monitored by the permittee as specified below.

<u>EFFLUENT CHARACTERISTIC</u>	<u>EFFLUENT LIMITS</u>						<u>MONITORING REQUIREMENTS</u>	
	Mass Limits			Concentration Limits				
PARAMETER	AVERAGE MONTHLY	AVERAGE WEEKLY	MAXIMUM DAILY	AVERAGE MONTHLY	AVERAGE WEEKLY	MAXIMUM DAILY	MEASUREMENT FREQUENCY	SAMPLE TYPE ³
FLOW ¹	***	***	***	Report MGD	***	Report MGD	CONTINUOUS	RECORDER
FLOW – Rolling Average ²	***	***	***	3.01 MGD	***	***	CONTINUOUS	RECORDER
BOD ₅ ⁴	500 lbs/Day	500 lbs/Day	Report	20 mg/L	20 mg/L	Report mg/L	3/WEEK	24-HOUR COMPOSITE ⁵
TSS ⁴	500 lbs/Day	500 lbs/Day	Report	20 mg/L	20 mg/L	Report mg/L	3/WEEK	24-HOUR COMPOSITE ⁵
pH RANGE ⁶	6.5 – 8.3 SU SEE PERMIT PAGE 6 OF 16, PARAGRAPH I.A.3.						1/DAY	GRAB
DISSOLVED OXYGEN	***	***	***	6.0 mg/L minimum			2/DAY	GRAB
E. COLI ⁷	***	***	***	126 cfu/100 mL	***	409 cfu/100 mL	1/DAY	GRAB
TOTAL RESIDUAL CHLORINE ^{7, 8, 9}	***	***	***	17.6 µg/L	***	30.4 µg/L	2/DAY	GRAB
TOTAL PHOSPHORUS ^{10, 11, 12} (April 1- October 31) (November 1 – March 31)	3.8 lbs/Day 25.1 lbs/Day	*** ***	*** ***	150 µg/L 1,000 µg/L	*** ***	Report µg/L Report µg/L	3/WEEK 1/WEEK	24-HOUR COMPOSITE ⁵

<u>EFFLUENT CHARACTERISTIC</u>	<u>EFFLUENT LIMITS</u>		<u>MONITORING REQUIREMENT</u>	
	AVERAGE MONTHLY	MAXIMUM DAILY	MEASUREMENT FREQUENCY	SAMPLE TYPE³
<u>TOTAL AMMONIA, as N</u> (April 1 – April 30) (May 1 – May 31) (June 1 – October 31) (November 1 – March 31)	10 mg/L 5 mg/L 2 mg/L 10 mg/L	Report mg/L Report mg/L 3.0 mg/L 35.2 mg/L	1/WEEK 1/WEEK 3/WEEK 1/WEEK	24-HOUR COMPOSITE ⁵
TOTAL RECOVERABLE COPPER	11.6 µg/L	14.0 µg/L	1/MONTH	24-HOUR COMPOSITE ⁵
<u>WHOLE EFFLUENT TOXICITY</u> ^{13, 14, 15, 16, 17, 18} LC50 CHRONIC NOEC Hardness pH Ammonia Total Cadmium Total Chromium Total Lead Total Copper Total Zinc Total Nickel Total Aluminum	*** *** Report mg/L Report S.U. Report mg/L Report µg/L Report µg/L Report µg/L Report µg/L Report µg/L Report µg/L Report µg/L	>100% 62.5% *** *** *** *** *** *** *** *** ***	4/YEAR	24-HOUR COMPOSITE ⁵

Footnotes:

1. The monthly average and maximum daily flows for each month shall be reported. An attachment reporting total flow and precipitation for each date shall be included with the DMRs.
2. This is an annual average limit, 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 samples shall be taken after appropriate treatment and prior to discharge to Outfall 001. All sampling shall be representative of the effluent that is discharged through Outfall 001 to the South Branch of the Nashua River. A routine sampling program shall be developed in which samples are taken at the same location, same time and same day(s) of every month. Any deviations from the routine sampling program shall be documented in correspondence appended to the applicable discharge monitoring report that is submitted to EPA. In addition, all samples shall be analyzed using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136.
4. Sampling required for influent and effluent.
5. A 24-hour composite sample will consist of at least twenty-four (24) grab samples, flow proportional, taken for a consecutive 24 hour period (e.g. 0700 Monday - 0700 Tuesday).
6. Required for State Certification.
7. *E. coli* and total residual chlorine limits and monitoring requirements are in effect year round. The average monthly limit for *E. coli* is expressed as the geometric mean. The samples for *E. coli* shall be taken at the same time as a sample for chlorine.
8. Chlorination and dechlorination systems shall include an alarm system for indicating system interruptions or malfunctions. Any interruption or malfunction of the chlorine or dechlorination 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, the estimated amount of time that the reduced levels of chlorine or dechlorination chemicals occurred, and measures taken to prevent future occurrences.
9. For every day that more than two chlorine grab samples are analyzed on the final effluent, the monthly DMR shall include an attachment documenting the individual final effluent grab sample results for that day, the date and time of each sample, the analytical method, and a summary of any operational modifications implemented in response to the sample results. This requirement applies to all samples taken on the final effluent, including screening level and process control samples. All final effluent test results utilizing an EPA approved analytical method shall be used in the calculation and reporting of the monthly average and maximum daily discharge values submitted on the DMR.
10. From the effective date of the permit until April 1, 2019, the permittee shall achieve the following total phosphorus limitations from April 1 – October 31 while working towards achieving compliance with the new 150 µg/L seasonal total phosphorus limitation (See Part I.B. of this

permit, Schedule of Compliance): 1,000 µg/L average monthly, report maximum daily in µg/L and report average monthly loadings in pounds per day.

11. The 150 µg/L total phosphorus limit is a monthly average limit and applies to the period of April 1 – October 31 upon completion of the Compliance Schedule referenced above. In addition, the maximum daily concentration value must be reported for each month.
12. The 1,000 µg/l limit for November 1 -- March 31 is a monthly average limit and goes into effect November 1, 2019. From November 1 – March 31 of each year until November 1, 2019, the permittee shall report the monthly average and maximum daily values on each month's discharge monitoring report. These permit limits may be modified, subject to public notice and comment, based upon revisions to the water quality standards, compliance with the requirements of a Total Maximum Daily Load (TMDL), or upon a demonstration that an alternative permit limit will achieve water quality standards and the goals of the Clean Water Act.
13. The permittee shall conduct acute and chronic toxicity tests four (4) times per year using a single species, the daphnid, *Ceriodaphnia dubia*. Toxicity test samples shall be collected during the months of March, June, September and December. The test results shall be submitted by the last day of the month following the completion of the test. The results are due by April 30, July 31, October 31 and January 31, respectively. The tests must be performed in accordance with test procedures and protocols specified in Attachment A of this permit.
14. Each toxicity test report shall include a map or GPS coordinates of discharge location and receiving water sample location.
15. The LC50 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.
16. C-NOEC (chronic-no observed effect concentration) is defined as the highest concentration of toxicant or effluent to which organisms are exposed in a life cycle or partial life cycle test which causes no adverse effect on growth, survival, or reproduction at a specific time of observation as determined from hypothesis testing where the test results exhibit a linear-dose relationship. However, where the test results do not exhibit a linear dose-response relationship, the permittee must report the lowest concentration where there is no observable effect. The "62.5 or greater" limit is defined as a sample which is composed of 62.5% (or greater) effluent, the remainder being dilution water. This is a maximum daily limit.
17. 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 Attachments A and B (Chronic and Acute Toxicity Test Procedures and Protocols) 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.
18. For each whole effluent toxicity test the permittee shall report on the appropriate discharge monitoring report, (DMR), the concentrations of the hardness, pH, ammonia nitrogen as nitrogen, total recoverable aluminum, cadmium, copper, lead, nickel, and zinc found in the 100 percent effluent sample. All these aforementioned chemical parameters shall be determined to at least the minimum quantification level shown in Attachment A. Also the permittee should note that all

chemical parameter results must still be reported in the appropriate toxicity report.

Part I. A. (continued)

2. The discharge shall not cause a violation of the water quality standards of the receiving waters.
3. The pH of the effluent shall neither be less than 6.5 nor greater than 8.3 and not more than 0.5 units outside of the natural background range. There shall be no change from natural background conditions that would impair any use assigned to this water as a Class B Water.
4. The discharge shall not cause objectionable discoloration of the receiving waters.
5. The effluent shall not contain a visible oil sheen, foam, or floating solids at any time.
6. 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.
7. The results of sampling for any parameter above its required frequency must also be reported.
8. The use of aluminum in the treatment process is prohibited.
9. All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Director of the following:
 - a. Any new introduction of pollutants into that POTW from an indirect discharger in a primary industry category discharging process water; and
 - b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
 - c. For purposes of this paragraph, adequate notice shall include information on:
 - (1) The quantity and quality of effluent introduced into the POTW; and
 - (2) Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.
10. Prohibitions Concerning Interference and Pass Through:
 - a. Pollutants introduced into POTWs by a non-domestic source (user) shall not pass through the POTW or interfere with the operation or performance of the works.
 - b. If, within 30 days after notice of an interference or pass through violation has been sent by EPA to the POTW and to persons or groups who have requested such notice, the POTW fails to commence appropriate enforcement action to correct the violation, EPA may take appropriate enforcement action.

11. 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.

12. 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. COMPLIANCE SCHEDULE

1. 150 µg/l Total Phosphorus Limitation (April 1st - October 31st)

This limit shall be achieved in accordance with the following schedule:

- a. Complete construction of necessary upgrades and submit a status report to EPA no later than October 31, 2017.
- b. From April 1, 2018 through October 31, 2018, operate the facility to optimize phosphorus removal using ferric salts.
- c. Submit a status report to EPA regarding phosphorus removal optimization no later than October 31, 2018.
- d. The 150 µg/L (0.15 mg/L) total phosphorus limitation shall become effective April 1, 2019.

2. 1,000 µg/L Total Phosphorus Limitation (November 1 - March 31)

- a. From the effective date of the permit through March 31, 2017, report the average monthly and maximum daily total phosphorus concentrations in the discharge.
- b. From November 1, 2017 through March 31, 2018, operate the facility to optimize phosphorus removal relative to the 1.0 mg/L limit. Report the average monthly and maximum daily total phosphorus concentrations in the discharge.
- c. The 1,000 µg/L (1 mg/L) total phosphorus limit for the winter period (November 1 - March 31) shall become effective November 1, 2019.

C. INDUSTRIAL PRETREATMENT PROGRAM

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

2. 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.
3. Within 180 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.
4. In preparing this evaluation, the permittee shall complete and submit the attached form (Attachment C) 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).
5. 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.
6. The permittee shall provide the EPA (and State) with an annual report describing the permittee's pretreatment program activities for the previous pretreatment program reporting year 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 October 31 of each year.
7. 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.

8. 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.
9. 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.C.3.

D. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM

Operation and maintenance of the collection system owned and operated respectively by the Town of Clinton ("Clinton") and the Lancaster Sewer District ("Lancaster") shall be in compliance with the General Requirements of Part II and the terms and conditions of Part D and Part E of this permit. Each of Clinton and Lancaster respectively shall only be responsible under Part II, Part D and Part E for only its own infrastructure, activities and required reporting with respect to the portions of the collection system that each owns or operates.

Operation and maintenance of that portion of the collection system and the entirety of the treatment system owned and operated by MWRA shall be in compliance with the General Requirements of Part II and the terms and conditions of Part D and Part E of this permit. MWRA shall only be responsible under Part II, Part D and Part E for its own infrastructure, activities and required reporting with respect to the portion of the collection and treatment system that it owns or operates. In no event shall Permittee Massachusetts Water Resources Authority be responsible for the acts or failure to act of Permittee Town of Clinton or Permittee Lancaster Sewer District, or for the failure to properly operate or maintain any collection system or portion of a collection system that it does not own or operate. No Permittee shall be responsible for violations of Part II, Part D and Part E committed by another Permittee relative to the portions of the collection system owned and operated by such other Permittee. In the event of any conflict between the above provisions and any other term or provision of this Permit, the above provisions shall control. The permittee and each co-permittee are required to complete the following activities for the respective portions of the collection system which they operate:

1. **Maintenance Staff**

The permittee and co-permittees shall each 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 D.5. below.

2. **Preventive Maintenance Program**

The permittee and co-permittees shall each 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 D.5. below.

3. Infiltration/Inflow

The permittee and co-permittees 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 D.5. below.

4. Collection System Mapping

Within 30 months of the effective date of this permit, the permittee and co-permittees shall each 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 and co-permittees shall each develop and implement a Collection System Operation and Maintenance Plan.

- a. Within six (6) months of the effective date of the permit, the permittee and co-permittees shall each 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 submitted and implemented 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 and co-permittees' 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 and co-permittees shall each submit a summary report of activities related to the implementation of its Collection System O & M Plan during the previous calendar year. The report shall be submitted to EPA and MassDEP annually by March 31. The summary report shall, at a minimum, include:

- a. A description of the staffing levels maintained during the year;
- b. A map and a description of inspection and maintenance activities conducted and corrective actions taken during the previous year;
- c. Expenditures for any collection system maintenance activities and corrective actions taken during the previous year;
- d. A map with areas identified for investigation/action in the coming year;
- e. If treatment plant flow has reached 80% of the design flow (2.4 MGD) 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 and co-permittees shall provide an alternative power source(s) sufficient to operate the portion of the publicly owned treatment works¹ it owns and operates.

E. UNAUTHORIZED DISCHARGES

The permittee and co-permittees are authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfall 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 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 MassDEP Regional Office telephone numbers). The reporting form and instructions for its completion may be found online at <http://www.mass.gov/eea/agencies/massdep/service/approvals/sanitary-sewer-overflow-bypass-backup-notification.html>.

F. SLUDGE

The permittee shall comply with all existing federal and state laws and regulations that apply to sewage sludge use and disposal practices and with the CWA Section 405 (d) technical standards.

The permittee shall comply with the more stringent of either the state or federal (40 CFR Part 503) requirements.

1. The requirements and technical standards of 40 CFR Part 503 apply to facilities which perform one or more of the following use or disposal practices.
 - a. Land application - the use of sewage sludge to condition or fertilize the soil
 - b. Surface disposal - the placement of sewage sludge in a sludge-only landfill
 - c. Sewage sludge incineration in a sludge-only incinerator
2. The 40 CFR Part 503 conditions do not apply to facilities which place sludge within a municipal solid waste landfill. These conditions also do not apply to facilities which do not dispose of sewage sludge during the life of the permit but rather treat the sludge (e.g. lagoons- reed beds), or are otherwise excluded under 40 CFR 503.6.
3. The permittee shall use and comply with the sludge compliance guidance document² to determine appropriate conditions. Appropriate conditions contain the following elements.
 - a. General requirements

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

² <http://epa.gov/region1/npdes/permits/generic/sludgeguidance.pdf>

- b. Pollutant limitations
- c. Operational Standards (pathogen reduction requirements and vector attraction reduction requirements)
- d. Management practices
- e. Record keeping
- f. Monitoring
- g. Reporting

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

4. The permittee shall monitor the pollutant concentrations, pathogen reduction and vector attraction reduction at the following frequency. This frequency is based upon the volume of sewage sludge generated at the facility in dry metric tons per year
- a. less than 290 1/year
 - b. 290 to less than 1500 1/quarter
 - c. 1500 to less than 15000 6/year
 - d. 15000 + 1/month

The permittee shall sample the sewage sludge using the procedures detailed in 40 CFR 503.8.

5. The permittee shall submit an annual report containing the information specified in the guidance by **February 19 of each year**. Reports shall be submitted to the address contained in the reporting section of the permit. Sludge monitoring is not required by the permittee when the permittee is not responsible for the ultimate sludge disposal. The permittee must be assured that any third party contractor is in compliance with appropriate regulatory requirements. In such case, the permittee is required only to submit an annual report by February 19 containing the following information:
- a. Name and address of contractor responsible for sludge disposal.
 - b. Quantity of sludge in dry metric tons removed from the facility by the sludge contractor.

G. MONITORING AND REPORTING

The monitoring program in the permit specifies sampling and analysis, which will provide continuous information on compliance and the reliability and effectiveness of the installed pollution abatement equipment. The approved analytical procedures found in 40 CFR Part 136 are required unless other procedures are explicitly required in the permit. The Permittee is obligated to monitor and report sampling results to EPA and the MassDEP within the time specified within the permit.

Unless otherwise specified in this permit, the permittee shall submit reports, requests, and information and provide notices in the manner described in this section.

1. Submittal of DMRs Using NetDMR

The permittee shall continue to submit its monthly monitoring data in discharge monitoring reports (DMRs) to EPA and MassDEP no later than the 15th day of the month electronically using NetDMR. When the permittee submits DMRs using NetDMR, it is not required to submit hard copies of DMRs to EPA or MassDEP.

2. Submittal of Reports as NetDMR Attachments

Unless otherwise specified in this permit, the permittee shall electronically submit all reports to EPA as NetDMR attachments rather than as hard copies. Permittees shall continue to send hard copies of reports other than DMRs to MassDEP until further notice from MassDEP. (See Part I.G.6. for more information on state reporting.) Because the due dates for reports described in this permit may not coincide with the due date for submitting DMRs (which is no later than the 15th day of the month), a report submitted electronically as a NetDMR attachment shall be considered timely if it is electronically submitted to EPA using NetDMR with the next DMR due following the particular report due date specified in this permit.

3. Submittal of Pre-treatment Related Reports

All reports and information required of the permittee in the Industrial Users and Pretreatment Program section of this permit shall be submitted to the Office of Ecosystem Protection's Pretreatment Coordinator in Region 1 EPA's Office of Ecosystem Protection (OEP). These requests, reports and notices include:

- a. Annual Pretreatment Reports,
- b. Pretreatment Reports Reassessment of Technically Based Industrial Discharge Limits Form,
- c. Revisions to Industrial Discharge Limits,
- d. Report describing Pretreatment Program activities, and
- e. Proposed changes to a Pretreatment Program

This information shall be submitted to EPA/OEP as a hard copy at the following address:

**U.S. Environmental Protection Agency
Office of Ecosystem Protection
Regional Pretreatment Coordinator
5 Post Office Square - Suite 100 (OEP06-03)
Boston, MA 02109-3912**

4. Submittal of Requests and Reports to EPA/OEP

The following requests, reports, and information described in this permit shall be submitted to the EPA/OEP NPDES Applications Coordinator in the EPA Office Ecosystem Protection (OEP).

- a. Transfer of Permit notice
- b. Request for changes in sampling location
- c. Request for reduction in testing frequency
- d. Request for reduction in WET testing requirement
- e. Report on unacceptable dilution water / request for alternative dilution water for WET testing

- f. Notification of proposal to add or replace chemicals and bio-remedial agents including microbes

These reports, information, and requests shall be submitted to EPA/OEP electronically at R1NPDES.Notices.OEP@epa.gov or by hard copy mail to the following address:

**U.S. Environmental Protection Agency
Office of Ecosystem Protection
EPA/OEP NPDES Applications Coordinator
5 Post Office Square - Suite 100 (OEP06-03)
Boston, MA 02109-3912**

5. Submittal of Reports in Hard Copy Form

The following notifications and reports shall be submitted as hard copy with a cover letter describing the submission. These reports shall be signed and dated originals submitted to EPA.

- a. Written notifications required under Part II
- b. Notice of unauthorized discharges, including Sanitary Sewer Overflow (SSO) reporting
- c. Collection System Operation and Maintenance Plan (from co-permittee)
- d. Report on annual activities related to O&M Plan (from co-permittee)
- e. Sludge monitoring reports

This information shall be submitted to EPA/OES at the following address:

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

All sludge monitoring reports required herein shall be submitted only to:

**U.S. Environmental Protection Agency, Region 7
Biosolids Center
Water Enforcement Branch
11201 Renner Boulevard
Lenexa, Kansas 66219**

6. State Reporting

Unless otherwise specified in this permit, duplicate signed copies of all reports, information, requests or notifications described in this permit, including the reports, information, requests or notifications described in Parts I.G.3, I.G.4, and I.G.5 also shall be submitted to the State at the following addresses:

**MassDEP – Central Region
Bureau of Resource Protection
8 New Bond Street
Worcester, Massachusetts 01606**

Copies of toxicity tests only shall be submitted to:

**Massachusetts Department of Environmental Protection
Watershed Planning Program
8 New Bond Street
Worcester, Massachusetts 01606**

7. Verbal Reports and Verbal Notifications

Any verbal reports or verbal notifications, if required in Parts I and/or II of this permit, shall be made to both EPA and to MassDEP. This includes verbal reports and notifications which require reporting within 24 hours. (As examples, see Part II.B.4.c. (2), Part II.B.5.c. (3), and Part II.D.1.e.) Verbal reports and verbal notifications shall be made to EPA's Office of Environmental Stewardship at:

617-918-1510

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 CMR 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.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

TABLE OF CONTENTS

A. GENERAL CONDITIONS	Page
1. <u>Duty to Comply</u>	2
2. <u>Permit Actions</u>	2
3. <u>Duty to Provide Information</u>	2
4. <u>Reopener Clause</u>	3
5. <u>Oil and Hazardous Substance Liability</u>	3
6. <u>Property Rights</u>	3
7. <u>Confidentiality of Information</u>	3
8. <u>Duty to Reapply</u>	4
9. <u>State Authorities</u>	4
10. <u>Other laws</u>	4
B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS	
1. <u>Proper Operation and Maintenance</u>	4
2. <u>Need to Halt or Reduce Not a Defense</u>	4
3. <u>Duty to Mitigate</u>	4
4. <u>Bypass</u>	4
5. <u>Upset</u>	5
C. MONITORING AND RECORDS	
1. <u>Monitoring and Records</u>	6
2. <u>Inspection and Entry</u>	7
D. REPORTING REQUIREMENTS	
1. <u>Reporting Requirements</u>	7
a. Planned changes	7
b. Anticipated noncompliance	7
c. Transfers	7
d. Monitoring reports	8
e. Twenty-four hour reporting	8
f. Compliance schedules	9
g. Other noncompliance	9
h. Other information	9
2. <u>Signatory Requirement</u>	9
3. <u>Availability of Reports</u>	9
E. DEFINITIONS AND ABBREVIATIONS	
1. <u>Definitions for Individual NPDES Permits including Storm Water Requirements</u>	9
2. <u>Definitions for NPDES Permit Sludge Use and Disposal Requirements</u>	17
3. <u>Commonly Used Abbreviations</u>	23

NPDES PART II STANDARD CONDITIONS
(January, 2007)

PART II. A. GENERAL REQUIREMENTS

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

- a. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirements.
- b. The CWA provides that any person who violates Section 301, 302, 306, 307, 308, 318, or 405 of the CWA or any permit condition or limitation implementing any of such sections in a permit issued under Section 402, or any requirement imposed in a pretreatment program approved under Section 402 (a)(3) or 402 (b)(8) of the CWA is subject to a civil penalty not to exceed \$25,000 per day for each violation. Any person who negligently violates such requirements is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than 1 year, or both. Any person who knowingly violates such requirements is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or both.
- c. Any person may be assessed an administrative penalty by the Administrator for violating Section 301, 302, 306, 307, 308, 318, or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the CWA. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.

Note: See 40 CFR §122.41(a)(2) for complete “Duty to Comply” regulations.

2. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or notifications of planned changes or anticipated noncompliance does not stay any permit condition.

3. Duty to Provide Information

The permittee shall furnish to the Regional Administrator, within a reasonable time, any information which the Regional Administrator may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Regional Administrator, upon request, copies of records required to be kept by this permit.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

4. Reopener Clause

The Regional Administrator reserves the right to make appropriate revisions to this permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the CWA in order to bring all discharges into compliance with the CWA.

For any permit issued to a treatment works treating domestic sewage (including “sludge-only facilities”), the Regional Administrator or Director shall include a reopener clause to incorporate any applicable standard for sewage sludge use or disposal promulgated under Section 405 (d) of the CWA. The Regional Administrator or Director may promptly modify or revoke and reissue any permit containing the reopener clause required by this paragraph if the standard for sewage sludge use or disposal is more stringent than any requirements for sludge use or disposal in the permit, or contains a pollutant or practice not limited in the permit.

Federal regulations pertaining to permit modification, revocation and reissuance, and termination are found at 40 CFR §122.62, 122.63, 122.64, and 124.5.

5. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from responsibilities, liabilities or penalties to which the permittee is or may be subject under Section 311 of the CWA, or Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).

6. Property Rights

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges.

7. Confidentiality of Information

- a. In accordance with 40 CFR Part 2, any information submitted to EPA pursuant to these regulations may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words “confidential business information” on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR Part 2 (Public Information).
- b. Claims of confidentiality for the following information will be denied:
 - (1) The name and address of any permit applicant or permittee;
 - (2) Permit applications, permits, and effluent data as defined in 40 CFR §2.302(a)(2).
- c. Information required by NPDES application forms provided by the Regional Administrator under 40 CFR §122.21 may not be claimed confidential. This includes information submitted on the forms themselves and any attachments used to supply information required by the forms.

NPDES PART II STANDARD CONDITIONS
(January, 2007)

8. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee must apply for and obtain a new permit. The permittee shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Regional Administrator. (The Regional Administrator shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

9. State Authorities

Nothing in Part 122, 123, or 124 precludes more stringent State regulation of any activity covered by these regulations, whether or not under an approved State program.

10. Other Laws

The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, nor does it relieve the permittee of its obligation to comply with any other applicable Federal, State, or local laws and regulations.

PART II. B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of storm water pollution prevention plans. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Need to Halt or Reduce Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

4. Bypass

a. Definitions

- (1) *Bypass* means the intentional diversion of waste streams from any portion of a treatment facility.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

- (2) *Severe property damage* means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can be reasonably expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypass not exceeding limitations

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of Paragraphs B.4.c. and 4.d. of this section.

c. Notice

- (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
- (2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph D.1.e. of this part (Twenty-four hour reporting).

d. Prohibition of bypass

Bypass is prohibited, and the Regional Administrator may take enforcement action against a permittee for bypass, unless:

- (1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
- (3) i) The permittee submitted notices as required under Paragraph 4.c. of this section.
ii) The Regional Administrator may approve an anticipated bypass, after considering its adverse effects, if the Regional Administrator determines that it will meet the three conditions listed above in paragraph 4.d. of this section.

5. Upset

- a. Definition. *Upset* means an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph B.5.c. of this section are met. No determination made during

NPDES PART II STANDARD CONDITIONS

(January, 2007)

administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

- c. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
 - (2) The permitted facility was at the time being properly operated;
 - (3) The permittee submitted notice of the upset as required in paragraphs D.1.a. and 1.e. (Twenty-four hour notice); and
 - (4) The permittee complied with any remedial measures required under B.3. above.
- d. Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

PART II. C. MONITORING REQUIREMENTS

1. Monitoring and Records

- a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- b. Except for records for monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application except for the information concerning storm water discharges which must be retained for a total of 6 years. This retention period may be extended by request of the Regional Administrator at any time.
- c. Records of monitoring information shall include:
 - (1) The date, exact place, and time of sampling or measurements;
 - (2) The individual(s) who performed the sampling or measurements;
 - (3) The date(s) analyses were performed;
 - (4) The individual(s) who performed the analyses;
 - (5) The analytical techniques or methods used; and
 - (6) The results of such analyses.
- d. Monitoring results must be conducted according to test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, unless other test procedures have been specified in the permit.
- e. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by

NPDES PART II STANDARD CONDITIONS

(January, 2007)

imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

2. Inspection and Entry

The permittee shall allow the Regional Administrator or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location.

PART II. D. REPORTING REQUIREMENTS

1. Reporting Requirements

- a. **Planned Changes.** The permittee shall give notice to the Regional Administrator as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is only required when:
 - (1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR§122.29(b); or
 - (2) The alteration or addition could significantly change the nature or increase the quantities of the pollutants discharged. This notification applies to pollutants which are subject neither to the effluent limitations in the permit, nor to the notification requirements at 40 CFR§122.42(a)(1).
 - (3) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition or change may justify the application of permit conditions different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. **Anticipated noncompliance.** The permittee shall give advance notice to the Regional Administrator of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- c. **Transfers.** This permit is not transferable to any person except after notice to the Regional Administrator. The Regional Administrator may require modification or revocation and reissuance of the permit to change the name of the permittee and

NPDES PART II STANDARD CONDITIONS

(January, 2007)

incorporate such other requirements as may be necessary under the CWA. (See 40 CFR Part 122.61; in some cases, modification or revocation and reissuance is mandatory.)

- d. Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.
 - (1) Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.
 - (2) If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in the permit, the results of the monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Director.
 - (3) Calculations for all limitations which require averaging or measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.
- e. Twenty-four hour reporting.
 - (1) The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances.

A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
 - (2) The following shall be included as information which must be reported within 24 hours under this paragraph.
 - (a) Any unanticipated bypass which exceeds any effluent limitation in the permit. (See 40 CFR §122.41(g).)
 - (b) Any upset which exceeds any effluent limitation in the permit.
 - (c) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Regional Administrator in the permit to be reported within 24 hours. (See 40 CFR §122.44(g).)
 - (3) The Regional Administrator may waive the written report on a case-by-case basis for reports under Paragraph D.1.e. if the oral report has been received within 24 hours.

NPDES PART II STANDARD CONDITIONS (January, 2007)

- f. Compliance Schedules. Reports of compliance or noncompliance with, any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
- g. Other noncompliance. The permittee shall report all instances of noncompliance not reported under Paragraphs D.1.d., D.1.e., and D.1.f. of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in Paragraph D.1.e. of this section.
- h. Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Administrator, it shall promptly submit such facts or information.

2. Signatory Requirement

- a. All applications, reports, or information submitted to the Regional Administrator shall be signed and certified. (See 40 CFR §122.22)
- b. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 2 years per violation, or by both.

3. Availability of Reports.

Except for data determined to be confidential under Paragraph A.8. above, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the State water pollution control agency and the Regional Administrator. As required by the CWA, effluent data shall not be considered confidential. Knowingly making any false statements on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the CWA.

PART II. E. DEFINITIONS AND ABBREVIATIONS

1. Definitions for Individual NPDES Permits including Storm Water Requirements

Administrator means the Administrator of the United States Environmental Protection Agency, or an authorized representative.

Applicable standards and limitations means all, State, interstate, and Federal standards and limitations to which a “discharge”, a “sewage sludge use or disposal practice”, or a related activity is subject to, including “effluent limitations”, water quality standards, standards of performance, toxic effluent standards or prohibitions, “best management practices”, pretreatment standards, and “standards for sewage sludge use and disposal” under Sections 301, 302, 303, 304, 306, 307, 308, 403, and 405 of the CWA.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

Application means the EPA standard national forms for applying for a permit, including any additions, revisions, or modifications to the forms; or forms approved by EPA for use in “approved States”, including any approved modifications or revisions.

Average means the arithmetic mean of values taken at the frequency required for each parameter over the specified period. For total and/or fecal coliforms and Escherichia coli, the average shall be the geometric mean.

Average monthly discharge limitation means the highest allowable average of “daily discharges” over a calendar month calculated as the sum of all “daily discharges” measured during a calendar month divided by the number of “daily discharges” measured during that month.

Average weekly discharge limitation means the highest allowable average of “daily discharges” measured during the calendar week divided by the number of “daily discharges” measured during the week.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of “waters of the United States.” BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Best Professional Judgment (BPJ) means a case-by-case determination of Best Practicable Treatment (BPT), Best Available Treatment (BAT), or other appropriate technology-based standard based on an evaluation of the available technology to achieve a particular pollutant reduction and other factors set forth in 40 CFR §125.3 (d).

Coal Pile Runoff means the rainfall runoff from or through any coal storage pile.

Composite Sample means a sample consisting of a minimum of eight grab samples of equal volume collected at equal intervals during a 24-hour period (or lesser period as specified in the section on Monitoring and Reporting) and combined proportional to flow, or a sample consisting of the same number of grab samples, or greater, collected proportionally to flow over that same time period.

Construction Activities - The following definitions apply to construction activities:

- (a) Commencement of Construction is the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction activities.
- (b) Dedicated portable asphalt plant is a portable asphalt plant located on or contiguous to a construction site and that provides asphalt only to the construction site that the plant is located on or adjacent to. The term dedicated portable asphalt plant does not include facilities that are subject to the asphalt emulsion effluent limitation guideline at 40 CFR Part 443.
- (c) Dedicated portable concrete plant is a portable concrete plant located on or contiguous to a construction site and that provides concrete only to the construction site that the plant is located on or adjacent to.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

- (d) Final Stabilization means that all soil disturbing activities at the site have been complete, and that a uniform perennial vegetative cover with a density of 70% of the cover for unpaved areas and areas not covered by permanent structures has been established or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.
- (e) Runoff coefficient means the fraction of total rainfall that will appear at the conveyance as runoff.

Contiguous zone means the entire zone established by the United States under Article 24 of the Convention on the Territorial Sea and the Contiguous Zone.

Continuous discharge means a “discharge” which occurs without interruption throughout the operating hours of the facility except for infrequent shutdowns for maintenance, process changes, or similar activities.

CWA means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended by Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483, and Pub. L. 97-117; 33 USC §§1251 et seq.

Daily Discharge means the discharge of a pollutant measured during the calendar day or any other 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the “daily discharge” is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the “daily discharge” is calculated as the average measurement of the pollutant over the day.

Director normally means the person authorized to sign NPDES permits by EPA or the State or an authorized representative. Conversely, it also could mean the Regional Administrator or the State Director as the context requires.

Discharge Monitoring Report Form (DMR) means the EPA standard national form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by “approved States” as well as by EPA. EPA will supply DMRs to any approved State upon request. The EPA national forms may be modified to substitute the State Agency name, address, logo, and other similar information, as appropriate, in place of EPA’s.

Discharge of a pollutant means:

- (a) Any addition of any “pollutant” or combination of pollutants to “waters of the United States” from any “point source”, or
- (b) Any addition of any pollutant or combination of pollutants to the waters of the “contiguous zone” or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation (See “Point Source” definition).

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead

NPDES PART II STANDARD CONDITIONS

(January, 2007)

to a treatment works; and discharges through pipes, sewers, or other conveyances leading into privately owned treatment works.

This term does not include an addition of pollutants by any “indirect discharger.”

Effluent limitation means any restriction imposed by the Regional Administrator on quantities, discharge rates, and concentrations of “pollutants” which are “discharged” from “point sources” into “waters of the United States”, the waters of the “contiguous zone”, or the ocean.

Effluent limitation guidelines means a regulation published by the Administrator under Section 304(b) of CWA to adopt or revise “effluent limitations”.

EPA means the United States “Environmental Protection Agency”.

Flow-weighted composite sample means a composite sample consisting of a mixture of aliquots where the volume of each aliquot is proportional to the flow rate of the discharge.

Grab Sample – An individual sample collected in a period of less than 15 minutes.

Hazardous Substance means any substance designated under 40 CFR Part 116 pursuant to Section 311 of the CWA.

Indirect Discharger means a non-domestic discharger introducing pollutants to a publicly owned treatment works.

Interference means a discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

- (a) Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
- (b) Therefore is a cause of a violation of any requirement of the POTW’s NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act (CWA), the Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resources Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SDWA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection Research and Sanctuaries Act.

Landfill means an area of land or an excavation in which wastes are placed for permanent disposal, and which is not a land application unit, surface impoundment, injection well, or waste pile.

Land application unit means an area where wastes are applied onto or incorporated into the soil surface (excluding manure spreading operations) for treatment or disposal.

Large and Medium municipal separate storm sewer system means all municipal separate storm sewers that are either: (i) located in an incorporated place (city) with a population of 100,000 or more as determined by the latest Decennial Census by the Bureau of Census (these cities are listed in Appendices F and 40 CFR Part 122); or (ii) located in the counties with unincorporated urbanized

NPDES PART II STANDARD CONDITIONS

(January, 2007)

populations of 100,000 or more, except municipal separate storm sewers that are located in the incorporated places, townships, or towns within such counties (these counties are listed in Appendices H and I of 40 CFR 122); or (iii) owned or operated by a municipality other than those described in Paragraph (i) or (ii) and that are designated by the Regional Administrator as part of the large or medium municipal separate storm sewer system.

Maximum daily discharge limitation means the highest allowable “daily discharge” concentration that occurs only during a normal day (24-hour duration).

Maximum daily discharge limitation (as defined for the Steam Electric Power Plants only) when applied to Total Residual Chlorine (TRC) or Total Residual Oxidant (TRO) is defined as “maximum concentration” or “Instantaneous Maximum Concentration” during the two hours of a chlorination cycle (or fraction thereof) prescribed in the Steam Electric Guidelines, 40 CFR Part 423. These three synonymous terms all mean “a value that shall not be exceeded” during the two-hour chlorination cycle. This interpretation differs from the specified NPDES Permit requirement, 40 CFR § 122.2, where the two terms of “Maximum Daily Discharge” and “Average Daily Discharge” concentrations are specifically limited to the daily (24-hour duration) values.

Municipality means a city, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribe organization, or a designated and approved management agency under Section 208 of the CWA.

National Pollutant Discharge Elimination System means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318, and 405 of the CWA. The term includes an “approved program”.

New Discharger means any building, structure, facility, or installation:

- (a) From which there is or may be a “discharge of pollutants”;
- (b) That did not commence the “discharge of pollutants” at a particular “site” prior to August 13, 1979;
- (c) Which is not a “new source”; and
- (d) Which has never received a finally effective NPDES permit for discharges at that “site”.

This definition includes an “indirect discharger” which commences discharging into “waters of the United States” after August 13, 1979. It also includes any existing mobile point source (other than an offshore or coastal oil and gas exploratory drilling rig or a coastal oil and gas exploratory drilling rig or a coastal oil and gas developmental drilling rig) such as a seafood processing rig, seafood processing vessel, or aggregate plant, that begins discharging at a “site” for which it does not have a permit; and any offshore rig or coastal mobile oil and gas exploratory drilling rig or coastal mobile oil and gas developmental drilling rig that commences the discharge of pollutants after August 13, 1979, at a “site” under EPA’s permitting jurisdiction for which it is not covered by an individual or general permit and which is located in an area determined by the Regional Administrator in the issuance of a final permit to be in an area of biological concern. In determining whether an area is an area of biological concern, the Regional Administrator shall consider the factors specified in 40 CFR §§125.122 (a) (1) through (10).

NPDES PART II STANDARD CONDITIONS (January, 2007)

An offshore or coastal mobile exploratory drilling rig or coastal mobile developmental drilling rig will be considered a “new discharger” only for the duration of its discharge in an area of biological concern.

New source means any building, structure, facility, or installation from which there is or may be a “discharge of pollutants”, the construction of which commenced:

- (a) After promulgation of standards of performance under Section 306 of CWA which are applicable to such source, or
- (b) After proposal of standards of performance in accordance with Section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with Section 306 within 120 days of their proposal.

NPDES means “National Pollutant Discharge Elimination System”.

Owner or operator means the owner or operator of any “facility or activity” subject to regulation under the NPDES programs.

Pass through means a Discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW’s NPDES permit (including an increase in the magnitude or duration of a violation).

Permit means an authorization, license, or equivalent control document issued by EPA or an “approved” State.

Person means an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

Point Source means any discernible, confined, and discrete conveyance, including but not limited to any pipe ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff (see 40 CFR §122.2).

Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. §§2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean:

- (a) Sewage from vessels; or
- (b) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well is used either to facilitate production or for disposal purposes is approved by the authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

NPDES PART II STANDARD CONDITIONS
(January, 2007)

Primary industry category means any industry category listed in the NRDC settlement agreement (Natural Resources Defense Council et al. v. Train, 8 E.R.C. 2120 (D.D.C. 1976), modified 12 E.R.C. 1833 (D. D.C. 1979)); also listed in Appendix A of 40 CFR Part 122.

Privately owned treatment works means any device or system which is (a) used to treat wastes from any facility whose operation is not the operator of the treatment works or (b) not a “POTW”.

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Publicly Owned Treatment Works (POTW) means any facility or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a “State” or “municipality”.

This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

Regional Administrator means the Regional Administrator, EPA, Region I, Boston, Massachusetts.

Secondary Industry Category means any industry which is not a “primary industry category”.

Section 313 water priority chemical means a chemical or chemical category which:

- (1) is listed at 40 CFR §372.65 pursuant to Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) (also known as Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986);
- (2) is present at or above threshold levels at a facility subject to EPCRA Section 313 reporting requirements; and
- (3) satisfies at least one of the following criteria:
 - (i) are listed in Appendix D of 40 CFR Part 122 on either Table II (organic priority pollutants), Table III (certain metals, cyanides, and phenols), or Table V (certain toxic pollutants and hazardous substances);
 - (ii) are listed as a hazardous substance pursuant to Section 311(b)(2)(A) of the CWA at 40 CFR §116.4; or
 - (iii) are pollutants for which EPA has published acute or chronic water quality criteria.

Septage means the liquid and solid material pumped from a septic tank, cesspool, or similar domestic sewage treatment system, or a holding tank when the system is cleaned or maintained.

Sewage Sludge means any solid, semisolid, or liquid residue removed during the treatment of municipal wastewater or domestic sewage. Sewage sludge includes, but is not limited to, solids removed during primary, secondary, or advanced wastewater treatment, scum, septage, portable toilet pumpings, Type III Marine Sanitation Device pumpings (33 CFR Part 159), and sewage sludge products. Sewage sludge does not include grit or screenings, or ash generated during the incineration of sewage sludge.

NPDES PART II STANDARD CONDITIONS
(January, 2007)

Sewage sludge use or disposal practice means the collection, storage, treatment, transportation, processing, monitoring, use, or disposal of sewage sludge.

Significant materials includes, but is not limited to: raw materials, fuels, materials such as solvents, detergents, and plastic pellets, raw materials used in food processing or production, hazardous substance designated under section 101(14) of CERCLA, any chemical the facility is required to report pursuant to EPCRA Section 313, fertilizers, pesticides, and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

Significant spills includes, but is not limited to, releases of oil or hazardous substances in excess of reportable quantities under Section 311 of the CWA (see 40 CFR §110.10 and §117.21) or Section 102 of CERCLA (see 40 CFR § 302.4).

Sludge-only facility means any “treatment works treating domestic sewage” whose methods of sewage sludge use or disposal are subject to regulations promulgated pursuant to Section 405(d) of the CWA, and is required to obtain a permit under 40 CFR §122.1(b)(3).

State means any of the 50 States, the District of Columbia, Guam, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, the Trust Territory of the Pacific Islands.

Storm Water means storm water runoff, snow melt runoff, and surface runoff and drainage.

Storm water discharge associated with industrial activity means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant. (See 40 CFR §122.26 (b)(14) for specifics of this definition.

Time-weighted composite means a composite sample consisting of a mixture of equal volume aliquots collected at a constant time interval.

Toxic pollutants means any pollutant listed as toxic under Section 307 (a)(1) or, in the case of “sludge use or disposal practices” any pollutant identified in regulations implementing Section 405(d) of the CWA.

Treatment works treating domestic sewage means a POTW or any other sewage sludge or wastewater treatment devices or systems, regardless of ownership (including federal facilities), used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated for the disposal of sewage sludge. This definition does not include septic tanks or similar devices.

For purposes of this definition, “domestic sewage” includes waste and wastewater from humans or household operations that are discharged to or otherwise enter a treatment works. In States where there is no approved State sludge management program under Section 405(f) of the CWA, the Regional Administrator may designate any person subject to the standards for sewage sludge use and disposal in 40 CFR Part 503 as a “treatment works treating domestic sewage”, where he or she finds that there is a potential for adverse effects on public health and the environment from poor sludge quality or poor sludge handling, use or disposal practices, or where he or she finds that such designation is necessary to ensure that such person is in compliance with 40 CFR Part 503.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

Waste Pile means any non-containerized accumulation of solid, non-flowing waste that is used for treatment or storage.

Waters of the United States means:

- (a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of tide;
- (b) All interstate waters, including interstate “wetlands”;
- (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, “wetlands”, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
 - (1) Which are or could be used by interstate or foreign travelers for recreational or other purpose;
 - (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (3) Which are used or could be used for industrial purposes by industries in interstate commerce;
- (d) All impoundments of waters otherwise defined as waters of the United States under this definition;
- (e) Tributaries of waters identified in Paragraphs (a) through (d) of this definition;
- (f) The territorial sea; and
- (g) “Wetlands” adjacent to waters (other than waters that are themselves wetlands) identified in Paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA (other than cooling ponds as defined in 40 CFR §423.11(m) which also meet the criteria of this definition) are not waters of the United States.

Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Whole Effluent Toxicity (WET) means the aggregate toxic effect of an effluent measured directly by a toxicity test. (See Abbreviations Section, following, for additional information.)

2. Definitions for NPDES Permit Sludge Use and Disposal Requirements.

Active sewage sludge unit is a sewage sludge unit that has not closed.

NPDES PART II STANDARD CONDITIONS

(January, 2007)

Aerobic Digestion is the biochemical decomposition of organic matter in sewage sludge into carbon dioxide and water by microorganisms in the presence of air.

Agricultural Land is land on which a food crop, a feed crop, or a fiber crop is grown. This includes range land and land used as pasture.

Agronomic rate is the whole sludge application rate (dry weight basis) designed:

- (1) To provide the amount of nitrogen needed by the food crop, feed crop, fiber crop, cover crop, or vegetation grown on the land; and
- (2) To minimize the amount of nitrogen in the sewage sludge that passes below the root zone of the crop or vegetation grown on the land to the ground water.

Air pollution control device is one or more processes used to treat the exit gas from a sewage sludge incinerator stack.

Anaerobic digestion is the biochemical decomposition of organic matter in sewage sludge into methane gas and carbon dioxide by microorganisms in the absence of air.

Annual pollutant loading rate is the maximum amount of a pollutant that can be applied to a unit area of land during a 365 day period.

Annual whole sludge application rate is the maximum amount of sewage sludge (dry weight basis) that can be applied to a unit area of land during a 365 day period.

Apply sewage sludge or sewage sludge applied to the land means land application of sewage sludge.

Aquifer is a geologic formation, group of geologic formations, or a portion of a geologic formation capable of yielding ground water to wells or springs.

Auxiliary fuel is fuel used to augment the fuel value of sewage sludge. This includes, but is not limited to, natural gas, fuel oil, coal, gas generated during anaerobic digestion of sewage sludge, and municipal solid waste (not to exceed 30 percent of the dry weight of the sewage sludge and auxiliary fuel together). Hazardous wastes are not auxiliary fuel.

Base flood is a flood that has a one percent chance of occurring in any given year (i.e. a flood with a magnitude equaled once in 100 years).

Bulk sewage sludge is sewage sludge that is not sold or given away in a bag or other container for application to the land.

Contaminate an aquifer means to introduce a substance that causes the maximum contaminant level for nitrate in 40 CFR §141.11 to be exceeded in ground water or that causes the existing concentration of nitrate in the ground water to increase when the existing concentration of nitrate in the ground water exceeds the maximum contaminant level for nitrate in 40 CFR §141.11.

Class I sludge management facility is any publicly owned treatment works (POTW), as defined in 40 CFR §501.2, required to have an approved pretreatment program under 40 CFR §403.8 (a) (including any POTW located in a state that has elected to assume local program responsibilities pursuant to 40 CFR §403.10 (e) and any treatment works treating domestic sewage, as defined in 40 CFR § 122.2,

NPDES PART II STANDARD CONDITIONS

(January, 2007)

classified as a Class I sludge management facility by the EPA Regional Administrator, or, in the case of approved state programs, the Regional Administrator in conjunction with the State Director, because of the potential for sewage sludge use or disposal practice to affect public health and the environment adversely.

Control efficiency is the mass of a pollutant in the sewage sludge fed to an incinerator minus the mass of that pollutant in the exit gas from the incinerator stack divided by the mass of the pollutant in the sewage sludge fed to the incinerator.

Cover is soil or other material used to cover sewage sludge placed on an active sewage sludge unit.

Cover crop is a small grain crop, such as oats, wheat, or barley, not grown for harvest.

Cumulative pollutant loading rate is the maximum amount of inorganic pollutant that can be applied to an area of land.

Density of microorganisms is the number of microorganisms per unit mass of total solids (dry weight) in the sewage sludge.

Dispersion factor is the ratio of the increase in the ground level ambient air concentration for a pollutant at or beyond the property line of the site where the sewage sludge incinerator is located to the mass emission rate for the pollutant from the incinerator stack.

Displacement is the relative movement of any two sides of a fault measured in any direction.

Domestic septage is either liquid or solid material removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, or similar treatment works that receives only domestic sewage. Domestic septage does not include liquid or solid material removed from a septic tank, cesspool, or similar treatment works that receives either commercial wastewater or industrial wastewater and does not include grease removed from a grease trap at a restaurant.

Domestic sewage is waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment works.

Dry weight basis means calculated on the basis of having been dried at 105 degrees Celsius (°C) until reaching a constant mass (i.e. essentially 100 percent solids content).

Fault is a fracture or zone of fractures in any materials along which strata on one side are displaced with respect to the strata on the other side.

Feed crops are crops produced primarily for consumption by animals.

Fiber crops are crops such as flax and cotton.

Final cover is the last layer of soil or other material placed on a sewage sludge unit at closure.

Fluidized bed incinerator is an enclosed device in which organic matter and inorganic matter in sewage sludge are combusted in a bed of particles suspended in the combustion chamber gas.

Food crops are crops consumed by humans. These include, but are not limited to, fruits, vegetables, and tobacco.

NPDES PART II STANDARD CONDITIONS
(January, 2007)

Forest is a tract of land thick with trees and underbrush.

Ground water is water below the land surface in the saturated zone.

Holocene time is the most recent epoch of the Quaternary period, extending from the end of the Pleistocene epoch to the present.

Hourly average is the arithmetic mean of all the measurements taken during an hour. At least two measurements must be taken during the hour.

Incineration is the combustion of organic matter and inorganic matter in sewage sludge by high temperatures in an enclosed device.

Industrial wastewater is wastewater generated in a commercial or industrial process.

Land application is the spraying or spreading of sewage sludge onto the land surface; the injection of sewage sludge below the land surface; or the incorporation of sewage sludge into the soil so that the sewage sludge can either condition the soil or fertilize crops or vegetation grown in the soil.

Land with a high potential for public exposure is land that the public uses frequently. This includes, but is not limited to, a public contact site and reclamation site located in a populated area (e.g., a construction site located in a city).

Land with low potential for public exposure is land that the public uses infrequently. This includes, but is not limited to, agricultural land, forest and a reclamation site located in an unpopulated area (e.g., a strip mine located in a rural area).

Leachate collection system is a system or device installed immediately above a liner that is designed, constructed, maintained, and operated to collect and remove leachate from a sewage sludge unit.

Liner is soil or synthetic material that has a hydraulic conductivity of 1×10^{-7} centimeters per second or less.

Lower explosive limit for methane gas is the lowest percentage of methane gas in air, by volume, that propagates a flame at 25 degrees Celsius and atmospheric pressure.

Monthly average (Incineration) is the arithmetic mean of the hourly averages for the hours a sewage sludge incinerator operates during the month.

Monthly average (Land Application) is the arithmetic mean of all measurements taken during the month.

Municipality means a city, town, borough, county, parish, district, association, or other public body (including an intermunicipal agency of two or more of the foregoing entities) created by or under State law; an Indian tribe or an authorized Indian tribal organization having jurisdiction over sewage sludge management; or a designated and approved management agency under section 208 of the CWA, as amended. The definition includes a special district created under state law, such as a water district, sewer district, sanitary district, utility district, drainage district, or similar entity, or an integrated waste management facility as defined in section 201 (e) of the CWA, as amended, that has as one of its principal responsibilities the treatment, transport, use or disposal of sewage sludge.

NPDES PART II STANDARD CONDITIONS (January, 2007)

Other container is either an open or closed receptacle. This includes, but is not limited to, a bucket, a box, a carton, and a vehicle or trailer with a load capacity of one metric ton or less.

Pasture is land on which animals feed directly on feed crops such as legumes, grasses, grain stubble, or stover.

Pathogenic organisms are disease-causing organisms. These include, but are not limited to, certain bacteria, protozoa, viruses, and viable helminth ova.

Permitting authority is either EPA or a State with an EPA-approved sludge management program.

Person is an individual, association, partnership, corporation, municipality, State or Federal Agency, or an agent or employee thereof.

Person who prepares sewage sludge is either the person who generates sewage sludge during the treatment of domestic sewage in a treatment works or the person who derives a material from sewage sludge.

pH means the logarithm of the reciprocal of the hydrogen ion concentration; a measure of the acidity or alkalinity of a liquid or solid material.

Place sewage sludge or sewage sludge placed means disposal of sewage sludge on a surface disposal site.

Pollutant (as defined in sludge disposal requirements) is an organic substance, an inorganic substance, a combination of organic and inorganic substances, or pathogenic organism that, after discharge and upon exposure, ingestion, inhalation, or assimilation into an organism either directly from the environment or indirectly by ingestion through the food chain, could on the basis of information available to the Administrator of EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction) or physical deformations in either organisms or offspring of the organisms.

Pollutant limit (for sludge disposal requirements) is a numerical value that describes the amount of a pollutant allowed per unit amount of sewage sludge (e.g., milligrams per kilogram of total solids); the amount of pollutant that can be applied to a unit of land (e.g., kilograms per hectare); or the volume of the material that can be applied to the land (e.g., gallons per acre).

Public contact site is a land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.

Qualified ground water scientist is an individual with a baccalaureate or post-graduate degree in the natural sciences or engineering who has sufficient training and experience in ground water hydrology and related fields, as may be demonstrated by State registration, professional certification, or completion of accredited university programs, to make sound professional judgments regarding ground water monitoring, pollutant fate and transport, and corrective action.

Range land is open land with indigenous vegetation.

Reclamation site is drastically disturbed land that is reclaimed using sewage sludge. This includes, but is not limited to, strip mines and construction sites.

NPDES PART II STANDARD CONDITIONS (January, 2007)

Risk specific concentration is the allowable increase in the average daily ground level ambient air concentration for a pollutant from the incineration of sewage sludge at or beyond the property line of a site where the sewage sludge incinerator is located.

Runoff is rainwater, leachate, or other liquid that drains overland on any part of a land surface and runs off the land surface.

Seismic impact zone is an area that has 10 percent or greater probability that the horizontal ground level acceleration to the rock in the area exceeds 0.10 gravity once in 250 years.

Sewage sludge is a solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to: domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in treatment works.

Sewage sludge feed rate is either the average daily amount of sewage sludge fired in all sewage sludge incinerators within the property line of the site where the sewage sludge incinerators are located for the number of days in a 365 day period that each sewage sludge incinerator operates, or the average daily design capacity for all sewage sludge incinerators within the property line of the site where the sewage sludge incinerators are located.

Sewage sludge incinerator is an enclosed device in which only sewage sludge and auxiliary fuel are fired.

Sewage sludge unit is land on which only sewage sludge is placed for final disposal. This does not include land on which sewage sludge is either stored or treated. Land does not include waters of the United States, as defined in 40 CFR §122.2.

Sewage sludge unit boundary is the outermost perimeter of an active sewage sludge unit.

Specific oxygen uptake rate (SOUR) is the mass of oxygen consumed per unit time per unit mass of total solids (dry weight basis) in sewage sludge.

Stack height is the difference between the elevation of the top of a sewage sludge incinerator stack and the elevation of the ground at the base of the stack when the difference is equal to or less than 65 meters. When the difference is greater than 65 meters, stack height is the creditable stack height determined in accordance with 40 CFR §51.100 (ii).

State is one of the United States of America, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Trust Territory of the Pacific Islands, the Commonwealth of the Northern Mariana Islands, and an Indian tribe eligible for treatment as a State pursuant to regulations promulgated under the authority of section 518(e) of the CWA.

Store or storage of sewage sludge is the placement of sewage sludge on land on which the sewage sludge remains for two years or less. This does not include the placement of sewage sludge on land for treatment.

Surface disposal site is an area of land that contains one or more active sewage sludge units.

NPDES PART II STANDARD CONDITIONS (January, 2007)

Total hydrocarbons means the organic compounds in the exit gas from a sewage sludge incinerator stack measured using a flame ionization detection instrument referenced to propane.

Total solids are the materials in sewage sludge that remain as residue when the sewage sludge is dried at 103 to 105 degrees Celsius.

Treat or treatment of sewage sludge is the preparation of sewage sludge for final use or disposal. This includes, but is not limited to, thickening, stabilization, and dewatering of sewage sludge. This does not include storage of sewage sludge.

Treatment works is either a federally owned, publicly owned, or privately owned device or system used to treat (including recycle and reclaim) either domestic sewage or a combination of domestic sewage and industrial waste of a liquid nature.

Unstable area is land subject to natural or human-induced forces that may damage the structural components of an active sewage sludge unit. This includes, but is not limited to, land on which the soils are subject to mass movement.

Unstabilized solids are organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Vector attraction is the characteristic of sewage sludge that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.

Volatile solids is the amount of the total solids in sewage sludge lost when the sewage sludge is combusted at 550 degrees Celsius in the presence of excess air.

Wet electrostatic precipitator is an air pollution control device that uses both electrical forces and water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

Wet scrubber is an air pollution control device that uses water to remove pollutants in the exit gas from a sewage sludge incinerator stack.

3. Commonly Used Abbreviations

BOD	Five-day biochemical oxygen demand unless otherwise specified
CBOD	Carbonaceous BOD
CFS	Cubic feet per second
COD	Chemical oxygen demand
Chlorine	
Cl ₂	Total residual chlorine
TRC	Total residual chlorine which is a combination of free available chlorine (FAC, see below) and combined chlorine (chloramines, etc.)

NPDES PART II STANDARD CONDITIONS
(January, 2007)

TRO	Total residual chlorine in marine waters where halogen compounds are present
FAC	Free available chlorine (aqueous molecular chlorine, hypochlorous acid, and hypochlorite ion)
Coliform	
Coliform, Fecal	Total fecal coliform bacteria
Coliform, Total	Total coliform bacteria
Cont. (Continuous)	Continuous recording of the parameter being monitored, i.e. flow, temperature, pH, etc.
Cu. M/day or M ³ /day	Cubic meters per day
DO	Dissolved oxygen
kg/day	Kilograms per day
lbs/day	Pounds per day
mg/l	Milligram(s) per liter
ml/l	Milliliters per liter
MGD	Million gallons per day
Nitrogen	
Total N	Total nitrogen
NH ₃ -N	Ammonia nitrogen as nitrogen
NO ₃ -N	Nitrate as nitrogen
NO ₂ -N	Nitrite as nitrogen
NO ₃ -NO ₂	Combined nitrate and nitrite nitrogen as nitrogen
TKN	Total Kjeldahl nitrogen as nitrogen
Oil & Grease	Freon extractable material
PCB	Polychlorinated biphenyl
pH	A measure of the hydrogen ion concentration. A measure of the acidity or alkalinity of a liquid or material
Surfactant	Surface-active agent

NPDES PART II STANDARD CONDITIONS
(January, 2007)

Temp. °C	Temperature in degrees Centigrade
Temp. °F	Temperature in degrees Fahrenheit
TOC	Total organic carbon
Total P	Total phosphorus
TSS or NFR	Total suspended solids or total nonfilterable residue
Turb. or Turbidity	Turbidity measured by the Nephelometric Method (NTU)
ug/l	Microgram(s) per liter
WET	“Whole effluent toxicity” is the total effect of an effluent measured directly with a toxicity test.
C-NOEC	“Chronic (Long-term Exposure Test) – No Observed Effect Concentration”. The highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specified time of observation.
A-NOEC	“Acute (Short-term Exposure Test) – No Observed Effect Concentration” (see C-NOEC definition).
LC ₅₀	LC ₅₀ is the concentration of a sample that causes mortality of 50% of the test population at a specific time of observation. The LC ₅₀ = 100% is defined as a sample of undiluted effluent.
ZID	Zone of Initial Dilution means the region of initial mixing surrounding or adjacent to the end of the outfall pipe or diffuser ports.

ATTACHMENT A

**USEPA REGION 1 FRESHWATER ACUTE
TOXICITY TEST PROCEDURE AND PROTOCOL**

I. GENERAL REQUIREMENTS

The permittee shall conduct acceptable acute toxicity tests in accordance with the appropriate test protocols described below:

- **Daphnid (Ceriodaphnia dubia) definitive 48 hour test.**
- **Fathead Minnow (Pimephales promelas) definitive 48 hour test.**

Acute toxicity test data shall be reported as outlined in Section VIII.

II. METHODS

The permittee shall use 40 CFR Part 136 methods. Methods and guidance may be found at:

http://water.epa.gov/scitech/methods/cwa/wet/disk2_index.cfm

The permittee shall also meet the sampling, analysis and reporting requirements included in this protocol. This protocol defines more specific requirements while still being consistent with the Part 136 methods. If, due to modifications of Part 136, there are conflicting requirements between the Part 136 method and this protocol, the permittee shall comply with the requirements of the Part 136 method.

III. SAMPLE COLLECTION

A discharge sample shall be collected. Aliquots shall be split from the sample, containerized and preserved (as per 40 CFR Part 136) for chemical and physical analyses required. The remaining sample shall be measured for total residual chlorine and dechlorinated (if detected) in the laboratory using sodium thiosulfate for subsequent toxicity testing. (Note that EPA approved test methods require that samples collected for metals analyses be preserved immediately after collection.) Grab samples must be used for pH, temperature, and total residual chlorine (as per 40 CFR Part 122.21).

Standard Methods for the Examination of Water and Wastewater describes dechlorination of samples (APHA, 1992). Dechlorination can be achieved using a ratio of 6.7 mg/L anhydrous sodium thiosulfate to reduce 1.0 mg/L chlorine. If dechlorination is necessary, a thiosulfate control (maximum amount of thiosulfate in lab control or receiving water) must also be run in the WET test.

All samples held overnight shall be refrigerated at 1- 6°C.

IV. DILUTION WATER

A grab sample of dilution water used for acute toxicity testing shall be collected from the receiving water at a point immediately upstream of the permitted discharge's zone of influence at a reasonably accessible location. Avoid collection near areas of obvious road or agricultural runoff, storm sewers or other point source discharges and areas where stagnant conditions exist. In the case where an alternate dilution water has been agreed upon an additional receiving water control (0% effluent) must also be tested.

If the receiving water diluent is found to be, or suspected to be toxic or unreliable, an alternate standard dilution water of known quality with a hardness, pH, conductivity, alkalinity, organic carbon, and total suspended solids similar to that of the receiving water may be substituted **AFTER RECEIVING WRITTEN APPROVAL FROM THE PERMIT ISSUING AGENCY(S)**. Written requests for use of an alternate dilution water should be mailed with supporting documentation to the following address:

Director
Office of Ecosystem Protection (CAA)
U.S. Environmental Protection Agency-New England
5 Post Office Sq., Suite 100 (OEP06-5)
Boston, MA 02109-3912

and

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

Note: USEPA Region 1 retains the right to modify any part of the alternate dilution water policy stated in this protocol at any time. Any changes to this policy will be documented in the annual DMR posting.

See the most current annual DMR instructions which can be found on the EPA Region 1 website at <http://www.epa.gov/region1/enforcement/water/dmr.html> for further important details on alternate dilution water substitution requests.

It may prove beneficial to have the proposed dilution water source screened for suitability prior to toxicity testing. EPA strongly urges that screening be done prior to set up of a full definitive toxicity test any time there is question about the dilution water's ability to support acceptable performance as outlined in the 'test acceptability' section of the protocol.

V. TEST CONDITIONS

The following tables summarize the accepted daphnid and fathead minnow toxicity test conditions and test acceptability criteria:

**EPA NEW ENGLAND EFFLUENT TOXICITY TEST CONDITIONS FOR THE
DAPHNID, CERIODAPHNIA DUBIA 48 HOUR ACUTE TESTS¹**

1.	Test type	Static, non-renewal
2.	Temperature (°C)	20 ± 1°C or 25 ± 1°C
3.	Light quality	Ambient laboratory illumination
4.	Photoperiod	16 hour light, 8 hour dark
5.	Test chamber size	Minimum 30 ml
6.	Test solution volume	Minimum 15 ml
7.	Age of test organisms	1-24 hours (neonates)
8.	No. of daphnids per test chamber	5
9.	No. of replicate test chambers per treatment	4
10.	Total no. daphnids per test concentration	20
11.	Feeding regime	As per manual, lightly feed YCT and <u>Selenastrum</u> to newly released organisms while holding prior to initiating test
12.	Aeration	None
13.	Dilution water ²	Receiving water, other surface water, synthetic water adjusted to the hardness and alkalinity of the receiving water (prepared using either Millipore Milli-Q ^R or equivalent deionized water and reagent grade chemicals according to EPA acute toxicity test manual) or deionized water combined with mineral water to appropriate hardness.
14.	Dilution series	≥ 0.5, must bracket the permitted RWC
15.	Number of dilutions	5 plus receiving water and laboratory water control and thiosulfate control, as necessary. An additional dilution at the permitted effluent concentration (% effluent) is required if it is not included in the dilution

series.

- | | |
|----------------------------|---|
| 16. Effect measured | Mortality-no movement of body or appendages on gentle prodding |
| 17. Test acceptability | 90% or greater survival of test organisms in dilution water control solution |
| 18. Sampling requirements | For on-site tests, samples must be used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples must first be used within 36 hours of collection. |
| 19. Sample volume required | Minimum 1 liter |

Footnotes:

1. Adapted from EPA-821-R-02-012.
2. Standard prepared dilution water must have hardness requirements to generally reflect the characteristics of the receiving water.

**EPA NEW ENGLAND TEST CONDITIONS FOR THE FATHEAD MINNOW
(PIMEPHALES PROMELAS) 48 HOUR ACUTE TEST¹**

1. Test Type	Static, non-renewal
2. Temperature (°C)	$20 \pm 1^{\circ} \text{C}$ or $25 \pm 1^{\circ} \text{C}$
3. Light quality	Ambient laboratory illumination
4. Photoperiod	16 hr light, 8 hr dark
5. Size of test vessels	250 mL minimum
6. Volume of test solution	Minimum 200 mL/replicate
7. Age of fish	1-14 days old and age within 24 hrs of each other
8. No. of fish per chamber	10
9. No. of replicate test vessels per treatment	4
10. Total no. organisms per concentration	40
11. Feeding regime	As per manual, lightly feed test age larvae using concentrated brine shrimp nauplii while holding prior to initiating test
12. Aeration	None, unless dissolved oxygen (D.O.) concentration falls below 4.0 mg/L, at which time gentle single bubble aeration should be started at a rate of less than 100 bubbles/min. (Routine D.O. check is recommended.)
13. dilution water ²	Receiving water, other surface water, synthetic water adjusted to the hardness and alkalinity of the receiving water (prepared using either Millipore Milli-Q ^R or equivalent deionized and reagent grade chemicals according to EPA acute toxicity test manual) or deionized water combined with mineral water to appropriate hardness.
14. Dilution series	≥ 0.5 , must bracket the permitted RWC

15. Number of dilutions	5 plus receiving water and laboratory water control and thiosulfate control, as necessary. An additional dilution at the permitted effluent concentration (% effluent) is required if it is not included in the dilution series.
16. Effect measured	Mortality-no movement on gentle prodding
17. Test acceptability	90% or greater survival of test organisms in dilution water control solution
18. Sampling requirements	For on-site tests, samples must be used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples are used within 36 hours of collection.
19. Sample volume required	Minimum 2 liters

Footnotes:

1. Adapted from EPA-821-R-02-012
2. Standard dilution water must have hardness requirements to generally reflect characteristics of the receiving water.

VI. CHEMICAL ANALYSIS

At the beginning of a static acute toxicity test, pH, conductivity, total residual chlorine, oxygen, hardness, alkalinity and temperature must be measured in the highest effluent concentration and the dilution water. Dissolved oxygen, pH and temperature are also measured at 24 and 48 hour intervals in all dilutions. The following chemical analyses shall be performed on the 100 percent effluent sample and the upstream water sample for each sampling event.

<u>Parameter</u>	Effluent	Receiving Water	ML (mg/l)
Hardness ¹	x	x	0.5
Total Residual Chlorine (TRC) ^{2, 3}	x		0.02
Alkalinity	x	x	2.0
pH	x	x	--
Specific Conductance	x	x	--
Total Solids	x		--
Total Dissolved Solids	x		--
Ammonia	x	x	0.1
Total Organic Carbon	x	x	0.5
Total Metals			
Cd	x	x	0.0005
Pb	x	x	0.0005
Cu	x	x	0.003
Zn	x	x	0.005
Ni	x	x	0.005
Al	x	x	0.02
Other as permit requires			

Notes:

- Hardness may be determined by:
 - APHA Standard Methods for the Examination of Water and Wastewater , 21st Edition
 - Method 2340B (hardness by calculation)
 - Method 2340C (titration)
- Total Residual Chlorine may be performed using any of the following methods provided the required minimum limit (ML) is met.
 - APHA Standard Methods for the Examination of Water and Wastewater , 21st Edition
 - Method 4500-CL E Low Level Amperometric Titration
 - Method 4500-CL G DPD Colorimetric Method
- Required to be performed on the sample used for WET testing prior to its use for toxicity testing.

VII. TOXICITY TEST DATA ANALYSIS

LC50 Median Lethal Concentration (Determined at 48 Hours)

Methods of Estimation:

- Probit Method
- Spearman-Kärber
- Trimmed Spearman-Kärber
- Graphical

See the flow chart in Figure 6 on p. 73 of EPA-821-R-02-012 for appropriate method to use on a given data set.

No Observed Acute Effect Level (NOAEL)

See the flow chart in Figure 13 on p. 87 of EPA-821-R-02-012.

VIII. TOXICITY TEST REPORTING

A report of the results will include the following:

- Description of sample collection procedures, site description
- Names of individuals collecting and transporting samples, times and dates of sample collection and analysis on chain-of-custody
- General description of tests: age of test organisms, origin, dates and results of standard toxicant tests; light and temperature regime; other information on test conditions if different than procedures recommended. Reference toxicant test data should be included.
- All chemical/physical data generated. (Include minimum detection levels and minimum quantification levels.)
- Raw data and bench sheets.
- Provide a description of dechlorination procedures (as applicable).
- Any other observations or test conditions affecting test outcome.

FRESHWATER CHRONIC TOXICITY TEST PROCEDURE AND PROTOCOL USEPA Region 1

I. GENERAL REQUIREMENTS

The permittee shall be responsible for the conduct of acceptable chronic toxicity tests using three fresh samples collected during each test period. The following tests shall be performed as prescribed in Part 1 of the NPDES discharge permit in accordance with the appropriate test protocols described below. (Note: the permittee and testing laboratory should review the applicable permit to determine whether testing of one or both species is required).

- **Daphnid (Ceriodaphnia dubia) Survival and Reproduction Test.**
- **Fathead Minnow (Pimephales promelas) Larval Growth and Survival Test.**

Chronic toxicity data shall be reported as outlined in Section VIII.

II. METHODS

Methods to follow are those recommended by EPA in: Short Term Methods For Estimating The Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms, Fourth Edition, October 2002. United States Environmental Protection Agency. Office of Water, Washington, D.C., EPA 821-R-02-013. The methods are available on-line at <http://www.epa.gov/waterscience/WET/> . Exceptions and clarification are stated herein.

III. SAMPLE COLLECTION AND USE

A total of three fresh samples of effluent and receiving water are required for initiation and subsequent renewals of a freshwater, chronic, toxicity test. The receiving water control sample must be collected immediately upstream of the permitted discharge's zone of influence. Fresh samples are recommended for use on test days 1, 3, and 5. However, provided a total of three samples are used for testing over the test period, an alternate sampling schedule is acceptable. The acceptable holding times until initial use of a sample are 24 and 36 hours for on-site and off-site testing, respectively. A written waiver is required from the regulating authority for any hold time extension. All test samples collected may be used for 24, 48 and 72 hour renewals after initial use. All samples held for use beyond the day of sampling shall be refrigerated and maintained at a temperature range of 0-6° C.

All samples submitted for chemical and physical analyses will be analyzed according to Section VI of this protocol.

Sampling guidance dictates that, where appropriate, aliquots for the analysis required in this protocol shall be split from the samples, containerized and immediately preserved, or analyzed as per 40 CFR Part 136. EPA approved test methods require that samples collected for metals analyses be preserved immediately after collection. Testing for the presence of total residual chlorine (TRC) must be analyzed immediately or as soon as possible, for all effluent samples, prior to WET testing. TRC analysis may be performed on-site or by the toxicity testing laboratory and the samples must be dechlorinated, as necessary, using sodium thiosulfate prior to sample use for toxicity testing.

If any of the renewal samples are of sufficient potency to cause lethality to 50 percent or more of the test organisms in any of the test treatments for either species or, if the test fails to meet its permit limits, then chemical analysis for total metals (originally required for the initial sample only in Section VI) will be required on the renewal sample(s) as well.

IV. DILUTION WATER

Samples of receiving water must be collected from a location in the receiving water body immediately upstream of the permitted discharge's zone of influence at a reasonably accessible location. Avoid collection near areas of obvious road or agricultural runoff, storm sewers or other point source discharges and areas where stagnant conditions exist. EPA strongly urges that screening for toxicity be performed prior to the set up of a full, definitive toxicity test any time there is a question about the test dilution water's ability to achieve test acceptability criteria (TAC) as indicated in Section V of this protocol. The test dilution water control response will be used in the statistical analysis of the toxicity test data. All other control(s) required to be run in the test will be reported as specified in the Discharge Monitoring Report (DMR) Instructions, Attachment F, page 2, Test Results & Permit Limits.

The test dilution water must be used to determine whether the test met the applicable TAC. When receiving water is used for test dilution, an additional control made up of standard laboratory water (0% effluent) is required. This control will be used to verify the health of the test organisms and evaluate to what extent, if any, the receiving water itself is responsible for any toxic response observed.

If dechlorination of a sample by the toxicity testing laboratory is necessary a "sodium thiosulfate" control, representing the concentration of sodium thiosulfate used to adequately dechlorinate the sample prior to toxicity testing, must be included in the test.

If the use of an alternate dilution water (ADW) is authorized, in addition to the ADW test control, the testing laboratory must, for the purpose of monitoring the receiving water, also run a receiving water control.

If the receiving water diluent is found to be, or suspected to be toxic or unreliable an ADW of known quality with hardness similar to that of the receiving water may be substituted. Substitution is species specific meaning that the decision to use ADW is made for each species and is based on the toxic response of that particular species. Substitution to an ADW is authorized in two cases. The first is the case where repeating a test due to toxicity in the site dilution water requires an **immediate decision** for ADW use be made by the permittee and toxicity testing laboratory. The second is in the case where two of the most recent documented incidents of unacceptable site dilution water toxicity requires ADW use in future WET testing.

For the second case, written notification from the permittee requesting ADW use **and** written authorization from the permit issuing agency(s) is required **prior to** switching to a long-term use of ADW for the duration of the permit.

Written requests for use of ADW must be mailed with supporting documentation to the following addresses:

Director
Office of Ecosystem Protection (CAA)
U.S. Environmental Protection Agency, Region 1
Five Post Office Square, Suite 100
Mail Code OEP06-5
Boston, MA 02109-3912

and

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

Note: USEPA Region 1 retains the right to modify any part of the alternate dilution water policy stated in this protocol at any time. Any changes to this policy will be documented in the annual DMR posting.

See the most current annual DMR instructions which can be found on the EPA Region 1 website at <http://www.epa.gov/region1/enforcementandassistance/dmr.html> for further important details on alternate dilution water substitution requests.

V. TEST CONDITIONS AND TEST ACCEPTABILITY CRITERIA

Method specific test conditions and TAC are to be followed and adhered to as specified in the method guidance document, EPA 821-R-02-013. If a test does not meet TAC the test must be repeated with fresh samples within 30 days of the initial test completion date.

V.1. Use of Reference Toxicity Testing

Reference toxicity test results and applicable control charts must be included in the toxicity testing report.

If reference toxicity test results fall outside the control limits established by the laboratory for a specific test endpoint, a reason or reasons for this excursion must be evaluated, correction made and reference toxicity tests rerun as necessary.

If a test endpoint value exceeds the control limits at a frequency of more than one out of twenty then causes for the reference toxicity test failure must be examined and if problems are identified corrective action taken. The reference toxicity test must be repeated during the same month in which the exceedance occurred.

If two consecutive reference toxicity tests fall outside control limits, the possible cause(s) for the exceedance must be examined, corrective actions taken and a repeat of the reference toxicity test must take place immediately. Actions taken to resolve the problem must be reported.

V.1.a. Use of Concurrent Reference Toxicity Testing

In the case where concurrent reference toxicity testing is required due to a low frequency of testing with a particular method, if the reference toxicity test results fall slightly outside of laboratory established control limits, but the primary test met the TAC, the results of the primary test will be considered acceptable. However, if the results of the concurrent test fall well outside the established **upper** control limits i.e. ≥ 3 standard deviations for IC25 values and \geq two concentration intervals for NOECs, and even though the primary test meets TAC, the primary test will be considered unacceptable and must be repeated.

V.2. For the *C. dubia* test, the determination of TAC and formal statistical analyses must be performed using only the first three broods produced.

V.3. Test treatments must include 5 effluent concentrations and a dilution water control. An additional test treatment, at the permitted effluent concentration (% effluent), is required if it is not included in the dilution series.

VI. CHEMICAL ANALYSIS

As part of each toxicity test's daily renewal procedure, pH, specific conductance, dissolved oxygen (DO) and temperature must be measured at the beginning and end of each 24-hour period in each test treatment and the control(s).

The additional analysis that must be performed under this protocol is as specified and noted in the table below.

<u>Parameter</u>	Effluent	Receiving Water	ML (mg/l)
Hardness ^{1, 4}	x	x	0.5
Total Residual Chlorine (TRC) ^{2, 3, 4}	x		0.02
Alkalinity ⁴	x	x	2.0
pH ⁴	x	x	--
Specific Conductance ⁴	x	x	--
Total Solids ⁶	x		--
Total Dissolved Solids ⁶	x		--
Ammonia ⁴	x	x	0.1
Total Organic Carbon ⁶	x	x	0.5
Total Metals ⁵			
Cd	x	x	0.0005
Pb	x	x	0.0005
Cu	x	x	0.003
Zn	x	x	0.005
Ni	x	x	0.005
Al	x	x	0.02

Other as permit requires

Notes:

1. Hardness may be determined by:

- APHA Standard Methods for the Examination of Water and Wastewater , 21st Edition
 - Method 2340B (hardness by calculation)
 - Method 2340C (titration)
2. Total Residual Chlorine may be performed using any of the following methods provided the required minimum limit (ML) is met.
- APHA Standard Methods for the Examination of Water and Wastewater , 21st Edition
 - Method 4500-CL E Low Level Amperometric Titration
 - Method 4500-CL G DPD Colorimetric Method
 - USEPA 1983. Manual of Methods Analysis of Water and Wastes
 - Method 330.5
3. Required to be performed on the sample used for WET testing prior to its use for toxicity testing
4. Analysis is to be performed on samples and/or receiving water, as designated in the table above, from all three sampling events.
5. Analysis is to be performed on the initial sample(s) only unless the situation arises as stated in Section III, paragraph 4
6. Analysis to be performed on initial samples only

VII. TOXICITY TEST DATA ANALYSIS AND REVIEW

A. Test Review

1. Concentration / Response Relationship

A concentration/response relationship evaluation is required for test endpoint determinations from both Hypothesis Testing and Point Estimate techniques. The test report is to include documentation of this evaluation in support of the endpoint values reported. The dose-response review must be performed as required in Section 10.2.6 of EPA-821-R-02-013. Guidance for this review can be found at <http://water.epa.gov/scitech/methods/cwa/> . In most cases, the review will result in one of the following three conclusions: (1) Results are reliable and reportable; (2) Results are anomalous and require explanation; or (3) Results are inconclusive and a retest with fresh samples is required.

2. Test Variability (Test Sensitivity)

This review step is separate from the determination of whether a test meets or does not meet TAC. Within test variability is to be examined for the purpose of evaluating test sensitivity. This evaluation is to be performed for the sub-lethal hypothesis testing endpoints reproduction and growth as required by the permit. The test report is to include documentation of this evaluation to support that the endpoint values reported resulted from a toxicity test of adequate sensitivity. This evaluation must be performed as required in Section 10.2.8 of EPA-821-R-02-013.

To determine the adequacy of test sensitivity, USEPA requires the calculation of test percent minimum significant difference (PMSD) values. In cases where NOEC determinations are made based on a non-parametric technique, calculation of a test PMSD value, for the sole purpose of assessing test sensitivity, shall be calculated using a comparable parametric statistical analysis technique. The calculated test PMSD is then compared to the upper and lower PMSD bounds shown for freshwater tests in Section 10.2.8.3, p. 52, Table 6 of EPA-821-R-02-013. The comparison will yield one of the following determinations.

- The test PMSD exceeds the PMSD upper bound test variability criterion in Table 6, the test results are considered highly variable and the test may not be sensitive enough to determine the presence of toxicity at the permit limit concentration (PLC). If the test results indicate that the discharge is not toxic at the PLC, then the test is considered insufficiently sensitive and must be repeated within 30 days of the initial test completion using fresh samples. If the test results indicate that the discharge is toxic at the PLC, the test is considered acceptable and does not have to be repeated.
- The test PMSD falls below the PMSD lower bound test variability criterion in Table 6, the test is determined to be very sensitive. In order to determine which treatment(s) are statistically significant and which are not, for the purpose of reporting a NOEC, the relative percent difference (RPD) between the control and each treatment must be calculated and compared to the lower PMSD boundary. See *Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the NPDES Program*, EPA 833-R-00-003, June 2002, Section 6.4.2. The following link: [Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the NPDES Program](#) can be used to locate the USEPA website containing this document. If the RPD for a treatment falls below the PMSD lower bound, the difference is considered statistically insignificant. If the RPD for a treatment is greater than the PMSD lower bound, then the treatment is considered statistically significant.
- The test PMSD falls within the PMSD upper and lower bounds in Table 6, the sub-lethal test endpoint values shall be reported as is.

B. Statistical Analysis

1. General - Recommended Statistical Analysis Method

Refer to general data analysis flowchart, EPA 821-R-02-013, page 43

For discussion on Hypothesis Testing, refer to EPA 821-R-02-013, Section 9.6

For discussion on Point Estimation Techniques, refer to EPA 821-R-02-013, Section 9.7

2. *Pimephales promelas*

Refer to survival hypothesis testing analysis flowchart, EPA 821-R-02-013, page 79

Refer to survival point estimate techniques flowchart, EPA 821-R-02-013, page 80

Refer to growth data statistical analysis flowchart, EPA 821-R-02-013, page 92

3. *Ceriodaphnia dubia*

Refer to survival data testing flowchart, EPA 821-R-02-013, page 168

Refer to reproduction data testing flowchart, EPA 821-R-02-013, page 173

VIII. TOXICITY TEST REPORTING

A report of results must include the following:

- Test summary sheets (2007 DMR Attachment F) which includes:
 - Facility name
 - NPDES permit number
 - Outfall number
 - Sample type
 - Sampling method
 - Effluent TRC concentration
 - Dilution water used
 - Receiving water name and sampling location
 - Test type and species
 - Test start date
 - Effluent concentrations tested (%) and permit limit concentration
 - Applicable reference toxicity test date and whether acceptable or not
 - Age, age range and source of test organisms used for testing
 - Results of TAC review for all applicable controls
 - Test sensitivity evaluation results (test PMSD for growth and reproduction)
 - Permit limit and toxicity test results
 - Summary of test sensitivity and concentration response evaluation

In addition to the summary sheets the report must include:

- A brief description of sample collection procedures
- Chain of custody documentation including names of individuals collecting samples, times and dates of sample collection, sample locations, requested analysis and lab receipt with time and date received, lab receipt personnel and condition of samples upon receipt at the lab(s)
- Reference toxicity test control charts
- All sample chemical/physical data generated, including minimum limits (MLs) and analytical methods used
- All toxicity test raw data including daily ambient test conditions, toxicity test chemistry, sample dechlorination details as necessary, bench sheets and statistical analysis
- A discussion of any deviations from test conditions
- Any further discussion of reported test results, statistical analysis and concentration-response relationship and test sensitivity review per species per endpoint

Attachment C

EPA - New England

Reassessment of Technically Based Industrial Discharge Limits

Under 40 CFR§122.21(j)(4), all Publicly Owned Treatment Works (POTWs) with approved Industrial Pretreatment Programs (IPPs) shall provide the following information to the Director: a written evaluation of the need to revise local industrial discharge limits under 40 CFR §403.5(c)(1).

Below is a form designed by the U.S. Environmental Protection Agency (EPA - New England) to assist POTWs with approved IPPs in evaluating whether their existing Technically Based Local Limits (TBLLs) need to be recalculated. The form allows the permittee and EPA to evaluate and compare pertinent information used in previous TBLLs calculations against present conditions at the POTW.

Please read direction below before filling out form.

ITEM I.

- * In Column (1), list what your POTW's influent flow rate was when your existing TBLLs were calculated. In Column (2), list your POTW's present influent flow rate. Your current flow rate should be calculated using the POTW's average daily flow rate from the previous 12 months.
- * In Column (1) list what your POTW's SIU flow rate was when your existing TBLLs were calculated. In Column (2), list your POTW's present SIU flow rate.
- * In Column (1), list what dilution ratio and/or 7Q10 value was used in your old/expired NPDES permit. In Column (2), list what dilution ratio and/or 7Q10 value is presently being used in your new/reissued NPDES permit.

The 7Q10 value is the lowest seven day average flow rate, in the river, over a ten year period. The 7Q10 value and/or dilution ratio used by EPA in your new NPDES permit can be found in your NPDES permit "Fact Sheet."

- * In Column (1), list the safety factor, if any, that was used when your existing TBLLs were calculated.
- * In Column (1), note how your bio-solids were managed when your existing TBLLs were calculated. In Column (2), note how your POTW is presently disposing of its biosolids and how your POTW will be disposing of its biosolids in the future.

ITEM II.

- * List what your existing TBLLs are - as they appear in your current Sewer Use Ordinance (SUO).

ITEM III.

- * Identify how your existing TBLLs are allocated out to your industrial community. Some pollutants may be allocated differently than others, if so please explain.

ITEM IV.

- * Since your existing TBLLs were calculated, identify the following in detail:
 - (1) if your POTW has experienced any upsets, inhibition, interference or pass-through as a result of an industrial discharge.
 - (2) if your POTW is presently violating any of its current NPDES permit limitations - include toxicity.

ITEM V.

- * Using current sampling data, list in Column (1) the average and maximum amount of pollutants (in pounds per day) received in the POTW's influent. Current sampling data is defined as data obtained over the last 24 month period.

All influent data collected and analyzed must be in accordance with 40 CFR §136. Sampling data collected should be analyzed using the lowest possible detection method(s), e.g. graphite furnace.

- * Based on your existing TBLLs, as presented in Item II., list in Column (2), for each pollutant the Maximum Allowable Headwork Loading (MAHL) values derived from an applicable environmental criteria or standard, e.g. water quality, sludge, NPDES, inhibition, etc. For more information, please see EPA's Local Limit Guidance Document (July 2004).

Item VI.

- * Using current sampling data, list in Column (1) the average and maximum amount of pollutants (in micrograms per liter) present your POTW's effluent. Current sampling data is defined as data obtained during the last 24 month period.

(Item VI. continued)

All effluent data collected and analyzed must be in accordance with 40 CFR '136. Sampling data collected should be analyzed using the lowest possible detection method(s), e.g. graphite furnace.

- * List in Column (2A) what the Water Quality Standards (WQS) were (in micrograms per liter) when your TBLLs were calculated, please note what hardness value was used at that time. Hardness should be expressed in milligram per liter of Calcium Carbonate.

List in Column (2B) the current WQSs or "Chronic Gold Book" values for each pollutant multiplied by the dilution ratio used in your new/reissued NPDES permit. For example, with a dilution ratio of 25:1 at a hardness of 25 mg/l - Calcium Carbonate (copper's chronic WQS equals 6.54 µg/L) the chronic NPDES permit limit for copper would equal 156.25 µg/L.

ITEM VII.

- * In Column (1), list all pollutants (in micrograms per liter) limited in your new/reissued NPDES permit. In Column (2), list all pollutants limited in your old/expired NPDES permit.

ITEM VIII.

- * Using current sampling data, list in Column (1) the average and maximum amount of pollutants in your POTW's biosolids. Current data is defined as data obtained during the last 24 month period. Results are to be expressed as total dry weight.

All biosolids data collected and analyzed must be in accordance with 40 CFR §136.

In Column (2A), list current State and/or Federal sludge standards that your facility's biosolids must comply with. Also note how your POTW currently manages the disposal of its biosolids. If your POTW is planing on managing its biosolids differently, list in Column (2B) what your new biosolids criteria will be and method of disposal.

In general, please be sure the units reported are correct and all pertinent information is included in your evaluation. If you have any questions, please contact your pretreatment representative at EPA - New England.

POTW Name & Address : _____

Date EPA approved current TBLLs : _____

ITEM I.

In Column (1) list the conditions that existed when your current TBLLs were calculated. In Column (2), list current conditions or expected conditions at your POTW.		
	Column (1) EXISTING TBLLs	Column (2) PRESENT CONDITIONS
POTW Flow (MGD)		
Dilution Ratio or 7Q10 (from NPDES Permit)		
SIU Flow (MGD)		
Safety Factor		N/A
Biosolids Disposal Method(s)		

ITEM II.

EXISTING TBLLs			
POLLUTANT	NUMERICAL LIMIT (mg/l) or (lb/day)	POLLUTANT	NUMERICAL LIMIT (mg/l) or (lb/day)

ITEM III.

Note how your existing TBLLs, listed in Item II., are allocated to your Significant Industrial Users (SIUs), i.e. uniform concentration, contributory flow, mass proportioning, other. Please specify by circling.

ITEM IV.

Has your POTW experienced any upsets, inhibition, interference or pass-through from industrial sources since your existing TBLLs were calculated?

If yes, explain.

Has your POTW violated any of its NPDES permit limits and/or toxicity test requirements?

If yes, explain.

ITEM V.

Using current POTW influent sampling data fill in Column (1). In Column (2), list your Maximum Allowable Headwork Loading (MAHL) values used to derive your TBLLs listed in Item II. In addition, please note the Environmental Criterion for which each MAHL value was established, i.e. water quality, sludge, NPDES etc.

Pollutant	Column (1) Influent Data Analyses		Column (2)	
	Average (lbs/day)	Maximum (lbs/day)	MAHL Values (lbs/day)	Environmental Criterion
Arsenic				
Cadmium				
Chromium				
Copper				
Cyanide				
Lead				
Mercury				
Nickel				
Silver				
Zinc				
Other (List)				

ITEM VI.

Using current POTW effluent sampling data, fill in Column (1). In Column (2A) list what the Water Quality Standards (Gold Book Criteria) were at the time your existing TBLLs were developed. List in Column (2B) current Gold Book values multiplied by the dilution ratio used in your new/reissued NPDES permit.

Pollutant	Column (1) Effluent Data Analyses		Columns (2A) (2B) Water Quality Criteria (Gold Book)	
	Maximum (µg/L)	Average (µg/L)	From TBLLs (µg/L)	Today (µg/L)
Arsenic				
*Cadmium				
*Chromium				
*Copper				
Cyanide				
*Lead				
Mercury				
*Nickel				
Silver				
*Zinc				
Other (List)				

*Hardness Dependent (mg/l - CaCO₃)

ITEM VII.

In Column (1), identify all pollutants limited in your new/reissued NPDES permit. In Column (2), identify all pollutants that were limited in your old/expired NPDES permit.

[illegible]

ITEM VIII.

Using current POTW biosolids data, fill in Column (1). In Column (2A), list the biosolids criteria that was used at the time your existing TBLLs were calculated. If your POTW is planning on managing its biosolids differently, list in Column (2B) what your new biosolids criteria would be and method of disposal.

Column (1) Data Analyses Average		Biosolids Criteria	
Pollutant	Biosolids (mg/kg)	Column (2A) Biosolids Criterion From TBLLs (mg/kg)	Column (2B) New Biosolids Criterion (mg/kg)
Arsenic			
Cadmium			
Chromium			
Copper			
Cyanide			
Lead			
Mercury			
Nickel			
Silver			
Zinc			
Molybdenum			
Selenium			
Other (List)			

NPDES PERMIT REQUIREMENT
FOR
INDUSTRIAL PRETREATMENT ANNUAL REPORT

The information described below shall be included in the pretreatment program annual reports:

1. An updated list of all industrial users by category, as set forth in 40 C.F.R. 403.8(f)(2)(i), indicating compliance or noncompliance with the following:
 - baseline monitoring reporting requirements for newly promulgated industries
 - compliance status reporting requirements for newly promulgated industries
 - periodic (semi-annual) monitoring reporting requirements,
 - categorical standards, and
 - local limits;
2. A summary of compliance and enforcement activities during the preceding year, including the number of:
 - significant industrial users inspected by POTW (include inspection dates for each industrial user),
 - significant industrial users sampled by POTW (include sampling dates for each industrial user),
 - compliance schedules issued (include list of subject users),
 - written notices of violations issued (include list of subject users),
 - administrative orders issued (include list of subject users),
 - criminal or civil suits filed (include list of subject users) and,
 - penalties obtained (include list of subject users and penalty amounts);
3. A list of significantly violating industries required to be published in a local newspaper in accordance with 40 C.F.R. 403.8(f)(2)(vii);
4. A narrative description of program effectiveness including present and proposed changes to the program, such as funding, staffing, ordinances, regulations, rules and/or statutory authority;
5. A summary of all pollutant analytical results for influent, effluent, sludge and any toxicity or bioassay data from the wastewater treatment facility. The summary shall include a comparison of influent sampling results versus threshold inhibitory concentrations for the Wastewater Treatment System and effluent sampling results versus water quality standards. Such a comparison shall be based on the sampling program described in the paragraph below or any similar sampling program described in this Permit.

At a minimum, annual sampling and analysis of the influent and effluent of the Wastewater Treatment Plant shall be conducted for the following pollutants:

- | | |
|--------------------|-------------------|
| a.) Total Cadmium | f.) Total Nickel |
| b.) Total Chromium | g.) Total Silver |
| c.) Total Copper | h.) Total Zinc |
| d.) Total Lead | i.) Total Cyanide |
| e.) Total Mercury | j.) Total Arsenic |

The sampling program shall consist of one 24-hour flow-proportioned composite and at least one grab sample that is representative of the flows received by the POTW. The composite shall consist of hourly flow-proportioned grab samples taken over a 24-hour period if the sample is collected manually or shall consist of a minimum of 48 samples collected at 30 minute intervals if an automated sampler is used. Cyanide shall be taken as a grab sample during the same period as the composite sample. Sampling and preservation shall be consistent with 40 CFR Part 136.

6. A detailed description of all interference and pass-through that occurred during the past year;
7. A thorough description of all investigations into interference and pass-through during the past year;
8. A description of monitoring, sewer inspections and evaluations which were done during the past year to detect interference and pass-through, specifying parameters and frequencies;
9. A description of actions being taken to reduce the incidence of significant violations by significant industrial users; and,
10. The date of the latest adoption of local limits and an indication as to whether or not the permittee is under a State or Federal compliance schedule that includes steps to be taken to revise local limits.

RESPONSE TO COMMENTS
NPDES PERMIT NO. MA0100404
MWRA-CLINTON WASTEWATER TREATMENT FACILITY
CLINTON, MASSACHUSETTS

On September 29, 2010, the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) released for public notice a draft permit (MA0100404) for the MWRA-Clinton Wastewater Treatment Plant in Clinton, Massachusetts.

During the 2010 public comment period, EPA received comments from the following parties:

- MWRA (Massachusetts Water Resources Authority),
- MWRA Advisory Board,
- Merrimack River Watershed Council (MRWC), and
- Nashua River Watershed Association (NRWA).

Following the close of the first public comment period, EPA decided to partially revise the draft permit and reopen it for public comment based on the existence of “substantial new questions,” pursuant to 40 C.F.R. § 124.14(b). EPA accepted public comment on the revised draft permit from September 18, 2013 through November 27, 2013. Public comment on the revised draft permit was limited to the “substantial new questions that caused its reopening.” *Id.* at § 124.14(c).

In accordance with 40 C.F.R. § 124.14(c), comments filed on the fact sheet for the revised draft permit during the reopened comment period were limited to the “substantial new questions” that caused its reopening, which included

- Satellite sewer communities as limited co-permittees and the co-permittees’ responsibilities in Part I.C. Operation and Maintenance of the Sewer System,
- Updated collection system maintenance requirements in Part I.C. Operation and Maintenance of the Sewer System,
- Modification to the total phosphorus compliance schedule,
- Changes to the WET testing requirements, and
- Reasonable potential analysis for aluminum.

During the 2013 public comment period, EPA received comments on the partially revised draft permit from the following parties:

- MWRA (two separate comment letters),
- MWRA Advisory Board,
- NRWA,
- Massachusetts Coalition for Water Resources Stewardship (MCWRS), and
- Upper Blackstone Water Pollution Abatement District (UBWPAD).

The final permit is substantially identical to the partially revised draft permit that was available for public comment in 2013. Although EPA's knowledge of the facility has benefited from the various comments and additional information submitted, the information and arguments presented did not raise any substantial new questions concerning the permit. EPA did, however, make certain clarifications in response to comments. These improvements and changes are detailed in this document and reflected in the final permit.

The analyses underlying these changes are explained in the responses to individual comments that follow. These responses are organized first by the comment period (2010, then 2013) and then by topic, rather than by commenter. Therefore, the Comment Letter Indices below (Table 1 and Table 2) are provided for the convenience of the reader to find the page in this document where the response to a particular comment can be found.

A copy of the final permit and this response to comments document will be posted on the EPA Region 1 web site: http://www.epa.gov/region1/npdes/permits_listing_ma.html.

A copy of the final permit may also be obtained by writing or calling Robin Johnson, United States Environmental Protection Agency, 5 Post Office Square, Suite 100 (Mail Code: OEP06-1), Boston, Massachusetts 02109-3912; Telephone (617) 918-1045.

Changes made from 2010 Draft Permit to 2013 Partially Revised Draft Permit.....	4
Changes made from 2013 Partially Revised Draft Permit to Final Permit.....	5
Comment Letter Index	8
Response to Comments on 2010 Draft NPDES Permit	12
1. CO-PERMITTEE REQUIREMENTS	12
2. EFFLUENT FLOW LIMITS AND INFILTRATION/INFLOW	20
3. PHOSPHORUS LIMIT	29
4. METALS AND WHOLE EFFLUENT TOXICITY LIMITS	35
5. BACTERIA LIMITS	38
6. DISINFECTION	40
7. INDUSTRIAL PRETREATMENT, MONITORING AND REPORTING	42
8. CORRECTIONS	45
Response to Comments on 2013 Partially Re-Noticed Draft NPDES Permit	47
1. CO-PERMITTEE REQUIREMENTS	47
2. METALS AND WHOLE EFFLUENT TOXICITY	78
3. PHOSPHORUS.....	80
4. OPERATIONS AND MAINTENANCE.....	83
5. MONITORING AND REPORTING.....	84
6. CORRECTIONS.....	86

- Appendix A EPA Region 1 Co-permitting Approach for Publicly Owned Treatment Works That Include Municipal Satellite Sewage Collection Systems (also Attachment 1 to the 2013 Partially Revised Fact Sheet.)
- Appendix B U.S. Environmental Appeals Board Order Denying the Petition to Review, Charles River Pollution Control District, February 4, 2015
- Appendix C MWRA-Clinton WWTP Effluent Flows and USGS Gage Streamflows (see Comment A3)

Changes made from 2010 Draft Permit to 2013 Partially Revised Draft Permit

Page 3

- The WET test sampling method was corrected from grab sample to 24-Hour Composite. See Response A5.
- The following parameters were deleted from the required reporting list on the WET test DMR form: alkalinity, specific conductance, total solids, total organic carbon, total residual chlorine, dissolved oxygen, total magnesium, and total calcium. The permittee is still required to monitor for these parameters in the effluent and diluent, and to report the results in the WET test report.
- The monitoring frequency for total copper was changed from once per week to once per month, and the monthly average total copper limit was recalculated to 11.6 µg/L. See Response A4.

Page 4

- Footnote 7: Reference to fecal coliform has been changed to *E. coli*. See Response A8.
- Footnote 8: Language has been amended to indicate that reporting of interruptions and malfunctions of the chlorination and dechlorination systems shall also include a description of measures to prevent future occurrences. See Response C4.
- Footnote 9: Language has been modified to indicate that the permittee shall document any instance in which more than the two required chlorine samples are taken per day. The footnote was also changed to indicate that the permittee is only required to document chlorine samples performed on the final effluent. See Response A10.
- Footnote 10: Language was clarified to indicate that from the effective date of the permit until April 1, 2019, the phosphorus loading is a report-only requirement. See Response A12.

Page 5

- Footnote 13: The phrase “and loading values in lbs/day” has been removed. See Response A13.
- The language of Footnote 18 was updated to include a list of WET test parameters that must be monitored and reported on the DMR. The language pertaining to WET test monitoring when using Alternate Dilution Water was removed, as this information is contained in the updated WET test protocols.

Page 8, Part I.C.3., Industrial Pretreatment Program

The timeframe to submit a local limits technical evaluation was changed from 120 days to 180 days. See Response A16.

Page 9, Part I.D., Operations and Maintenance

The Operation and Maintenance (O&M) language was expanded to include overall collection system O&M rather than just infiltration and inflow. In addition to the requirements in the 2010 draft, the following requirements were added in the 2013 draft permit:

- Mapping of the collection system including all sewer lines, outfalls, pump stations, appurtenances such as siphons and air valves, catch basins, and surface waters;
- Development of a preliminary collection system O&M Plan, including management goals, staffing, information management, and legal authorities, and a listing of all pump stations; which must be submitted to EPA within six months of the effective date of the permit;
- Development of a full collection system O&M Plan including preventive maintenance, funding sources, staffing plans, known overflows and backups, and plans to avoid unauthorized discharges; which must be submitted to EPA within twenty-four months of the effective date of the permit.
- Submittal of an annual report with updates of all information listed above.

Page 12, I.F., Sludge

Reference, in footnote 2, to the Sludge Guidance document was updated to reflect that it is now provided online at <http://epa.gov/region1/npdes/permits/generic/sludgeguidance.pdf>, instead of as an attachment to the permit.

Changes made from 2013 Partially Revised Draft Permit to Final Permit

Page 1

Attachment E, Summary of Required Report Submittals, was not included as an attachment to the final permit. See Response D9.

Page 3

- The twice weekly monitoring requirement for aluminum was removed, because MWRA-Clinton no longer uses aluminum for nutrient removal. See Response E16.
- Footnote 5 was added to the sample type column for Whole Effluent Toxicity. See Response E17.
- The orthophosphate monitoring requirement was removed from the permit because it is no longer Region 1 standard practice to require winter orthophosphate monitoring at POTWs.

EPA's intention in requiring winter orthophosphate monitoring was to verify the assumption that the vast majority of the phosphorus discharges would be in the dissolved phase. At that time, it was EPA's understanding that the non-particulate orthophosphates would pass through the river system and not accumulate in the sediments. However, since the last permit issuance, a 2008 study of the TP in sediments in the Assabet River indicated that winter phosphorus loadings do accumulate in sediments, and that reductions in wintertime TP loading contribute significantly to the reduction in sediment phosphorus flux¹, even when the

¹ Assabet River Sediment and Dam Removal Study, Modeling Report, June 2008, CDM, page 6-7.

proportion of non-particulate orthophosphate is relatively high. Given that both dissolved and particulate phosphorus contribute to water quality impairments, EPA has determined that total phosphorus is the appropriate focus and sees insufficient reason to retain monitoring for orthophosphate in the wintertime. Therefore, EPA has removed the orthophosphate monitoring requirement from the final permit.

Page 4

Footnote 10: Language in the interim total phosphorus limit was clarified. See Response E37.

Page 5

- Footnote 13: This footnote required that total phosphorus and orthophosphate sampling occur concurrently. It was removed because orthophosphate monitoring is no longer required in the final permit.
- Footnote 14, which required aluminum and phosphorus sampling to be collected concurrently was removed from the permit because aluminum monitoring outside of WET testing is no longer required. See Response E16.

Page 6

A condition (Part I.A.8.) was added that prohibits the use of aluminum in the treatment process. See Response E16.

Page 7, I.B. Compliance Schedule

The compliance schedule was modified to reflect the status of construction to meet the total phosphorus limit. Because construction has already commenced, the deadlines for starting construction and all previous milestones were removed. The final permit requires compliance with the warm season total phosphorus limit starting April 1, 2019 and the cold weather season total phosphorus limit starting November 1, 2019. See Responses A12 and E25.

Page 9, I.D., Operations and Maintenance

- The introduction to Part I.D was expanded to two paragraphs which read:

Operation and maintenance of the collection system owned and operated respectively by the Town of Clinton (“Clinton”) and the Lancaster Sewer District (“Lancaster”) shall be in compliance with the General Requirements of Part II and the terms and conditions of Part D and Part E of this permit. Each of Clinton and Lancaster respectively shall only be responsible under Part II, Part D and Part E for only its own infrastructure, activities and required reporting with respect to the portions of the collection system that each owns or operates.

Operation and maintenance of that portion of the collection system and the entirety of the treatment system owned and operated by MWRA shall be in compliance with the General Requirements of Part II and the terms and conditions of Part D and Part E of this permit. MWRA shall only be responsible under Part II, Part D and Part E for its own infrastructure,

activities and required reporting with respect to the portion of the collection and treatment system that it owns or operates. In no event shall Permittee Massachusetts Water Resources Authority be responsible for the acts or failure to act of Permittee Town of Clinton or Permittee Lancaster Sewer District, or for the failure to properly operate or maintain any collection system or portion of a collection system that it does not own or operate. No Permittee shall be responsible for violations of Part II, Part D and Part E committed by another Permittee relative to the portions of the collection system owned and operated by such other Permittee. In the event of any conflict between the above provisions and any other term or provision of this Permit, the above provisions shall control. The permittee and each co-permittee are required to complete the following activities for the respective portions of the collection system which they operate:"

See Response A1.

- Each numbered item in Part I.D. was modified to mention co-permittees in addition to the permittee and to clarify that co-permittees are responsible for each requirement in Part I.D. for the portion of the collection system that each co-permittee owns and operates. See Response A1.

Page 13, I.G. Monitoring and Reporting

Updated monitoring and reporting language is included in the final permit. The monitoring and reporting requirements have not changed; however, the updated language clarifies e-reporting deadlines, requirements for co-permittees, and which reports must continue to be submitted via hard copy.

Page 16, H. State Permit Conditions

The State Permit Conditions section was misnumbered. It has been changed from I.G. to I.H. See Response E30.

Comment Letter Index

Table 1. 2010 Comments

Comment ID	Topic	Page
MWRA Comment Letter, dated October 27, 2010		
A1	Co-permittees	12
A2	Co-permittees, deletions	16
A3	Effluent Flow Limit	20
A4	Copper limit	35
A5	WET testing	45
A6	Draft Phosphorus TMDL	29
A7	Routine Sampling Requirement	42
A8	E. coli correction	38
A9	Chlorination Reporting	40
A10	Chlorination Reporting	40
A11	Process Control Samples	40
A12	Phosphorus Compliance Schedule	31
A13	Phosphorus Footnote Correction	31
A14	Weekends and Holidays	43
A15	Compliance Schedule	31
A16	Industrial Pretreatment Program	43
A17	Industrial Pretreatment Program	43
A18	Co-permittees, deletions	18
A19	Monitoring Requirements	43
A20	Co-permittees	18
A21	Corrections to DMR Table	45
A22	7Q10 and dilution	24
A23	Flow Capacity	25
A24	E. coli season inconsistency	41
A25	Connection of nutrient impairment to discharge	32
A26	Reasonable potential analysis for zinc	38
A27	Operation and maintenance requirements for co-permittees	19
A28	Discussion of ACO for I/I removal	44

Table 1. 2010 Comment Letters, continued

Comment ID	Topic	Page
MWRA Advisory Board Letter, dated October 27, 2010		
B1	Opposition to co-permittees	19
B2	Cost to meet phosphorus limit	33
B3	Phosphorus limit and sludge	33
B4	I/I source reduction	26
B5	Effluent flow limit	26
Nashua River Watershed Association Letter, dated October 28, 2010		
C1	Maintain receiving water critical flow	27
C2	Effluent flow limit	28
C3	Average flow reporting	28
C4	Residual chlorine	41
C5	Bacteria	39
C6	Total Phosphorus Limit	34
C7	WET testing	38
Merrimack River Watershed Council letter, dated October 28, 2010		
D1	Effluent flow limit	28
D2	Flow reporting	29
D3	Transparency	29
D4	Enforcement of co-permittee provisions	20
D5	Total phosphorus limit	35
D6	E. coli limits	39
D7	E. coli correction	45
D8	Reduce chlorine use	41
D9	Typos, Attachment F	45

Table 2. 2013 Comment Letter Index

Comment ID	Topic	Page
MWRA Comment Letter, dated October 17, 2013		
E1	Satellite sewer systems are not point sources	47
E2	The co-permittees have not submitted applications	51
E3	Satellite systems are not “treatment works”	51
E4	Improper use of “treatment works” definition from Construction Grants regulations	53
E5	Satellite systems are neither direct nor indirect dischargers	53
E6	EPA may not waive applications	54
E7	EPA and the State can already regulate satellite systems	55
E8	Regulation of satellite systems is excessive and burdensome	56
E9	Co-permittee deletions	57
E10	Language for co-permittees	57
E11	Co-permittee deletions	58
E12	Co-permittee deletions	58
E13	Co-permittee revisions	58
E14	Typos, Attachment E errors	58
E15	Orthophosphorus vs orthophosphate terminology	86
E16	Aluminum reasonable potential	78
E17	Permit limit table: move footnote 5 to sample type column	86
E18	Total phosphorus and orthophosphate sampling should be concurrent	80
E19	Deletion of “full” from O&M report description	82
E20	Co-permittee deletions	59
E21	NetDMR is infeasible	84
E22	Submittal of monthly operating report	85
E23	Submittal of reports through NetDMR	85
E24	Attachment E corrections	86
E25	Phosphorus compliance schedule	80
E26	Formatting	87
E27	Footnote correction	87
E28	Footnote correction	87
E29	Formatting errors	87
E30	Numbering error	87
E31	Co-permittee deletions	59
E32	Phosphorus compliance schedule	81
E33	Reference error	87
E34	Copper limit and monitoring frequency	79
E35	Routine sampling program	85
E36	Chlorine reporting requirements	81
E37	Interim phosphorus monitoring	82
E38	Footnote correction	82
E39	DMR due dates	86

E40	Pretreatment requirements	83
E41	Co-permittee policy is a legislative rule	59
MWRA Advisory Board comment letter, dated October 16, 2013		
G1	Will public comment period be extended?	83
G2	Opposition to co-permittees	61
G3	EPA misdefines the term “treatment works”	61
G4	EPA is pushing MWRA into active management of its satellite systems	61
G5	Co-permittee policy will damage the relationship between regional facilities and member communities	63
MCWRS comment letter, dated November 25, 2013		
H1	Opposition to co-permittees	63
H2	Satellite communities are not dischargers	64
H3	Co-permittee policy relies on EPA documents	64
H4	Assistance is preferred over regulation	65
NRWA comment letter, dated November 27, 2013		
I1	Financial arrangement between MWRA and Town of Clinton does not encourage elimination of I/I	65
I2	O&M plan deadlines	84
I3	Flow increase	84
I4	Aluminum monitoring	79
I5	WET test revisions	80
I6	Phosphorus limit	82
UBWPAD comment letter, dated November 26, 2013		
J1	The Region may not change its position	67
J2	Satellite systems do not discharge	69
J3	Application requirements	72
J4	Approach is inconsistent with Permit Writer’s Manual	74
J5	State regulations	76
J6	Insufficient coordination within EPA	77
J7	This is a legislative rule in disguise	77

Response to Comments on 2010 Draft NPDES Permit

1. CO-PERMITTEE REQUIREMENTS

Comment A1: EPA not authorized to include co-permittees

MWRA believes that the United States Environmental Protection Agency (“EPA”) is not authorized under the code of Federal Regulations governing EPA’s NPDES program to include the Town of Clinton or the Lancaster Sewer District as co-permittees in draft NPDES permit no. MA0100404 for MWRA’s Clinton Wastewater Treatment Plant (“CWWTP”) for the following reasons.

Imposition of co-permittee status would have the legal effect of making each co-permittee jointly and severally liable for all permit obligations even though some of the co-permittees have no statutory or regulatory obligation to comply with or achieve a particular permit condition. Just as MWRA is limited by its enabling act to be legally responsible for specific infrastructure and operations included within the scope of its enabling act, so too are municipalities and sewer districts responsible only for their own local systems, which, in this case, have no separate discharge point sources and no obligation to obtain a NPDES permit. Mixing the two impermissibly blurs the otherwise bright line as to which entity has the obligation to obtain and comply with a permit. Imposition of co-permittee status adds compliance obligations compliance targets that otherwise do not exist under the NPDES system.

A NPDES permit is a license, issued by the government to a person or persons granting permission to do something that would otherwise be illegal without a permit. See U.S. Environmental Protection Agency NPDES Permit Writer’s Manual (September 2010) at p. 1-5. Typically, a NPDES permit is a license for a facility to discharge a specified amount of pollutant into a receiving water under certain conditions. See U.S. Environmental Protection Agency NPDES Permit Writer’s Manual (September 2010) at p. 1-5.

The NPDES regulations at Title 40 of the Code of Federal Regulation (“C.F.R.”) require that permits for the discharge of pollutants from any point source into the waters of the United States. See 40 C.F.R. 122 and 124. A person who discharges pollutants or proposes to discharge pollutants into waters of the United States must submit a complete application for a permit. See 40 C.F.R. 122 and 124. The permit application must be signed by a principal executive officer of the entity applying for a NPDES permit. See 40 C.F.R. 122.2(a)(3). The NPDES permittee will either be the owner or operator of the facility. See U.S. Environmental Protection Agency Permit Writer’s Manual (September 2010) at p. 4-1. Owner or operator means the owner or operator of any facility or activity subject to regulation under the NPDES permit program. See 40 C.F.R. 122.2. NPDES permits are only issued to direct discharges. See U.S. Environmental Protection Agency NPDES Permit Writer’s Manual (September 2010) at p. 1-7. Direct discharge means the discharge of a pollutant. See 40 C.F.R. 122.2.

Standard conditions in a permit apply to portions of the collection system for which the permittee has ownership or has operational control. See U.S. Environmental Protection Agency NPDES Permit Writer’s Manual (September 2010) at p. 9-20. The permit may require the permittee to implement a program to assess the current capacity of the collections system and treatment facilities that it owns or over which it has operational control to ensure that discharges from

unauthorized locations do not occur. See U.S. Environmental Protection Agency NPDES Permit Writer's Manual (September 2010) at p. 9-22. Duty to mitigate is a standard provision that requires the permittee to take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of the permit which has a reasonable likelihood of adversely affecting human health or environment. See 40 C.F.R. 122.41(d). The permittee is also required to properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of the permit. See 40 C.F.R. 122.41(e).

Clearly, EPA does not have the legal authority to include non-point sources such as the Town of Clinton and the Lancaster Sewer District in the draft NPDES permit no. MA0100404 for CWWTP and the accompanying fact sheet as co-permittees. MWRA is the only applicant for draft NPDES permit no. MA0100404 and is the only signatory on the application. MWRA is the sole owner and operator of its CWWTP. CWWTP has one outfall (001) or point source which discharges into the South Branch of the Nashua River – the sole outfall covered by draft NPDES permit no. MA0100404.

The provisions in draft NPDES permit no. MA0100404 that the Town of Clinton and the Lancaster Sewer District are subject to include Part I Paragraph D. Operation and Maintenance of the Sewer System, Part I Paragraph E. Unauthorized Discharges, and Part II of the permit which is referenced in Part I Paragraph D. These provisions are standard conditions that are based on 40 C.F.R. 122.41(d) and 40 C.F.R. 122.41(e). As referenced above, these standard conditions in a permit apply to portions of the collection system for which the permittee has ownership or has operational control and do not apply to the Town of Clinton and the Lancaster Sewer District.

Therefore, MWRA requests that the following provisions in the draft permit and the fact sheet be modified accordingly.

Response A1: On February 4, 2015, the Environmental Appeals Board (EAB) upheld EPA's co-permittee approach when it dismissed an appeal of a Region 1 NPDES permit issued to a POTW with satellite collection systems. *In re Charles River Pollution Control Dist.*, NPDES Appeal 14-01, 16 E.A.D. __ (EAB Feb. 4, 2015) ("CRPCD Decision;" attached as Appendix B). The permit had included municipal satellite sewer collection systems conveying wastewater to the plant as co-permittees and subjected them to operating and maintenance requirements despite their opposition to inclusion on the permit.

The Towns of Bellingham, Franklin, Medway and Millis are the owners of satellite collection systems that convey wastewater to a wastewater treatment plant owned by the Charles River Pollution Control District. The Towns appealed the permit. They argued principally that the municipal collection systems (1) did not discharge pollutants to U.S. waters under the Act given their distance from the ultimate outfall point, as well as the existence of an intervening point source providing treatment (that is, the POTW treatment plant) and, (2) they did not, in any event, apply to be covered under the NPDES permitting program.

The Board disagreed and found that the Region has authority under the CWA and EPA's regulations to include the Towns as co-permittees on the permit, and the administrative record

supports the Region's decision to include the Towns as co-permittees. In rejecting the Petitioners' claims, the Board upheld each of the Region's legal arguments and factual justifications on a range of interesting and important CWA issues. It found that the Region reasonably construed the NPDES regulatory definition of "publicly owned treatment works" to include the Towns' municipal satellite sewer collection systems. Because the Towns' sewer collection systems are components of the treatment plant that discharges into waters of the United States, the Towns are subject to NPDES regulation. Additionally, it held that under NPDES regulations pertaining to a discharger's "duty to apply," where there are multiple dischargers responsible for the same discharge, then an application from one of the dischargers constitutes an application from all.

The decision confirms EPA's authority under the Clean Water Act to require independently owned systems discharging to a centralized POTW to obtain an NPDES permit. The decision encompasses—and disposes of—the objections raised by various commenters in this proceeding on the permit's co-permittee provisions; EPA notes that many of the comments filed in this proceeding are similar, if not identical, to those filed in the CRPCD proceeding. The decision, along with EPA's Response to Petition and Response to Comments in the CRPCD action, is included as Appendix B to this Response to Comments, and incorporated herein as they pertain to the legal authority to include portions of the collection systems as co-permittees. The CRPCD Decision supplements and clarifies the rationale presented by EPA (see Appendix A) for including municipalities that own/operate outlying portions of the treatment works. EPA has, of course, also explained its reasoning for including municipal satellite collection systems as co-permittees in the fact sheet for the partially revised permit, as well as in this response to comment. In the interest of developing a streamlined response, avoiding redundancy and shortening the length of this document, EPA has not as a general matter reproduced the detailed responses to various objections to which EPA (whether the Region or Board) is on record as having already responded to and/or addressed.

In letters dated August 26, 2016, EPA waived the application and signatory requirements of the Town of Clinton and the Lancaster Sewer District as co-permittees under the NPDES discharge permit issued to the MWRA. In those letters, EPA noted that under NPDES regulations, all Publicly Owned Treatment Works (POTWs) must submit permit application information set forth in 40 C.F.R. § 122.21(j) unless otherwise indicated. In this case, EPA further explained that where Region 1 EPA has "access to substantially identical information," or such information is "not of material concern for a specific permit," the Regional Administrator may waive permit application requirements for existing POTWs. This was the basis for waiving the NPDES permit application and signatory requirements applicable to the operators of the municipal satellite collection systems. The Region has also adopted the rationales regarding permit applications and application waivers set forth in the CRPCD Decision, slip op. at 23-28 (summarizing the legal principles governing permit application and waiver requirements in the co-permittee context).

As described in the Fact Sheet (Section II.b. Operation and Maintenance of the Sewer System), each co-permittee is responsible for their portion of the collection system for activities required in Part I.D, Operation and Maintenance of the Sewer System and Part I.E Unauthorized Discharges. Specifically, Part I.D. of the permit places responsibility for the operation and maintenance of each municipality's section of the collection system on the municipality that owns and operates it. Each municipality is expected to maintain their portion of the collection

system to prevent overflows. If an overflow does occur, the permit establishes that it is the respective municipalities' responsibility to address it. Part I.E. of the Permit requires each co-permittee to notify EPA and MassDEP of any discharge of wastewater from a point source (including sanitary sewer overflows (SSOs)) from any portion of the wastewater collection system it owns/operates that are not authorized by the permit in accordance with Part II Section D.1.e.1 (Standard Conditions – 24-hour reporting).²

Nowhere in the final permit is MWRA made responsible for the operation or maintenance of the co-permittees' sewer systems or vice versa. In other words, EPA does not invest the prefix "co" with the same meaning as the commenter, and does not agree that this is a necessary interpretation of the term. EPA simply employs the term to refer to the municipalities that have been included under the permit in addition to the operator of the treatment plant and that have been required to meet a certain subset of permit conditions, notably those pertaining to proper operation and maintenance and pollution mitigation with respect to portions of the collection system over which they exercise ownership. The prefix "co-" is intended to be read in its limiting sense—i.e., having a lesser share in duty or responsibility, as in "co-pilot," or "for the limited purpose of"—and not in a manner that would create reciprocal or co-extensive obligations.³ To obviate any further concern on this point, EPA here clarifies and confirms that the co-permitting structure is not intended to and does not create joint and several liability among the MWRA, the Town of Clinton and the Lancaster Sewer District but instead delineates narrowly drawn obligations on each community with respect to the portion of the treatment works under its ownership and operation.⁴

² As this information will also be available for review by MWRA upon request, co-permitting municipalities that own/operate portions of the collection systems will provide the MWRA with greater information regarding satellite collection systems than it might otherwise have. This information will assist MWRA in assessing impacts that the collections systems are having on the portion of the POTW MWRA operates, including interceptor sewers and the POTW Treatment Plant.

³ The term "co-permittee" is found within regulations for storm water discharges. It is employed at 40 C.F.R. § 122.26 (b)(1) as "...a permittee to a NPDES permit that is only responsible for permit conditions relating to the discharge for which it is the operator." Although this provision is not directly applicable to a continuously discharging POTW, EPA's use of the term co-permittee in the permit is consistent with this definition because each of the co-permittees is only responsible for the portion of the treatment works which it owns and/or operates. It is also used in the context of privately owned treatment works, where it anticipates a flexible approach to be adapted to the circumstances of each permit, providing EPA with analogous discretion to either separately permit, co-permit, or not permit users of a privately owned treatment works as necessary to ensure compliance with CWA requirements. 40 C.F.R. § 122.44(m) ("For a privately owned treatment works, any conditions expressly applicable to any user, as a limited co-permittee, that may be necessary in the permit issued to the treatment works to ensure compliance with applicable requirements under this part. Alternatively, the Director may issue separate permits to the treatment works and to its users, or may require a separate permit application from any user.")

⁴ The permit is clear that the requirements of these parts of the permit are imposed on MWRA and each of the co-permittees as separate entities and only for the portion of the treatment works which they own and/or operate. As such, separate reports must be submitted by MWRA and each of the co-permittees. Compliance with these permit requirements shall be evaluated for each entity, separately. Page 1 of the permit specifically identifies the Town of Clinton and the Lancaster Sewer District as co-permittees for Parts I.C. (Operation and Maintenance) and I.D. (Unauthorized Discharges), I.E. (Monitoring and Reporting).

To ensure that responsibilities for the permittee and co-permittees are clearly understood, the introduction to Part I.D. has been modified to read,

Operation and maintenance of the collection system owned and operated respectively by the Town of Clinton (“Clinton”) and the Lancaster Sewer District (“Lancaster”) shall be in compliance with the General Requirements of Part II and the terms and conditions of Part D and Part E of this permit. Each of Clinton and Lancaster respectively shall only be responsible under Part II, Part D and Part E for only its own infrastructure, activities and required reporting with respect to the portions of the collection system that each owns or operates.

Operation and maintenance of that portion of the collection system and the entirety of the treatment system owned and operated by MWRA shall be in compliance with the General Requirements of Part II and the terms and conditions of Part D and Part E of this permit. MWRA shall only be responsible under Part II, Part D and Part E for its own infrastructure, activities and required reporting with respect to the portion of the collection and treatment system that it owns or operates. In no event shall Permittee Massachusetts Water Resources Authority be responsible for the acts or failure to act of Permittee Town of Clinton or Permittee Lancaster Sewer District, or for the failure to properly operate or maintain any collection system or portion of a collection system that it does not own or operate. No Permittee shall be responsible for violations of Part II, Part D and Part E committed by another Permittee relative to the portions of the collection system owned and operated by such other Permittee. In the event of any conflict between the above provisions and any other term or provision of this Permit, the above provisions shall control. The permittee and each co-permittee are required to complete the following activities for the respective portions of the collection system which they operate:

Comment A2: Requests for deletions in Permit.

Delete the strikethrough language on Page 1 of 14.

“The Town Clinton and the Lancaster Sewer District are co-permittees for Part D., Operation and Maintenance, which include conditions regarding the operation and maintenance of the collection systems owned and operated by the Towns; and Part E., Unauthorized Discharges. The responsible Town Departments are:

Town of Clinton

Lancaster Sewer District

Department of Public Works

P.O. Box 773

242 Church Street

226 Main Street

Clinton, MA 01510

South Lancaster, MA 01561

- Pages 9 of 14 and 10 of 14: Add the bolded language on page 9 in the first sentence of Section D. Operation and Maintenance of the Sewer System

Operation and maintenance of the sewer system **that MWRA owns and operates** shall be in compliance with the General Requirements of Part II and the following conditions:

- Delete the strikethrough language on page 9 in Paragraph 1 (Maintenance Staff)

The permittee ~~and co-permittees~~ 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.

- Delete the strikethrough language and add the bolded language on page 9 in Paragraph 2 (Preventative Maintenance Program)

The permittee ~~and co-permittees~~ shall maintain an ongoing preventative maintenance program to prevent overflows and bypasses caused by malfunctions or failures of the sewer system infrastructure **that it owns and operates**.

- Delete the strikethrough language and add the bolded language on page 10 in Paragraph 3 (Infiltration/Inflow Control)

~~The Each~~ permittee (~~MWRA, the Town of Clinton, and the Lancaster Sewer District~~) shall develop and implement a plan to control infiltration and inflow (I/I) to the separate sewer system **that it owns and operates**. This plan shall be submitted to EPA and MADEP within 6 months of the effective date of this permit and shall describe the permittee's program for reducing infiltration/inflow and all unauthorized discharges of wastewater, including overflows and bypasses due to excessive infiltration/inflow.

- Delete the strikethrough language and add the bolded language on page 10 in Paragraph 4 (Alternate Power Source)

In order to maintain compliance with the terms and conditions of this permit, the permittee ~~and co-permittees~~ shall continue to provide an alternative power source with which to sufficiently operate ~~the its~~ treatment works **which it has jurisdiction over** (as defined at 40 CFR §122.2).

- Delete the strikethrough language and add the bolded language on page 10 in Paragraph 5 (Reporting Requirements)

The permittee ~~and co-permittees~~ shall ~~each~~ submit a summary report of all actions taken to minimize I/I from the sewer system **that it owns and operates** during the previous calendar year to EPA and Mass DEP annually, by March 31.

- Delete the strikethrough language and add the bolded language on page 10 in Section E. (Unauthorized Discharges)

The permittee ~~and co-permittees~~ ~~is are~~ authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfall 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 **discharges from any other point sources from**

the sewer system that it owns and operates shall be reported in accordance with section D.1.e.(1) of the general Requirements of this permit (Twenty-four-hour reporting).

Response A2: EPA is designating the Town of Clinton and the Lancaster Sewer District as co-permittees in the final permit. Therefore, the co-permittees will not be removed from the final permit, and the other edits suggested in the comment have not been made in the final permit. See Response A1.

Comment A18: Requests for deletions in permit.

Part 1.D. Operation and Maintenance of the Sewer System. (Page 9 of 14 and Page 10 of 14). Consistent with MWRA's request to remove the co-permittees from the permit, please delete references to co-permittees from Items 1- 5.

Part I.E. Unauthorized Discharges. (Page 10 of 14). Consistent with MWRA's request to remove the co-permittees from the permit, please delete references to co-permittees.

Response A18: EPA is designating the Town of Clinton and the Lancaster Sewer District as co-permittees in the final permit. Therefore, the co-permittees will not be removed from the final permit, and the other edits suggested in the comment have not been made in the final permit. See Responses A1 and A2.

Comment A20: Comments related to co-permittees:

Delete the strikethrough language on Page 1 of 29 of Fact Sheet

The Town of Clinton and Lancaster are co-permittees for specific activities required by the permit. See Section VI of this fact sheet and Sections 1.C. and 1.D. of the draft permit. The responsible municipal departments are:

Town of Clinton
Department of Public Works
242 Church Street
Clinton, MA 01510

Lancaster Sewer District
P.O. Box 773
226 Main Street
South Lancaster, MA 01561

Delete the strikethrough language and add the bolded language in paragraphs 1 and 5 on page 23 of 29 under Section VI. (Operation and Maintenance of the Collection System)

The current permit includes a requirement regarding the operation and maintenance of collection system that **MWRA owns and operates**. ~~Among other things, the permit requires the permittee, and the Town of Clinton and Lancaster Sewer District, as limited co-permittees, to each develop and implement an inflow/infiltration control program for the portion of the collection system it owns and operates and to report unauthorized discharges from its portion of the collection system.~~

The current permit requires the permittee ~~and each co-permittee~~ to submit an annual report to EPA and MADEP addressing I/I removal efforts. MWRA has submitted annual reports addressing I/I reduction in its portion of the sewer system and analysis of influent flows. However, it does not appear that the Town of Clinton and the Lancaster Sewer District submitted

I/I reports to EPA and MassDEP. While MWRA reports contain useful information in regards to I/I quantities, they do not, and are not expected to, address Clinton's or Lancaster's I/I reduction efforts.

Delete the following paragraph on page 24 of 29 under Section VI. (Operation and Maintenance of the Collection System)

The draft permit continues the current permit's requirements regarding operation and maintenance of the collection system. Specifically, the permit includes the Towns of Clinton and Lancaster as limited co-permittees for conditions pertaining to operation and maintenance of the portion of the collection system each Town owns and operates, and includes the continuation of I/I control programs, and reporting of overflows.

Response A20: The fact sheet provides the basis for the draft permit and is not subsequently modified with issuance of a final permit. EPA is retaining co-permittees in the permit, and thus, no changes were made in the final permit.

Comment A27: Page 23 of 29: VI. Operation and Maintenance of the Collection System.

General comments: This permit, issued to MWRA, should only deal with MWRA owned and operated portions of the collection system. As mentioned above, MWRA disagrees that the town of Clinton and the Lancaster Sewer District should be included in this permit. Please see comments on draft permit.

Response A27: EPA disagrees. The MWRA-Clinton permit, with its co-permittee structure, allows EPA to address issues relating to the operation of the entire POTW (satellite collection systems included) in a comprehensive and administratively efficient manner. See Response A1.

Comment B1: Opposition to co-permittees

The MWRA Advisory Board has initially reviewed the Draft National Pollutant Discharge Elimination System (NPDES) Permit for the Clinton Wastewater Treatment Plant (CWWTP) and is providing the following comments in accordance with 40 C.F.R. § 124.13.

As a preface, the Advisory Board was created in the same legislation that created the Massachusetts Water Resources Authority (MWRA). Our role is to represent the interests of the communities and their ratepayers.

It is important to understand the unique relationship of the MWRA and the CWWTP. Prior to 1987, responsibility of the operation of this plant was with the Commonwealth of Massachusetts through its Metropolitan District Commission Water Division. The State Legislature, in order to meet federal requirements and ensure federal funding, turned over responsibility for the construction and operation of the existing/new plant to the MWRA. MWRA ratepayers are forced to pay for all but \$500,000 of the costs associated with the plant.

Just as importantly, Clinton, which contributes \$0 to the wastewater treatment plant, separately manages, maintains, and controls its own water and wastewater systems. As it relates to co-permittees in the draft permit, the Advisory Board strongly believes that EPA is not authorized under the code of Federal Regulations governing the NPDES Program to include the Town of Clinton or the Lancaster Sewer District as co-permittees.

EPA does not have the legal authority to include non-point sources such as the Town of Clinton and the Lancaster Sewer District in the Draft NPDES Permit. MWRA is the only applicant and signatory on the application. MWRA is the sole owner and operator of the CWWTP, which has one outfall/point source that discharges into the Nashua River, the only outfall covered by the Draft NPDES Permit.

Response B1: See Response A1. EPA disagrees that it does not have the legal authority to include the portions of the POTW owned and operated by the Town of Clinton and the Lancaster Sewer District in the permit. The MWRA-Clinton permit, with its co-permittee structure, allows EPA to address issues relating to the operation of the entire POTW (satellite collection systems included) in a comprehensive and administratively efficient manner.

Comment D4: Enforcement of co-permittee provisions.

Finally, the permit also needs to address the enforcement actions that will be taken if the permittees, including the Town of Clinton and Lancaster Sewer District, fail to make significant progress in reducing the severe and long-standing I/I problem and submit the required reports.

Response D4: All the permit requirements are fully enforceable elements of this permit. If EPA and/or MassDEP determine that any permittee is not meeting any of these permit requirements, a variety of enforcement actions, including monetary penalties, may be commenced. The permit's terms and conditions are also enforceable by citizens pursuant to the Clean Water Act's citizen suit provision at § 505, 33 U.S.C. § 1365.

2. EFFLUENT FLOW LIMITS AND INFILTRATION/INFLOW

Comment A3: Effluent flow limit.

In its letter to EPA dated June 5, 2009, re Supplement to MWRA's application for renewal of NPDES permit, MWRA requested a revision in the permitted flow for CWWTP from 3.01 MGD to 3.65 MGD. The CWWTP cannot meet and has not met the running annual average flow limit of 3.01 MGD. MWRA does not have control over flow to the CWWTP, and therefore has no way to comply with this flow limit. Because the plant has a treatment capacity of 6 MGD and the hydraulic capacity is 12 MGD, none of the concerns related to adverse effects of higher flow to the treatment plant have occurred, that is there have been no bypasses, nor has treatment plant efficiency decreased. There have been no violations of permit limitations due to higher flows (other than the flow limitation).

EPA argues in the fact sheet that plant flow represents a significant percentage of the receiving water dry weather (emphasis added) flow and that raising the flow limit would raise issues relative to antidegradation provisions. However, in reality, plant flow is only high during wet weather conditions, when both the plant and river flows are high, that is, when available dilution in the river increases. (This is clearly shown in [Appendix C] which provides daily Clinton treatment plant flow data and river flow data measured at the USGS gage from June 2007 through August 2010 and dilution factor calculations for each date.) The minimum river flow over this time period was 2.38 MGD, significantly higher than the 1.7 MGD used in EPA's calculations.

The issues of dry weather consistency with water quality standards, and antidegradation, could be addressed by increasing the flow limitation during wet weather. MWRA asks EPA to open up the possibility of increasing the flow limitation during wet weather periods.

In addition, in the fact sheet, EPA states that “the current flow limit could be achieved by a serious effort to control I/I.” This statement does not appear to be based on any factual evidence. MWRA is not aware of any information showing how specific I/I removal projects would lower the flow sufficiently to meet the flow limit during wet water conditions that lead to exceedances of the flow limit. Administrative Orders issued by DEP for both Clinton and Lancaster dealing with I/I reduction have been in effect since July 3, 1985; no evidence has been presented which shows that I/I reductions can be implemented to meet the 3.01 MGD limit.

The design of the CWWTP is such that the stormwater inflows have not created CWWTP permit violations, other than the flow limit violation. EPA should increase the permit effluent flow limit to 3.65 MGD as a running annual average or calculate a limit (based on historical data) that MWRA could meet during wet weather. Also, EPA should work cooperatively with MassDEP, Clinton, and Lancaster Sewer District on local stormwater inflow removal projects that can proceed deliberately, with proper focus on stormwater quality discharges to the river. It is reasonable to increase the permit flow limit for the proposed permit to a level that is attainable as MWRA requested, or, in the alternative, provide CWWTP with an interim flow limit until such time that EPA can determine whether there are any steps that it can require the Town of Clinton or the Lancaster Sewer District to take to reduce flows to a level which would justify a running annual average flow limit of 3.01 MGD.

Response A3: The final permit includes a wastewater effluent flow limit which is equivalent to the design flow (3.01 MGD) of the facility. Specifically, the inclusion of an effluent flow limit equal to the design flow serves several purposes: (1) to assure that the permittee does not allow wastewater effluent flows from the facility in excess of the design capacity, since doing so may result in less effective treatment; (2) to encourage inflow and infiltration reduction efforts to, among other things, prevent or minimize SSO discharges; and (3) to ensure that reasonable potential analyses and the effluent limitations calculations remain valid by assuring that the assumptions underlying these analyses and calculations (i.e., an upper limit or ceiling on the amount of wastewater effluent flow discharged from the facility) are accurate.⁵

MWRA contends that its facility can treat wastewater effluent flows in excess of its design capacity and requests a separate wet weather limit. However, it is apparent that the Clinton collection system cannot handle existing wet weather wastewater effluent flows, as there have been six SSOs in the Clinton system since 2010, listed below. EPA is not increasing the effluent flow limit in wet weather as the commenter requests. A more appropriate response is to reduce the I/I that is likely the cause of the high wet weather effluent flows.

⁵ For this reason, it has been standard practice to include wastewater effluent flow limits in NPDES permits issued to POTWs in Massachusetts.

Table 3. Sanitary Sewer Overflows in the Town of Clinton from 2010 through 2016

Date	Location	Volume (gallons)	Cause	Remedy	Wet Weather Related
3/15/2010	52 Elm St. sewer manhole	10,000 – 100,000	Flooding from Nashua River	Flooding subsided, rebuilt top of affected manhole.	X
3/15/2010	30 Eileen Ave. pump station	100,000 – 1,000,000	Flooding from Nashua River	Flooding subsided, repaired pump station	X
5/26/2010	95 Green Street (Weetabix property)	10,000 – 100,000	Sewer blockage or collapse	Repaired sewer	
12/13/2013	95 Green Street (Weetabix property)	<10,000	Sewer blockage or collapse	Repaired sewer	
8/14/2016	Nashua River at the Chestnut Street Bridge	100	Broken pipe	Repaired broken pipe	

The MWRA-Clinton facility presents a challenge with respect to assessing the adequacy of the permit under section 301(b)(1)(C) because of significant variability in flow. Dilution factors, which are used to assess reasonable potential and/or to establish water quality-based effluent limits, are typically calculated using anticipated long-term and maximum daily flow rates. Flows exceeding these values will disturb the assumptions behind these calculations and undermine the basis for the Region's determinations of reasonable potential and establishment of effluent limitations. Should this occur, the permit as written may, as a practical matter, be rendered less stringent than necessary to ensure compliance with applicable water quality standards. EPA has determined that a wastewater effluent flow limit is reasonable to ensure against this eventuality, and to ensure compliance with water quality standards as mandated by the CWA and its implementing regulations.

Regarding the commenter's request for an increase in the effluent flow limit to 3.65 MGD, EPA has outlined the process for a POTW to obtain a wastewater effluent flow increase considering applicable regulations in the fact sheet for the Brockton Draft NPDES permit at page 6 and incorporates that discussion and analysis here. In this case, the permittee has not completed this process, most notably a satisfactory demonstration on meeting antidegradation water quality

standard requirements, and EPA is not including an increase in the wastewater effluent flow limit in the final permit.

The following outline of the flow increase approval process was provided in the Brockton Draft NPDES permit.

1. Process to demonstrate meeting of water quality standards
 - a. Institute plant improvements to achieve new permit limits; plant improvements should be in place at least one year and preferably two to allow assimilation of receiving water to new conditions; and
 - b. Perform receiving stream evaluation to determine impairment status
 - c. If results confirm the discharge is no longer contributing to water quality impairments, can request increase if consistent with antidegradation requirements (below); or
 - d. If results indicate discharge is contributing to water quality impairments, can
 - i. Propose plan with permit limits that will ensure discharge will not contribute to impairments at current and increased effluent flow; or
 - ii. Initiate water quality standards proceeding for variance or downgrade of receiving water classification, including Use Attainability Analysis and public process
2. Process to demonstrate meeting of antidegradation requirements
 - a. Perform monitoring and evaluation of emerging contaminants, particularly endocrine disrupters, in effluent and in receiving water to determine concentration, loads and assimilative capacity (EPA is available to assist in defining scope of monitoring and evaluation); and
 - b. Evaluate benthic macroinvertebrate and taste/odor conditions in impaired reaches to determine extent of impairment and contributing pollutants and evaluate assimilative capacity in unimpaired reaches (may be best to wait until after plant improvements as in 1.b. above); and
 - c. Determine whether flow increase will result in loss of more than 10% assimilative capacity in any downstream reach. If it can be demonstrated that it does not, proceed to request flow increase; or
 - d. If increase cannot be demonstrated to be insignificant, proceed to antidegradation authorization proceeding under 314 CMR 4.04(5). Upon authorization pursuant to 314 CMR 4.04(5) (including “No less environmentally damaging alternative . . . is reasonably available or feasible” showing), can proceed to request flow increase.

Regarding the appropriate flow conditions to use in assessing attainment of Water Quality Standards, EPA is aware that spring and wet weather streamflows can significantly exceed 7Q10. However, under Massachusetts Surface Water Quality Standards (MA SWQS), effluent limitations must be designed to meet criteria under the most severe hydrological conditions, which occur under low flows. Water quality criteria are the minimum levels of water quality to prevent impairment. It is expected that water quality will be better than the criteria during higher flows to prevent impacts to aquatic life that would be expected to occur if they were exposed to the minimum criteria levels for extended periods of time. In this case, the dilution factor is 1.6. The assumption behind the water quality standards is that river flows will only approach this

dilution factor during very dry conditions. To adjust the effluent flow limit such that the dilution factor of 1.6 occurs year-round would expose aquatic life to more severe pollution impacts than was intended by the MA SWQS. Also see Response to A22 regarding low flow conditions.

Comment A22: 7Q10 and Dilution.

MWRA disagrees that it controls all the flow to the river: there is additional flow as measured by the USGS gauge. (The USGS data were submitted to EPA as an attachment to the June 5, 2009 supplement to the permit application, and can be found at http://waterdata.usgs.gov/nwis/nwisman/?site_no=01095505&agency_cd=USGS)

The USGS 7-day low-flow average is 2.52 MGD if all data from June 2007-August 2010 are included as opposed to the 1.7 MGD used by EPA which is MWRA's obligated release under state law (a 0.8 MGD difference). The single-day minimum river flow was 2.38 MGD. As discussed above in comments on the permit, Appendix C shows the Clinton flow data and the river flow data measured by the USGS gauge. Basing the permit limitations on MWRA's required releases rather than the actual river flow has the effect of substantially underestimating the actual available dilution.

Response A22: As stated in the fact sheet, the MA SWQS at 314 CMR 4.03(3)(b) require that:

In waters where flows are regulated by dams or similar structures, the lowest flow condition at which aquatic life criteria must be applied is the flow equaled or exceeded 99% of the time on a yearly basis, or another equivalent flow agreed upon by the Department and the federal, state or private entity controlling the flow. The minimum flow established in such an agreement will become the critical low flow for those waters covered by the agreement.

In a letter dated June 5, 2009, MWRA requested a revision in the critical low flow for the Nashua River from 2.785 cfs (cubic feet per second) (1.8 MGD) to 4.27 cfs (2.75 MGD) based on flow measurements at a US Geological Survey (USGS) gage upstream of the Clinton WWTP.

MWRA submitted dam release data to EPA in support of the request. At the time of the request, the lowest flow recorded at the USGS gage was 2.07 MGD, which occurred on June 19, 2007, shortly after the USGS gage went online. For this date, MWRA provided the following data:

Table 4. Flow released from the Wachusett Dam on June 19, 2007.

Source	Flow (MGD)
Wachusett Spills	0
Lancaster Mills	0.46
Dam Releases	1.71
Dam seepage	0.90
Sum of Releases	3.07
Streamflow	2.07 (1 MGD deficit)

Considering the MWRA-reported releases from the Wachusett Dam, the Nashua River flow should have been 3.07 MGD. Instead, it was 2.07 MGD. It is not clear why the Nashua River seems to have lost water between the dam and the gage, although it is possible that the losses were to evaporation or absorption into the river banks. It is impossible to know what the Nashua River flow would have been in the absence of the Lancaster Mills release, which was scheduled to stop in 2010, but it fair to assume it would be equal to or less than 2.07 MGD.

In fact, more recent USGS streamflow data indicate that the Nashua River does indeed approach the 1.71 MGD flow during dry weather periods. From October 17 through 20, 2010, the Nashua River flow was 1.74 MGD, not significantly higher than the required minimum release.

Considering these data, EPA has decided not to grant MWRA's request to modify the critical low flow. As mentioned in the fact sheet, if MWRA agrees to release more flow to the Nashua River through a formal agreement with the Commonwealth of Massachusetts, EPA may reconsider modifying the permit to account for greater dilution in the receiving water.

Comment A23: Flow Capacity.

The fact that the plant flow represents a significant percentage of the receiving water dry weather flow is not, in reality, relevant to wet weather conditions, when both the plant and river flows are high and when the increased flow limit requested by MWRA would prevent permit violations for flow. CWWTP has a treatment capacity of 6 MGD and a hydraulic capacity of 12 MGD. There have been no permit violations except for the flow limit itself. The discussion of I/I and flow limitations is confusing, and not relevant to the issue of wet weather flow. The discussion in the fact sheet is not based in physical reality because it is conflated with dry weather-low receiving water flow situations.

The issues of dry weather consistency with water quality standards, and antidegradation, could be addressed by increasing the flow limitation during wet weather. MWRA asks EPA to open up the possibility of increasing the flow limitation during wet weather periods.

EPA states “the current flow limit could be achieved by a serious effort to control I/I.” This statement does not appear to be based on any factual evidence. MWRA is not aware of any information showing how specific I/I removal projects would lower the flow sufficiently to meet the flow limit during the wet weather conditions that lead to exceedances of the flow limit. Administrative Orders issued by DEP are in place with both Clinton and Lancaster dealing with I/I reduction; no evidence has been presented that shows that I/I reductions can be implemented to meet the 3.01 MGD limit.

The design of the WWTP is such that the stormwater inflows have not created WWTP permit violations, other than the flow limit violation. EPA should increase the permit effluent flow limit to 3.65 MGD as a running annual average or calculate a limit (based on historical data) that MWRA could meet during wet weather. Also, EPA should work cooperatively with MassDEP, Clinton, and Lancaster Sewer District on local stormwater inflow removal projects that can proceed deliberately, with proper focus on stormwater quality discharges to the river. It is reasonable to increase the permit flow limit for the proposed permit to a level that is attainable as MWRA requested.

Response A23: See Response A3.

Comment B4: Infiltration/Inflow Source Reduction.

As it relates to I/I, the inclusion of Clinton and Lancaster Sewer District as part of this permit oversteps EPA authorization.

EPA must address I/I with the communities directly and not as part of this permit. The MWRA has evaluated its one interceptor coming into the plant and is relatively assured it is I/I free; therefore, all sections relating to community I/I should not be a component of this permit.

Response B4: Nothing in the permit precludes the permittee or co-permittees from pursuing source reduction as a component of achieving end of pipe limits. In fact, the permit requires that the permittees and co-permittees take measures to address I/I in the portion of the collection system that each one owns and operates. EPA encourages MWRA to pursue source reduction with the communities, who will benefit from reduced costs because of not relying entirely on end of pipe treatment.

Comment B5: Effluent Flow Limit.

Lastly, flow-rolling average of 3.01 MGD at the CWWTP cannot be met by the MWRA. To date, there have been no violations of permit conditions due to higher flows (other than the flow limitation condition). MWRA has no control of the flows going into the plant. In addition, the lowest river flow has been substantially above the required minimum release from the Wachusett Dam. This should also be taken into account when setting the maximum discharge from the plant.

EPA should consider raising permitted flow to 3.65 MGD to more accurately reflect the average flow through the plant.

Response B5: Please see Responses A3 and A22.

Comment C1: Maintain receiving water critical low flow and dilution factor.

NRWA strongly agrees with EPA in its decision not to increase the receiving water critical low flow number as requested by the MWRA. There is not sufficient flow in the South Nashua during periods of low flow (minimum release from the dam) to justify such an increase. Improvements to the dam earlier this decade have allowed for increased releases (up to 100 MGD) to the South Nashua. Since dam upgrades were completed a few years ago and increased flow to the South Nashua was made possible, the NRWA has advocated for a higher minimum flow and a more naturalized flow to the river from the MWRA-controlled Wachusett Dam than the 1.8 MGD MWRA is statutorily required to release under Chapter 488 of the Acts of 1895. Currently MWRA releases to the South Nashua up to 100 MGD when water is moved from the Quabbin Reservoir into the Wachusett Reservoir. These releases do not necessarily coincide with a naturalized flow regime.

NRWA appreciates MWRA's efforts, at NRWA's request, to gradually ramp up and down the releases in 25 million gallon increments. MWRA also requested the installation of the USGS gage upstream from the WWTP to further understand the effects of dam releases on the South Nashua. Nonetheless, a formalized increase in the minimum low flow would have a beneficial impact on the reach of the river downstream of the Clinton WWTP and in the Nashua mainstem. The 2003 MassDEP Water Quality Assessment Report for the Nashua River Watershed recommends optimizing "withdrawal and release practices from the Wachusett Reservoir to maintain a minimum flow and natural flow regime in the Nashua River," due to many pollutant impairments. NRWA's water monitoring program also has documented *E. coli* and nutrient impairments downstream of the WWTP.

The minimum flow number and the natural flow regime (with regard to timing, frequency and duration) that would result in water quality improvements during periods of low flow has been debated but not studied directly in the South Nashua. NRWA recommends such a study be performed to determine optimal discharge values for water quality improvements.

NRWA stated during a public forum held in June 2006 that "even a ten-fold increase during low flows in the summer months would substantially improve the river's conditions." The ideal minimum flow number is not known, and could be 10 MGD, or 18 MGD. MWRA has stated more recently it has excess water supply capacity to safely sell approximately 12 MGD of water to new communities and still allow for another 12 MGD of additional releases to be split between the Swift and South Nashua Rivers. A study of how such water might be allocated has not been performed, and needs to be done concurrently with the study to determine optimal discharge values for water quality. Attaining such improvements in water quality can only occur if WWTP upgrades (especially phosphorus and I/I issues) are implemented in tandem, and total flow discharges are not increased proportionally.

As indicated in the permit, NRWA strongly agrees that EPA require MRWA formalize any agreement to increase minimum flows before EPA allows an increase in the critical low flow. A formalized agreement would preclude MWRA from reverting to the detrimental minimum flow requirement of the Acts of 1895.

Response C1: EPA has taken notice of the comment in its decision not to increase the dilution factor. The comment is now part of the public record for this permit reissuance.

Comment C2: Effluent Flow Limit.

NRWA strongly agrees with EPA's decision not to grant an increase in the permitted flow to the plant beyond its current limit of 3.01 MGD. NRWA notes that the 25-year-old Administrative Order issued to the Town of Clinton has not been enforced. At the very least, current I/I conditions in Clinton and Lancaster should be fully evaluated and reported to the DEP so that corrective actions can be planned for and the necessary funding for repairs be sought. I/I upgrades would also reduce the potential for SSOs.

Goals for the reduction of I/I for the Town of Clinton should be tied to a strict timeline, in the same way total phosphorus upgrades to the plant are outlined and benchmarks are to be met. In addition to a specific timeline for the upgrades, sufficient staffing and funding should be required of the town to implement the upgrades.

Response C2: EPA has taken notice of the comment's agreement with the 3.01 MGD effluent flow limit, and the comment is now part of the public record for this permit reissuance. Regarding requirements for the co-permittees to evaluate and reduce I/I in Clinton and Lancaster, Section I.D. of the final permit outlines operation and maintenance (O&M) requirements for the permittee and co-permittees. The requirements include retaining sufficient staff, starting a preventive maintenance program, reducing I/I, mapping of the collection system, submittal of O&M plans, and submittal of an annual report. As in the draft permit, these requirements are tied to timelines in the final permit.

Comment C3: Average Flow Reporting.

The NRWA agrees with the required monthly average and maximum daily flow reporting requirements in the Discharge Monitoring Report (DMR), but also requests that the daily South Nashua River USGS gage (01095505) flow data be included in addition to precipitation data in the DMR. Discharges from the Wachusett Dam can fluctuate by 100 MGD from one day to the next. This data is important to have recorded alongside plant daily flow data for evaluation purposes.

NRWA would like to have all flow data be made available to the public in an annual report, and the information included in the fact sheet for the next round of permitting.

Response C3: The USGS discontinued Gage #01095505 (Nashua River 0.4 Mi Upstream Rt 110 at Clinton, MA) in November 2011 and replaced it with Gage #01095503 (Nashua River, Water Street Bridge, at Clinton, MA). Discharge data from this gage are available on a real-time basis at http://waterdata.usgs.gov/ma/nwis/uv?site_no=01095503. USGS also offers a service called "Water Alert," whereby interested parties may sign up for email alerts when a USGS gage records measurements in certain ranges set by the user. Considering the availability of the USGS data, EPA does not consider it necessary for MWRA to report this information in its monthly DMR submittals.

Comment D1: Effluent Flow Limit.

MRWC strongly supports the EPA's decision to not increase the permitted flow from the Clinton WWTP beyond 3.01 MGD because the current flow limit could be achieved with more rigorous efforts to control infiltration/inflow (I/I). Similarly, we agree that the current dilution factor of

1.6 is correct based on water released from the Wachusett Dam combined with the permitted flow from the WWTP.

Response D1: EPA has taken notice of the comment in deciding to retain the flow limit. The comment is now part of the public record for this permit reissuance.

Comment D2: Flow reporting.

NRWC also approves of the new requirement for monthly average and maximum daily flows in the discharge monitoring report, but requests the agency include the actual monthly average (not the rolling monthly average) and maximum daily flows in the fact sheet during the next renewal process.

Response D2: Monthly discharge monitoring information and reports submitted to EPA pursuant to this permit are public information and available for viewing during normal business hours. In addition, Discharge Monitoring Report (DMR) data that permittees submit to EPA are available through EPA's Enforcement and Compliance History Online website at <https://echo.epa.gov/>. Because MWRA-Clinton will be required to report monthly average effluent flows on the DMR, these data will be available for viewing by the public at this website.

Comment D3: Transparency.

We also suggest greater public information accessibility by making this flow information available to interested parties when requested, submitting the facility's annual report to local libraries, and posting the annual report online on the Town of Clinton's website.

Response D3: Any public information pertaining to compliance with the NPDES permit is available for review at the EPA Region 1 office or on the ECHO website as discussed in Response D2.

3. PHOSPHORUS LIMIT

Comment A6: Draft Phosphorus TMDL.

MWRA notes that a draft TMDL for phosphorus was prepared by the state in 2007, but was neither approved by EPA nor was the TMDL revised in time to be used for this permit. This is unfortunate, as a phosphorus TMDL for the Nashua River would provide a much firmer scientific bases for the expensive changes to treatment plants that are being required in the Nashua watershed. More data were collected by DEP in 2008, but for reasons that are not clear, these data are still not available and were not used help develop the permit limits. The quantity of the in-stream phosphorus data is sparse, and much of the existing data is flagged for quality assurance issues. EPA cites the existence of macrophytes downstream of the CWWTP, but the DEP 2003 Water Quality Assessment notes that macrophytes also occur upstream. This lack of data means that there is not a thorough assessment of the existing water quality in the south branch of the Nashua, and therefore the impact the multi-million dollar investment in treatment plant upgrades will have on the biological health of the river downstream of the plant, within a distance that the plant could reasonably be expected to affect, (much less the distant Pepperell Impoundment) is unknown.

Response A6: While a draft TMDL was issued for public comment in June 2007, a final version has not been submitted to EPA for approval. During the public comment period, MassDEP

received significant comments from EPA and other parties. EPA has concerns about the model used in the TMDL and the stated goals of the TMDL, which EPA believes would not achieve designated uses in the Nashua River.

Furthermore, neither the CWA nor EPA regulations require that a TMDL be completed before a water quality-based limit may be included in a permit. Thus, an approved TMDL is not a precondition to the issuance of an NPDES permit for discharges. This interpretation is consistent with the preamble to 40 C.F.R. 122.44(d)(1), which expressly outlines the relationship between subsections 122.44(d)(1)(vi) (i.e., procedures for implementing narrative criteria), and (d)(1)(vii) (incorporation of the assumptions and recommendations of any available waste load allocation into a water quality-based effluent limitation).

The final point about 40 CFR 122.44(d)(1)(vi) is that in the majority of cases where paragraph (vi) applies, waste load allocations and total maximum daily loads will not be available for the pollutant of concern. Nonetheless, any effluent limit derived under paragraph (vi) must satisfy the requirements of paragraph (vii). Paragraph (vii) requires that all water quality-based effluent limitations comply with “appropriate water quality standards,” and be consistent with “available” waste load allocations. See Response A25 for a discussion of the need for a total phosphorous effluent limit based on 40 CFR 122.4(d)(1)(i)

Thus, for the purposes of complying with paragraph (vii), where a wasteload allocation is unavailable, effluent limits derived under paragraph (vi) must comply with narrative water quality criteria and other applicable water quality standards. See 54 Fed. Reg. at 23,876. If a TMDL is eventually issued by MassDEP and approved by EPA, the phosphorus effluent limitation in any subsequently issued NPDES permit also must be consistent with the wasteload allocation assigned to the Clinton WWTP.

The documented nutrient impairment in the reach immediately downstream of the facility makes nutrient reduction effects in Pepperell Pond a secondary concern. While it is true that there are macrophytes both upstream and downstream of the MWRA Clinton discharge, this merely indicates that there are sources of phosphorus upstream of the WWTP in addition to the WWTP itself. This does not negate the need to control point sources of phosphorus that may cause or worsen impairments downstream.

The commenter notes that additional phosphorus data were collected upstream of the Clinton facility in 2008, but that they were not yet publicly available. These data are displayed in Table 5 below. The median of the upstream phosphorus concentrations in 2008 are 0.014 mg/L (14 µg/L). This value is not appreciably different from the median upstream concentration value used in the 2010 draft permit, which was 0.012 mg/L (12 µg/L). Therefore, the phosphorus limit remains unchanged.

Table 5. Total Phosphorus Concentrations at Nashua River upstream of Clinton WWTP Discharge

Date	Total Phosphorus, mg/L
5/15/2008	0.014
6/12/2008	0.007
7/17/2008	0.014
8/14/2008	0.059
9/18/2008	0.022
Median	0.014

Comment A12: Phosphorus Compliance Schedule.

Footnote 10 should clarify that MWRA will not be expected to achieve the mass loading phosphorus limitation until the compliance schedule is completed.

Response A12: EPA has applied the suggested correction. Also, due to the time elapsed and progress in constructing the upgrades, the compliance schedule in the final permit extends to April 1, 2019 (see Response E25). Footnote 10 now reads:

From the effective date of the permit until April 1, 2019, the permittee shall achieve the following total phosphorus limitations from April 1 – October 31 while working towards achieving compliance with the new 150 µg/L seasonal total phosphorus limitation (See Part I.B. of this permit, Schedule of Compliance): 1,000 µg/L average monthly, report maximum daily in µg/L and report average monthly loadings in pounds per day.

Comment A13: Correction. Delete the strikethrough phrase “and loading” from the footnote.

Response A13: EPA agrees. Footnote 12 has been modified as requested, and as originally intended.

Comment A15: Compliance Schedule.

MWRA requests that the following language be included: “In the event that MWRA cannot meet the proposed schedule for coming into compliance with the phosphorus limit due to unforeseen circumstances (e.g. new developments in phosphorus removal technology or difficulties in reaching the low limit with the selected technology) it can seek EPA approval to extend the schedule for a reasonable period of time. Any such extension would only require EPA approval and would not require a formal permit modification.”

Response A15: NPDES regulations governing compliance schedules require achievement of effluent limitations as soon as possible. The proposal in the comment above is based on

speculation, and EPA does not believe that it is reasonable to base compliance schedules on the existence of unnamed contingencies. Still, the permittee should be aware that interim compliance dates may be adjusted up to 120 days as a minor permit modification under NPDES regulations so long as the final date of compliance is met. 40 C.F.R. § 122.47 and 40 C.F.R. § 122.63(c). The permittee may also present ground for a permit modification if specific facts should materialize in the future to warrant such a request. After consulting with MWRA on the construction status of the upgrades and time needed to test the system, the final permit requires compliance with the total phosphorus limit by April 1, 2019. If EPA agrees that unforeseen circumstances prevent the permittee from achieving the compliance schedule in the permit, a longer schedule is possible through a permit modification or an administrative order. In such as instance, EPA would, consider both means.

Comment A25: Total Phosphorus.

EPA cites the existence of macrophytes downstream of CWWTP, but the DEP 2003 Water Quality Assessment notes that macrophytes also occur upstream. This should be added to the fact sheet. (Personal observations by MWRA technical staff also find abundant aquatic plants both upstream and downstream of the discharge, with amount of growth apparently most related to availability of sunlight.) More recent data collected by DEP in 2008 are not yet available, therefore it is not clear whether or not the biological health of the river downstream of the plant, within a distance that the plant could reasonably be expected to affect, is adversely impacted by the plant, or if so, how much.

EPA states that the Pepperell impoundment 20 miles downstream is the downstream point of accumulation for any biomass produced upstream as a result of CWWTP phosphorus inputs. Although strictly speaking this is a true statement, EPA does not cite any studies describing a quantitative relationship between CWWTP discharges and the amount of biomass in the Pepperell impoundment. Therefore it is not accurate to imply a known relationship between the Clinton discharges and eutrophication in the Pepperell impoundment.

(MWRA notes that it is unfortunate that a TMDL for phosphorus for the Nashua River was not completed and approved, as this would provide a much firmer scientific basis for the expensive changes to treatment plants that are being required in the Nashua watershed.)

Response A25: See Response A6 regarding the results of the 2008 total phosphorus sampling and the evidence that the discharge causes, has the reasonable potential to cause, or contributes to an excursion above the narrative nutrient state water quality standard in the South Nashua River. As the Environmental Appeals Board and the First Circuit Court of Appeals have ruled, NPDES regulations do not require cause-and-effect proof between a pollutant discharge and an existing water quality impairment before the permit writer can derive a numeric in-stream target to interpret a narrative water quality criterion, or impose a water quality-based effluent limitation to implement that criterion. *See e.g., In re Upper Blackstone Pollution Abatement Dist.*, 14 E.A.D. 577 (EAB 2010); *Upper Blackstone Water Pollution Abatement Dist. v. EPA*, 690 F.3d 9 (1st Cir. 2012).

Under 40 C.F.R. § 122.44(d)(1)(i), permit issuers are required to determine whether a given point source discharge “cause[s], ha[s] the reasonable potential to cause, or contribute[s] to an excursion above” the narrative or numeric criteria set forth in state water quality standards. The

regulations require nothing more than a reasonable potential to cause, or contribute to an excursion of a numeric or narrative state water quality criterion; whenever such a potential exists, a permit must contain effluent limits to meet state water quality standards.

Discharges of nutrients can cause impairments in waters near the point of discharge as well as far downstream of the original source. Both possible endpoints must be considered. The Nashua River Draft Phosphorus TMDL used an HSPF model to link point source nutrient discharges to algal biomass in Pepperell Pond. The Executive Summary on page 6 of the Draft TMDL states,

The recommended implementation for this TMDL is primarily changes to WWTF NPDES discharge limits based on model results which indicate the greater importance of point sources compared to non-point sources during summer low-flow conditions through the input of nutrients in the readily available form of dissolved phosphorus. The model also shows the linked nature of all segments of the river. Nutrient point-source effluent discharges to upper reaches where the velocities are higher turn into algal and plant biomass when the river velocity slows in the ponded areas downstream. Pepperell Pond exhibits the main impact from these nutrients as demonstrated by high algal and macrophytic growth, nuisance surface algal and plant mats, and conditions of super-saturation in dissolved oxygen.

Although the TMDL recommended a total phosphorus limit of 0.5 mg/L for the MWRA-Clinton WWTF to protect Pepperell Pond, this limit is not sufficiently protective of the South Nashua River segment (MA81-09) immediately downstream of the MWRA-Clinton facility. This segment is listed as impaired for phosphorus in the Final 2014 List of Integrated Waters, and the concentration of total phosphorus upstream of the Clinton WWTP facility did not change appreciably between 2003 and 2008 (see Response A6). Most crucially, a mass balance calculation shows that at the current limit of 1 mg/L, the downstream concentration at 7Q10 conditions would be 0.6 mg/L, six times the Gold Book Criteria of 100 µg/L for flowing waters. Therefore, reasonable potential exists for the discharge to cause or contribute to an exceedance of water quality standards for phosphorus, making a total phosphorus limit necessary. The limit in the final permit remains 150 µg/L (0.150 mg/L) for the months of April through October.

Comment B3: Cost to meet phosphorus limit

If EPA intends to engage Clinton and/or the Lancaster Sewer District, it should only be through separate and direct permit/actions, not through the MWRA permit.

Beleaguered MWRA ratepayers could be forced to expend millions of dollars for capital investments to meet phosphorous levels at the plant.

EPA should first consider, through a direct permit with Clinton and the Lancaster Sewer District, a source reduction program developed and borne by the communities.

Once the source reduction plan has been implemented, the need for “end of pipe” solutions should be reevaluated.

Specifically, two areas that EPA must deal with the Clinton and the Lancaster Sewer District separately are first, the stringent total phosphorous levels included as part of this permit, and, secondly, I/I reduction.

Furthermore, additional phosphorous treatment will generate more sludge, thereby shortening the useable life of the landfill. Consideration should be given to this additional cost and operating impact of creating additional sludge for disposal.

Response B3: EPA is dealing directly with Clinton and the Lancaster Sewer District on the issue of I/I (infiltration/inflow) reduction by including these two parties as co-permittees in this permit with direct responsibilities to address I/I. See Response A3. Further, through the public comment process, Clinton and the Lancaster Sewer District have had the opportunity to comment on the total phosphorus effluent limit and compliance schedule. EPA sees these as a more appropriate means to include these parties instead of with separate permits for Clinton and the Lancaster Sewer District as suggested by the commenter.

The total phosphorus limits are water quality-based effluent limits that are imposed and are derived to ensure compliance with water quality standards. Under Section 301 of the Clean Water Act, cost or other technological factors are not appropriate when determining the need for water quality-based effluent limitations. However, EPA has included a compliance schedule for the MWRA to design and build a nutrient removal system.

Cost can be considered relative to implementation. If a demonstration can be made that achieving compliance with the terms of the schedule is not affordable, consistent with EPA guidelines for affordability, a longer schedule can be obtained. See Response A15 regarding means to allow longer schedules.

The inclusion of Clinton and the Lancaster Sewer District under a co-permittee framework rather than separate permits makes sense from the Region's perspective from an administrative efficiency standpoint, *i.e.*, development of one rather than multiple permits, but also in terms of how the system operates, *i.e.*, as an integrally connected and interdependent POTW.

With regards to sludge handling, EPA recognizes that increased nutrient removal may lead to higher operating costs and additional sludge disposal. EPA expects that cost and sludge handling will be important considerations in selection of the appropriate treatment technologies.

EPA recommends that the most cost-effective and environmentally sustainable method of managing sludge should be carefully considered as part of facilities planning. Permittees are encouraged to use pretreatment programs to improve the quality of their sludge to facilitate reuse so that landfill disposal is not necessary. In light of heightened scrutiny on energy costs and advances in engineering designs, EPA would expect the future upgrades to be more energy and resource efficient than previous designs.

Comment C6: Total Phosphorus limit.

NRWA strongly supports the new phosphorus limit of 150 µg/l for the April through October months. Control of phosphorus discharges to the South Nashua is essential to improve water quality in the nutrient impaired river segment directly downstream from the plant, and to improve documented eutrophication in downstream segments of the Nashua River mainstem. NRWA also supports a maximum load limit for Total Phosphorus (3.8 lbs/day) in addition to the concentration limit, due to the excess flows currently experienced at the plant.

NRWA agrees with the monitoring requirements for dissolved orthophosphate at this time.

Response C6: The April 1 to October 31 total phosphorus limits of 150 µg/L and 3.8 lbs/day are included in the final permit. See Responses A25, B3, and D5. However, EPA, as a practice, no longer requires winter orthophosphate monitoring for POTWs and has removed it from the final permit. For the rationale behind this change, please refer the list of changes made from the 2013 draft permit to the final permit in the beginning of this response document.

Comment D5: Total Phosphorus Limit

MRWC strongly supports the addition to this permit of EPA's new total phosphorus concentration limit of 150 µg/L between April 1 and October 31 of each year. This is a commendable step toward improving water quality in the nearby nutrient impaired segment of the Nashua River (MA81-09), in addition to documented issues of nutrient overload further downstream. Given the current problems with excess flow from the plant, MRWC also feels that a maximum total phosphorus load should be included in this permit consistent with the concentration limit of 150 µg/L at the permitted flow levels (3.8 lbs). Once flow levels are within permitted amounts, this additional maximum load requirement becomes redundant and no longer creates any additional burden to the treatment facility.

Response D5: EPA agrees with the comment and included a mass-based monthly average total phosphorus loading limit of 3.8 pounds per day for April 1 to October 31 in the 2010 draft permit, along with a concentration-based monthly average total phosphorus limit of 150 µg/L for April 1 to October 31. These limits are also in the final permit.

4. METALS AND WHOLE EFFLUENT TOXICITY LIMITS

Comment A4: Copper Limit.

MWRA believes that the monthly copper limitation should be the same as the daily limitation, that is, 14.0 µg/l. MWRA believes there is an error in the calculation of the monthly copper limitation; the draft monthly limitation is unduly conservative and would be exceeded almost 20% of the time even though water quality criteria are being met.

For MWRA's copper data, the existing permit only requires one measurement per month, and it is those measurements that are used to calculate the new copper limitations. However, EPA's calculation of the new monthly limitation apparently treated the single monthly measurements as if they were in fact averages of 4 measurements. This mistake results in an unduly conservative limitation. In Appendix C [to the fact sheet] the monthly variance is calculated at 0.02, while the daily variance is 0.078. In fact, we don't know what the monthly variance is because there aren't enough data, but for this reissuance it is reasonable to assume that it is the same as the daily variance. Therefore MWRA believes that the monthly copper limitation should be the same as the daily limitation, that is, 14.0 µg/l.

Response A4: The assertion that EPA treated the single monthly measurements as though they were averages of 4 measurements is incorrect. The source data for effluent characterization and permit limit development do not need to be collected at the same frequency as the proposed limit based on that statistical analysis. The *Technical Support Document for Water Quality-based Toxics Control* (TSD) explains that "[t]he distribution fitting methods assume that the daily measurements are independent, uncorrelated observations."

Based on the existing monthly sampling data, EPA calculated the monthly limits assuming that, under the **new** permit, the monthly average copper would be an average of four measurements per month. This approach makes no assumptions of the existing effluent data other than the ones stated above, that they be independent and uncorrelated measurements.

As described in the TSD⁶, EPA uses a statistically based method for permit level derivation. This method determines the treatment performance level that will allow the effluent to meet the wasteload allocation within a given confidence level, in this case 95%. The relationship between monthly average permit limits and sampling frequency may at first seem counterintuitive. The TSD offers the following discussion⁷ on this topic:

The AML [average monthly limit] decreases as the number of monthly samples increases because an average of 10 samples, for example, is closer to the LTA [long-term average] than an average based on 4 samples. This phenomenon makes AMLs based on 10 samples appear to be more stringent than the monthly limit based on 4 samples. However, the stringency of these procedures is constant across monitoring frequencies because the probability basis and the targeted LTA performance are the same regardless of the number of samples taken. Thus, a permittee performing according to the LTA and variability associated with the wasteload allocation will, in fact, meet either of these AMLs when taking the corresponding number of monthly samples.

Effluent copper data from the MWRA-Clinton WWTP illustrate this point. The middle column of the table below displays reported copper concentrations from monthly composite samples. From this column, it would appear that MWRA-Clinton would exceed the proposed monthly average copper limit (9.5 µg/L) eight times from June 2011 through July 2016. Because MWRA sampled once per month, it is impossible to know what the monthly averages would have been if MWRA-Clinton had sampled four times per month, but for the data in the table below, a 4-month rolling average was also computed to simulate the difference a rolling average makes. The table shows that if the same data with eight exceedances were reported as 4-sample averages, only one exceedance would occur.

⁶ Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001), page 107.

⁷ Section 5.5.3, "Number of Samples", page 107, of the TSD

Table 6. Copper effluent concentrations reported in MWRA-Clinton Discharge Monitoring Reports from June 2011 through July 2016, compared with four-sample rolling averages. Values greater than 9.5 µg/L (the AML in the draft permit) are shaded.

Month End Date	Result (µg/L)	Rolling 4-sample average (µg/L)
06/30/2011	6.1	N/A
07/31/2011	7.6	N/A
08/31/2011	10.6	N/A
09/30/2011	4.8	7.3
10/31/2011	9.7	8.2
11/30/2011	11.2	9.1
12/31/2011	10.1	9.0
01/31/2012	8.9	10.0
02/29/2012	7.1	9.3
03/31/2012	6.9	8.3
04/30/2012	2.3	6.3
05/31/2012	5.7	5.5
06/30/2012	5.2	5.0
07/31/2012	5.8	4.8
08/31/2012	6.0	5.7
09/30/2012	7.7	6.2
10/31/2012	7.4	6.7
11/30/2012	7.8	7.2
12/31/2012	8.4	7.8
01/31/2013	9.0	8.1
02/28/2013	9.9	8.8
03/31/2013	5.7	8.2
04/30/2013	7.2	7.9
05/31/2013	6.4	7.3
06/30/2013	4.9	6.0
07/31/2013	5.0	5.9
08/31/2013	6.4	5.7
09/30/2013	6.7	5.7
10/31/2013	6.7	6.2
11/30/2013	5.8	6.4
12/31/2013	10.1	7.3

Month End Date	Result (µg/L)	Rolling 4-sample average, (µg/L)
01/31/2014	4.6	6.8
02/28/2014	6.2	6.6
03/31/2014	4.6	6.3
04/30/2014	2.7	4.5
05/31/2014	1.9	3.8
06/30/2014	3.5	3.2
07/31/2014	9.0	4.3
08/31/2014	7.6	5.5
09/30/2014	6.7	6.7
10/31/2014	5.2	7.1
11/30/2014	5.7	6.3
12/31/2014	6.1	5.9
01/31/2015	6.0	5.7
02/28/2015	7.8	6.4
03/31/2015	11.3	7.8
04/30/2015	4.8	7.5
05/31/2015	5.1	7.2
06/30/2015	3.0	6.1
07/31/2015	4.0	4.2
08/31/2015	4.4	4.1
09/30/2015	5.5	4.2
10/31/2015	2.3	4.1
11/30/2015	4.8	4.3
12/31/2015	6.1	4.7
01/31/2016	5.4	4.7
02/29/2016	7.4	5.9
03/31/2016	6.0	6.2
04/30/2016	5.8	6.2
05/31/2016	6.1	6.3
06/30/2016	9.2	6.8
07/31/2016	9.9	7.8

Notwithstanding the above discussion, a once per month copper sampling frequency is EPA Region 1 practice for most dischargers. Therefore, the sampling frequency has been changed to once per month, and the monthly average limit has changed accordingly. The monthly average copper limit, based on a sampling frequency of once per month, is 11.6 µg/L. The limit is slightly higher than the limit based on four samples per month because for the same facility performance, a single monthly reported value tends to be higher than the average of four samples.

Note: regardless of monitoring frequency, the daily maximum limit is still greater than the average monthly limit because EPA uses different percentiles to determine the two limits: the 99th percentile for the maximum daily permit limit, and the 95th percentile as the monthly average.

Comment A26: Reasonable Potential Analysis for Zinc.

There are some inconsistencies in the zinc write-up. Criteria in write up from page 21 are 63.0 (chronic) and 62.5 (acute) µg/L whereas the analyses on pages 20 and 22 show 63.9 (acute) and 63.8 (chronic) µg/l.

Response A26: The correct water quality criteria for zinc are 63.9 µg/L (acute) and 63.8 µg/L. The inconsistency was unintentional, and does not change the reasonable potential analysis, which found that an effluent limit for zinc was not necessary.

Comment C7: WET testing.

NRWA supports quarterly WET testing for this facility. However, due to the extreme (±100 MGD) fluctuations in flow in the river from day to day, the WET testing can represent the most dilute conditions or the most extreme low flow conditions, depending on the timing of the testing. NRWA believes there should be a requirement that the testing be conducted during the lowest flow conditions to reflect potential worst case scenarios.

Response: Low flow assumptions are already incorporated into WET (Whole Effluent Toxicity) testing permit limits. The requirement that the C-NOEC (Chronic No-Effect Concentration) be no lower than 62.5% effluent means that the laboratory tests toxicity in water consisting of 62.5% effluent. This percentage reflects that fact that at low flow conditions in the Nashua River (1.71 MGD) and design flow of MWRA Clinton WWTP (3.01 MGD), approximately 62.5% of the river is effluent. MWRA has pointed out that during extreme low flows, the WWTP usually discharges less than its design flow due to the absence of groundwater infiltration into the collection system. Nevertheless, NPDES regulations at 40 CFR § 122.45(b)(1) require that “[i]n the case of POTWs, permit effluent limitations, standards, or prohibitions shall be calculated based on design flow.”

Furthermore, the quarterly testing schedule is intended to measure toxicity during all four seasons and to provide a predictable schedule for the facility and laboratories. If all laboratories had to perform WET testing during the driest week of the year, the limited number of laboratories that perform this test would be overwhelmed. It is also important to test effluent when flow is high, as pollutant removal efficiencies may be compromised during high flow conditions.

5. BACTERIA LIMITS

Comment A8: E. coli correction.

“Fecal coliform bacteria” should be replaced by “*E. coli*”. (Note that the fact sheet states that this is a seasonal requirement, the fact sheet should be corrected to agree with the draft permit.)

Response A8: Part I.A.1. Footnote 7 has been corrected to refer to *E. coli* instead of fecal coliform. The *E. Coli* effluent limit is a year-round limit, not a seasonal limit. The fact sheet is a

document that provides the basis for the draft permit and is not subsequently modified with issuance of a final permit. The requested clarification in the fact sheet is noted for the record.

Comment C5: Bacteria.

Due to the lack of dilution during low-flow periods, which often coincides with the recreational season on the river, the NRWA disagrees with the single sample *E. coli* limit of 409 cfu/100mL. The NRWA's water monitoring program has routinely documented bacteria impairments downstream of the plant above the single 409 cfu/100mL limit, and well above the MA State Water Quality Standard of 235 cfu/100 mL. Given that this is a recreational river downstream of the plant, and is on the Integrated List for pathogen impairment, NRWA believes the plant should be held to the lower water quality standard limit (235 cfu/100 mL).

The permit states that year-round bacteria limits and monitoring will be required, but the fact sheet states seasonal limits and monitoring are required. Which is correct?

Response C5: Please see Responses A8, D6, and D7.

Comment D6: E. coli limits.

MRWC strongly objects to the use of the proposed 409 cfu/100 mL single sample *Escherichia coli* limit in this draft permit. This proposed limit is well above the Massachusetts state water quality standard of 235 cfu/100 mL, and discharge at the current 409 cfu/100 mL limit would exceed state standards in the South Branch Nashua River under the given dilution factor, even if the receiving waters contained no background *E. coli* at all. Given that this river is already listed as impaired for pathogens in the receiving section as well as all the way downstream to its mouth at the Merrimack River, it is critical that Clinton WWTP discharge meets state water quality standards, especially during the primary contact season.

Response D6: MassDEP revised its surface water criteria for bacteria in the revisions to the Massachusetts Surface Water Quality Standards (SWQS) 314 CMR 4.00 (December 29, 2006). EPA approved the changes to the bacteria criteria on September 19, 2007.

For fresh waters, the SWQS criteria were revised from fecal coliform bacteria to either enterococci (for bathing beaches) or *E. coli*. The updated SWQS changes the criteria from the previous standard which was, for Class B waters, a monthly geometric mean for fecal coliform bacteria of 200 cfu/100 mL and no greater than 10% of the samples in a month were to exceed 400 cfu/100 mL. These criteria were based upon qualitative information and best professional judgment (Isaac, 2007). The new criteria for *E. coli* (used by MassDEP for non-beach inland waters) are 126 cfu/100 mL geometric mean and a SSM of 235 cfu/100 mL. These criteria are based upon statistical distribution (Isaac, 2007).

The bacteria criteria are based on the EPA criteria originally published in 1986 and more recently included in the EPA bacteria ruling found in the Federal Register (November 16, 2004: "Water Quality Standards for Coastal and Great Lakes Recreation Waters: Final Rule"). The *E. coli* SSM values are based on 4 classes of exposure with the upper 75% confidence level being the most stringent. MassDEP views the use of the 90% upper confidence level (lightly used full body contact recreation) of 409 cfu/100 mL as appropriate for setting effluent bacteria levels in NPDES permits. MassDEP views this as in keeping with how the fecal coliform criteria were

used with the 10% exceedances allowance. In the bacterial ruling, EPA explained that if NPDES permits limits are set at the 75% upper confidence level for SSM it would, in fact, be more stringent than intended by the criteria and “could impart a level of protection much more stringent than intended by the 1986 bacteria criteria document.” (EPA-823-F-06-013, September 2006, Water Quality Standards for Coastal Recreation Waters: Using Single Sample Maximum Values in State Water Quality Standards).

The bacteria limits for this permit are thus set using the water quality standard based geometric mean value in the SWQS and setting the daily maximum at the 90% upper confidence level. The permit is more stringent in that it does not allow 10% of the effluent samples to be above 409 cfu/100 mL, which is how the surface water criteria are applied in the water quality standards.

6. DISINFECTION

Comment A9: Chlorination Reporting.

It is not clear whether the reporting of potentially inadequate or excessive chlorination should be part of the monthly DMR cover letter or a separate report appended to the DMR.

Response A9: EPA requires that the permittee report inadequate or excess chlorination with the monthly DMR. Part I.G.2. specifies that, “Unless otherwise specified in this permit, the permittee shall electronically submit all reports to EPA as NetDMR attachments rather than as hard copies.” Since this report is not “otherwise specified” in the permit, reporting of potentially inadequate or excessive chlorination should be reported as a NetDMR attachment.

Comment A10: Chlorination Reporting.

The permit reads "For every day that more than one chlorine grab sample is analyzed ... " Since page 2 of 14 requires that 2 chlorine grabs be collected daily, MWRA believes Footnote 9 should read "For every day that more than two chlorine grab samples are analyzed ... "

Response A10: EPA agrees. Part I.A.1. Footnote 9 has been corrected accordingly.

Comment A11: Process Control Samples.

MWRA requests clarification on how to report the results of screening level and process control samples in the discharge monitoring reports. These tests are not performed on final effluent and therefore it does not seem appropriate to include the results in DMR calculations.

Response A11: This footnote is intended to ensure that total residual chlorine test results reported in the DMR are representative of the final effluent. The requirement only applies to samples from the final effluent. Screening level and process control samples that are not taken of the final effluent would not be required to be reported in the DMR.

This requirement was added because it has come to EPA’s attention that some permittees perform “screening” final effluent chlorine analyses prior to the official analysis reported in the DMR to ensure that results will be within permit limits and allow for changes in chlorine dosing if the screening sample indicates that chlorine levels are too high. These preliminary analyses of the final effluent are often not reported or factored into the DMR calculations as they are required to be. To discourage this practice, the draft permit requires the reporting of all effluent

chlorine grab samples in an attachment to the DMR and inclusion of all sample results from EPA approved analyses in the DMR monthly average and maximum daily calculations.

Comment A24: Fact Sheet Conventional Pollutants.

E. coli. Discussion of *E. coli* seasonal limitation is inconsistent with draft permit (Page 4 footnote 7), which requires the limit year-round.

Response A24: The commenter is correct that the fact sheet was inconsistent with the draft permit. The *E. coli* limit for MWRA Clinton WWTP in the final permit is year-round. The fact sheet is a document that provides the basis for the draft permit and is not subsequently modified with issuance of a final permit. The requested clarification in the fact sheet is noted for the record.

Comment D8: Reduce Chlorine Use

Due to the known toxicity of chlorine and reported chlorine odor in the vicinity of the Clinton WWTP, MRWC recommends reducing chlorine use for disinfection, at least during the winter months. During all parts of the year, MRWC recommends the use of Ultraviolet (UV) light for disinfection and treatment. The significant advantages of UV disinfection include no adverse effect on organisms downstream, removal of a potentially toxic chemical, and reduced expense from limiting the use of chlorine.

Response D8: The water quality-based effluent total residual chlorine limitations in the final permit are protective of water quality standards, and the compliance level is lower than in the current permit due to advances in laboratory methods that can detect lower levels of total residual chlorine. The discharge monitoring reports submitted by MWRA show that the limitations have been consistently achieved, except for one operational upset in November and December 2006.

EPA encourages permittees to implement technologies that eliminate or reduce chemical usage; however, is not requiring an alternative method of treatment when the current method is achieving effluent limitations.

Comment C4: Residual Chlorine.

NRWA has fielded a number of calls regarding residual chlorine odors from the plant. On one visit to the plant after a call in 2006, NRWA staff noticed a very strong chlorine odor at the plant's discharge. NRWA staff notified MassDEP, whose staff said they believed the plant was operating within its discharge permit limits. Although the NRWA and the MassDEP have documented high bacteria levels downstream of the plant, the toxic nature of residual chlorine in the river is also problematic. NRWA requests that a provision in the permit be added to require specific reporting of how malfunctions in the chlorine disinfection system are handled and what steps will be taken to avoid malfunctions in the future.

NRWA also requests that consideration be given to an upgrade to UV disinfection simultaneous with other upgrades for nutrient removal, both to save money from chlorine costs and to reduce the need for chlorine use.

Response C4: At 314 CMR 4.05(3)(b)8., the SWQS state that Class B waters shall not have taste or odor “in such concentrations or combinations that are aesthetically objectionable....” As such, a noticeable chlorine odor may interfere with designated uses.

The permit retains the requirement to have a chlorination/dechlorination alarm system and to report the details of any interruption or malfunction of the chlorination/dechlorination dosing systems with the monthly DMR. In response to this comment, EPA has amended Part I.A., Footnote 8 of the permit to also require the report of interruptions or malfunction to include measures taken to prevent a future occurrence.

The permit also retains the chlorine residual limits from the previous permit, 17.6 µg/L (average monthly) and 30.4 µg/L (maximum daily); however the compliance level for this requirement is now more stringent. In the previous permit, the compliance level for total residual chlorine was 50 µg/L, which was the minimum level detectable by the laboratory analysis. The laboratory analytical level of 20 µg/L is now achievable, enabling better detection of residual chlorine levels exceeding the permit limit. EPA believes this change will result in compliance with the taste and odor provision of the SWQS for Class B waters.

7. INDUSTRIAL PRETREATMENT, MONITORING AND REPORTING

Comment A7: Routine Sampling Program.

The requirement to develop a routine sampling program “in which samples are taken at the same location, same time, and same day(s) of every month” is difficult to understand. Some samples are continuous, some are 1, 2, 3 times/week, some are 1/day, some 2/day, some quarterly. In fact, there are no samples which clearly fit into the requirement “sample the same day(s) every month.” Therefore, the requirement to report on deviations from the sampling plan is unclear. For example, what constitutes a deviation from sampling “at the same time”? Is it 5 minutes or 5 hours? Note, MWRA sampling personnel and operational personnel are in separate functional units so operational personnel are not involved in determining when samples are collected.

Delete the strikethrough language and add the bolded language in Footnote 3.

“A routine sampling program shall be developed in which samples are taken at the same location, same time and same day(s) of every month. Any deviations from the routine sampling program shall be documented in correspondence appended to the applicable discharge monitoring report that is submitted to EPA. **in which samples are taken in a consistent schedule as much as practicable. If substantial deviations from the sampling plan occur, these changes shall be noted in the DMR cover letter.**”

Response A7: EPA believes that this provision is clear, but has made adjustments to further eliminate any potential confusion. The permittee should bear in mind that the intent of this condition is to require the permittee to develop a routine sampling program and to follow it to ensure that sampling is representative of the discharge. This will allow EPA and others to assess the data in an accurate fashion, which is not only in EPA’s interest, but the discharger’s as well. For example, if two samples per week are required in the permit for a given parameter, and samples are customarily taken on Monday and Thursday; samples taken on Wednesday and Friday would constitute a deviation from the sampling plan. If sampling is required two times

per day, and the sampling plan prescribes one sample at 9:00 am and another at 3:00 pm, taking one sample at 1:00 pm and another at 2:00 pm instead would constitute a significant deviation and must be reported on the monthly DMR form.

EPA does not consider a 5-minute deviation from the sampling plan significant. On the other hand, a 5-hour deviation from the sampling plan could be significant, because the quality of the effluent may change during the course of the day, and must be reported in the monthly DMR.

The source of commenter's confusion is somewhat unclear. EPA is aware that different pollutants are required to be sampled at different times and frequencies and is not suggesting that differences be eliminated. Rather, for each particular sampling requirement, routine and consistent procedures should be followed in obtaining the results.

Comment A14: Weekends and Holidays.

Please add language that allows for reporting the following business day if the due date falls on a weekend or holiday.

Response A14: EPA believes that the time period between testing and report, which is at least one month, gives the permittee more than enough time to submit the whole effluent toxicity reports and toxicity DMRs. Therefore, it is not necessary to grant extensions to the reporting deadline to account for holidays or weekends. No change has been made to the permit.

Comment A16: Part I.C. Industrial Pretreatment Program. (Page 8 of 14).

Item 3. MWRA requests that the 120-day time frame for the preparation and submittal of the written technical evaluation be changed to 180 days. Three months is an extremely short time to gather data and prepare the technical analysis, and 180 days is the requirement in the existing permit. Also, the additional time is needed to determine the potential for source reduction of phosphorus.

Response A16: EPA has changed the time frame for submittal of the written technical evaluation to 180 days.

Comment A17: Part I.C. Industrial Pretreatment Program. (Page 9 of 14).

Item 4.b. MWRA requests that the requirement to "issue or renew industrial user control mechanism within 90 days" be extended to 120 days.

Response A17: The standard time frame for issuance or renewal of industrial user control mechanisms is 180 days for new significant industrial users and 90 days for industrial users whose control mechanisms have expired. In EPA's experience, this timeframe has proven adequate and has not posed a compliance concern. As MWRA has provided no specific information meriting an extension of this timeline, and EPA is not in experience aware of any such information, it remains unchanged.

Comment A19: Part I.G. Monitoring and Reporting (Page 12 of 14).

MWRA notes that EPA sometimes has been experiencing technical difficulties with its NetDMR application. For example, there have been significant periods of time when the application is not available. It may be appropriate to indicate within the permit what the procedure is for submission of DMRs should NetDMR be unavailable on the due date. For example, should the

DMR be submitted electronically when the application becomes available, or should the DMR be submitted in hard copy?

Response A19: Like any new (or existing) database system, there will be moments when upgrades/maintenance will have to be performed to improve the overall performance of the NetDMR application. EPA has clearly communicated the potential impacts of the maintenance to the NetDMR users and specifically has told them that the maintenance performed would not impact a facility's ability to timely submit their DMRs electronically to EPA, and EPA has also communicated that there were no additional steps a facility had to take during these upgrades/maintenance time periods.

In the event of upgrades/maintenance or unplanned events that might impact the ability of a permittee to use NetDMR to submit their DMRs electronically, EPA would also communicate our expectations/options to the Region 1 NetDMR user community through EPA Region 1 NetDMR website.

Finally, Region 1 NetDMR staff have clearly made themselves available and have encouraged all permittees to contact us directly to discuss any concerns, issues, and/or problems they might be having with the use of NetDMR. For any ongoing problems with NetDMR, please contact Neil Handler at handler.neil@epa.gov or (617) 918-1334.

Comment A28: Page 23 of 29: VI. Operation and Maintenance of the Collection System.

Fourth paragraph re the Clinton ACO. The fact sheet should list the ACO [Administrative Consent Order] items that have been completed and approved by MassDEP during the 25 years of work with Clinton rather than listing the items required to be completed circa 1985.

Response A28: The fact sheet provides the basis for the permit requirements and is not intended to provide a complete history of all activities at the POTW. The reference to the sewer bank was included due to its relevance to the flow concerns at this facility.

In recent years, MWRA relined its entire sewer main and all sewer manholes to minimize I/I in its part of the system. EPA believes that I/I from this part of the sewer system is negligible.

As the commenter mentioned, pursuant to a 1985 ACO, the Town of Clinton established a sewer bank that requires 3 gallons of I/I be removed from the sewer system for every 1 gallon added from new sewer connections. Communications with MassDEP indicate that I/I improvements have occurred as part of new development in Clinton, to offset new sewer connections. The Town of Clinton's annual Infiltration/Inflow Report for 2010⁸ describes replacement of 100 linear feet of sewer line which exhibited high infiltration rates, purchase of flow meters and software for I/I prioritization, and the development of a prioritized I/I elimination plan based on monitoring data. These changes are described as offsetting the I/I equivalent of twelve new sewer connections in 2010 at a rate of 3:1.

⁸ 2010 is the only year that EPA has received an annual Infiltration/Inflow Report from the Town of Clinton.

8. CORRECTIONS

Comment A5: Whole Effluent Toxicity Sampling.

SAMPLE TYPE= Grab. Effluent toxicity samples have always been collected as 24-hour composite samples. Change the sample type to be changed to 24-hour composite.

Response A5: Part I.A. has been changed to indicate that effluent toxicity samples shall be 24-hour composite samples.

Comment A21: Effluent Characteristics

Page 4 of 29 of the fact sheet: Section III Description of Discharge. There are some errors in [fact sheet] Appendix A - Effluent Characteristics, which should be corrected as follows:

Date	Parameter	Change From	Change To
Jan 07	TSS inf load	243 lbs/d	182.1 lbs/d
Feb 07	TSS inf load	320 lbs/d	131.6 lbs/d
Mar 07	TSS inf load	234 lbs/d	246.9 lbs/d
Jan 08	TSS inf load	234 lbs/d	166.0 lbs/d
Oct 08	pH	7.5 s.u.	7.6 s.u
Jun 09	DO	9.6 mg/l ⁹	9.0 mg/l ¹

Response A21: These corrections will be noted in the administrative record.

Comment D7: E. coli correction

Also, an inconsistency exists between the fact sheet and the draft permit with respect to *E. coli* monitoring. The fact sheet states that these limits are seasonal (April 1st to October 31st), whereas the draft permit, Footnote 7, states these monitoring requirements are in effect year round. MRWC requests clarification as to which monitoring requirement is correct.

Response D7: EPA acknowledges this inconsistency between the 2010 fact sheet and draft permit. The draft permit was correct, and this document serves as a record to correct the fact sheet. *E. coli* limits and monitoring will be in effect year-round. Please see Response A8.

Comment D9: Attachment F.

Finally, MRWC would like to note that there are quite a few typographical errors in both the draft permit and accompanying fact sheet that should be corrected in the final documentation.

⁹ The comment originally read “9.6 µg/L”, but EPA assumes that the commenter intended to say “mg/L” because dissolved oxygen is customarily measured in milligrams per liter.

For example, Attachment F of the draft permit- Summary of Required Report Submittals states the Infiltration/Inflow Control Plan is in Part I.C.3, when it is in fact Part I.D.3.

Response D9: The correction is noted for the record. A Summary of Required Report Submittals is not included in the final permit due to the risk of inconsistencies such as the one cited in the comment.

Response to Comments on 2013 Partially Re-Noticed Draft NPDES Permit

1. CO-PERMITTEE REQUIREMENTS

Comment E1: MWRA Opening Comment

The Massachusetts Water Resources Authority (“MWRA”) has reviewed the revised draft National Pollutant Discharge Elimination System (“NPDES”) permit no. MA0100404 for the Clinton Wastewater Treatment Plant (“CWWTP”) which was noticed on September 18, 2013 and accompanying fact sheet and is providing the following comments in accordance with 40 C.F.R. §124.13. MWRA provided comments on the previous draft NPDES permit no. MA0100404 for the CWWTP and accompanying fact sheet noticed on September 29, 2010. MWRA’s previous comments dated October 27, 2010 are attached as Attachment A. In addition, MWRA is submitting general comments on items that have been noticed for public comment and is addressing items again that were the subject of MWRA comments submitted in 2010 but which were not revised by EPA.

As is set forth in MWRA’s detailed comments below, MWRA opposes the United States Environmental Protection Agency’s (“EPA”) proposed inclusion of the Town of Clinton and the Lancaster Sewer District as co-permittees in draft NPDES permit no. MA0100404 for MWRA’s CWWTP, and opposes EPA’s implementation of a new requirement that municipal satellite sewage collections systems that do not discharge pollutants directly to the waters of the United States obtain NPDES permits. MWRA believes that EPA is not authorized under the Clean Water Act, 33 U.S.C. § 1251 et. seq. (“CWA”) or the Code of Federal Regulations governing EPA’s NPDES program to include the Town of Clinton and the Lancaster Sewer District as co-permittees or to require that municipal satellite sewage collection systems that do not discharge pollutants directly to the waters of the United States obtain NPDES permits.

Background

MWRA owns and operates the CWWTP and an approximately one-mile separate sanitary interceptor sewer line that delivers wastewater to the CWWTP. CWWTP is an advanced wastewater treatment plant, which discharges to the South Branch of the Nashua River (MA81-09) pursuant to NPDES Permit No. MA0100404. The current NPDES permit was issued on September 27, 2000 and became effective on November 26, 2000.

CWWTP treats wastewater from the Town of Clinton and the Lancaster Sewer District. CWWTP serves a population of approximately 13,000 in Clinton and approximately 1,500 in Lancaster. Wastewater enters CWWTP plant through two connections: (1) a 24-inch diameter reinforced concrete sewer connected to the MWRA 30-inch diameter interceptor on High Street (Clinton influent), and (2) an 18-inch diameter reinforced concrete sewer connected to the Lancaster interceptor on High Street (Lancaster Sewer District influent). Flow passes through two separate metering stations (one for Clinton and one for Lancaster flows), then two submersible influent pumps lift flow to a mechanical bar screen. A manual bar rack is located in parallel for use when the mechanical bar screen is out of service. Flow is then conveyed to two parallel aerated grit chambers where grit is removed using screw grit collectors. Primary settling is accomplished in two rectangular tanks, each measuring 82-feet long by 24-feet wide by 9-feet deep. Chain and

flight collectors are used for scum and primary sludge that is pumped to residuals processing. From the primary settling tanks, wastewater flows by gravity to four high-rate trickling filters. Two trickling filters are 60-foot diameter (upgraded from original plant) and two are 80-foot diameter (new construction in 1992). Five feet of crushed stone media is used in each tank. Three intermediate pumps lift wastewater from the trickling filters to six 318,000 gallon aeration (activated sludge) tanks (each is 50-feet by 50-feet by 17-feet). From the aeration tanks, wastewater is conveyed to three 80.25-foot diameter clariflocculators. Nitrogen removal takes place in the activated sludge process to reduce nutrient levels to the receiving water, thereby inhibiting algae growth and reducing oxygen demand on the river. Nitrification is accomplished by a biological process, which utilizes nitrogen as an energy source. Disinfection occurs in two hypochlorite contact tanks, each measuring 100-feet long by 6-feet wide by 14-feet deep. Dechlorination takes place at the overflow cascade of the chlorine contact chamber. Sodium bisulfite is sprayed by injectors into the effluent stream to remove chlorine residual before going to the receiving water. The effluent is discharged through a Parshall flume and a multistep cascade to the South Branch of the Nashua River via a 24-inch outfall (Outfall 001), the only permitted point source.

MWRA owns and maintains approximately one mile of 20-inch, 24-inch and 30-inch interceptor in Clinton that parallels the South Branch of the Nashua River between High and Williams Streets. The Town of Clinton and Lancaster Sewer District own and operate their respective separate sanitary sewer systems. The Clinton wastewater collection system includes approximately 40 miles of sewers ranging in diameter from 8 to 30 inches. The Clinton collection system has nine public and eleven special connections to the MWRA interceptor system. It does not discharge directly to the waters of the United States. The southern portion of the Town of Lancaster (Lancaster Sewer District) is served by a wastewater collection system that includes seven small pump stations and approximately 22.6 miles of pipeline, primarily 8, 10, and 15-inch diameter lateral sewers. The Town's one main interceptor (15 to 36-inch diameter) collects flow from the lateral sewers and connects to MWRA's 18-inch diameter interceptor on High Street. It does not discharge directly to the waters of the United States.

The current NPDES permit for CWWTP went into effect on November 26, 2000 sixty days after the signature date. MWRA submitted its application for reissuance of the permit on May 27, 2005, 180 days prior to its expiration on November 26, 2005, in accordance with 40 C.F.R. §122.21. EPA administratively continued the current permit after it expired pursuant to 40 C.F.R. §122.6. EPA issued and published the initial Draft NPDES Permit No. MA0100404 for the CWTP for public comment on September 29, 2010 pursuant to the Federal Clean Water Act as amended, (33 U.S.C. 1251 et seq.) and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, 26-53) and a subsequent Draft NPDES Permit No. MA0100404 for the CWTP for public comment on September 18, 2013.

The permit authorization to discharge includes two separate and independent permit authorizations – a federal NPDES permit issued by EPA pursuant to the Clean Water Act and a state surface water discharge permit issued by the Massachusetts Department of Environmental Protection (“MADEP”) pursuant to the Massachusetts Clean Waters Act. However, while MADEP provides certification of the permit pursuant to CWA 33 U.S.C. §1341(a) and 40 C.F.R. 124.53, Massachusetts is not authorized under 33 U.S.C. §1342 of the CWA to administer a

NPDES program; EPA is the permitting authority for the State of Massachusetts. Until Massachusetts is authorized to administer a NPDES program, EPA is the permitting authority that issues all permits, conducts all compliance and monitoring activities, and enforces all program requirements.

It is important to note that EPA included the Town of Clinton and Lancaster Sewer District as limited co-permittees for unauthorized discharges and infiltration and inflow requirements in the 2000 NPDES permit for CWWTP. EPA has stated that it included these entities in MWRA's permit in order to address perceived capacity issues within the communities' collection systems. EPA initially attempted to place responsibility with MWRA for addressing unauthorized discharges and infiltration and inflow issues in the Town of Clinton and Lancaster Sewer District, which MWRA opposed on the grounds that it did not own or operate those systems, and was therefore not authorized under its Enabling Act (Section 26(d) of Chapter 372 of the Acts of 1984) to bear any costs or legal obligations associated with infiltration and inflow or unauthorized discharge requirements. MWRA requested that these requirements as they related to MWRA's responsibility for the Town of Clinton and Lancaster Sewer District collection systems not be included in its CWWTP NPDES permit. In lieu of language creating responsibilities on MWRA's part for infiltration and inflow issues and unauthorized discharges related to the Town of Clinton and Lancaster Sewer District, EPA included the Town of Clinton and Lancaster Sewer District as limited co-permittees in MWRA's NPDES permit for CWWTP even though neither entity applied for or was required to have a NPDES permit pursuant to the CWA. MWRA did not object at the time because the permit limited MWRA's requirements with respect to responsibilities for infiltration and inflow and unauthorized discharges to parts of the system it owned and operated, and because there was not the potential for a significant financial impact on MWRA, the Town of Clinton, or Lancaster Sewer District.

In the revised NPDES permit for CWWTP on September 18, 2013, EPA has included much more extensive requirements for MWRA, the Town of Clinton, and Lancaster Sewer District. As is discussed below, there are significant new questions concerning EPA's authority under the CWA and Code of Federal Regulations to require NPDES permits for non-point sources that do not discharge directly to the waters of the United States.

EPA is not authorized under the CWA, 33 U.S.C. § 1251 et. seq. and the Code of Federal Regulations governing EPA's NPDES program to include the Town of Clinton and the Lancaster Sewer District (the "Towns") as co-permittees in draft NPDES permit no. MA0100404 for MWRA's CWWTP for the following reasons.

A NPDES permit is a license, issued by the government to a person or persons granting permission to do something that would otherwise be illegal without a permit. See U.S. Environmental Protection Agency NPDES Permit Writer's Manual (September 2010) at p.1-5 and 40 C.F.R 121.1 and 122.2. Typically, a NPDES permit for POTWs is a license for a facility to discharge a specified amount of pollutant into a receiving water under certain conditions. See U.S. Environmental Protection Agency NPDES Permit Writer's Manual (September 2010) at p.1-5.

The CWA and the NPDES regulations at Title 40 of the Code of Federal Regulations (“C.F.R.”) require permits for the discharge of pollutants from a point source into the waters of the United States. See 40 C.F.R. 122 and 124 and 33 U.S.C. §1342 of the CWA. Section 33 U.S.C. §1362 of the CWA and 40 C.F.R. 122.2 define “discharge of pollutant(s)” as any addition of any pollutant to navigable waters from any point source and any addition of any pollutant to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft. The latter definition only includes discharges from pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works. 314 C.M.R. 12.02 of MADEP’s regulations, which were based on the CWA, define a “discharge or discharge of pollutants” as “any addition of any pollutant or combination of pollutants to waters of the Commonwealth from any source...which do not lead to a POTW....” 33 U.S.C. §1362 of the CWA and 40 C.F.R. 122.2 define “point source” as any discernible, confined and discrete conveyance...from which pollutants are or may be discharged. NPDES permits are only issued to direct discharges. See U.S. Environmental Protection Agency NPDES Permit Writer’s Manual (September 2010) at p.1-7. Direct discharge means the discharge of a pollutant. See 40 C.F.R. 122.2 and also 33 U.S.C. §1362 of the CWA. The adjective “direct” as defined in the Merriam-Webster Dictionary means stemming immediately from a source.

Response E1: EPA appreciates the informative background comment. We believe that assigning co-permittees the responsibility of properly operating their collection systems will not create additional requirements for MWRA, and on the contrary will make operation of the Clinton MWRA WWTP more predictable by reducing wet weather high flows that can cause treatment upsets. As explained above, EPA’s co-permittee approach¹⁰ was upheld in *In re: Charles River Pollution Control District*, NPDES Appeal No. 14-01, February 4, 2015. The permit had included municipal satellite sewer collection systems conveying wastewater to the plant as co-permittees and subjected them to operating and maintenance requirements despite their opposition to inclusion on the permit. The Board found that the Region has authority under the CWA and EPA’s regulations to include the Towns as co-permittees on the permit, and the administrative record supports the Region’s decision to include the Towns as co-permittees. In rejecting the Petitioners’ claims, the Board upheld each of the Region’s legal arguments and factual justifications on a range of CWA issues. It found that the Region reasonably construed the NPDES regulatory definition of “publicly owned treatment works” to include the Towns’ municipal satellite sewer collection systems. Because the Towns’ sewer collection systems are components of the treatment plant that discharges into waters of the United States, the Towns are subject to NPDES regulation. Additionally, it held that under NPDES regulations pertaining to a discharger’s “duty to apply,” where there are multiple dischargers responsible for the same discharge, then an application from one of the dischargers constitutes an application from all. As explained earlier in the Response to Comments, the EAB decision confirms EPA’s authority under the Clean Water Act to require independently owned systems discharging to a centralized POTW to obtain an NPDES permit, and adequately

¹⁰ Because this document was also attached to the draft permit, it is referred to by commenters as the “Analysis” and is included in this RTC as Appendix A

encompasses the objections raised below by commenters on the permit's co-permittee provisions.

Comment E2: The co-permittees have not submitted applications.

A person who discharges pollutants or proposes to discharge pollutants to waters of the United States must submit a complete application for a permit. See 40 C.F.R. 122.21 and 124.3 and see also 33 U.S.C. §1341 of the CWA. The permit application must be signed by a principal executive officer of the entity applying for a NPDES permit. See 40 C.F.R. 122.22(a)(3). A copy of the permit application must be made available to the public. See 33 U.S.C. §1342 (j) of the CWA. The NPDES permittee will either be the owner or operator of the facility. See U.S. Environmental Protection Agency NPDES Permit Writer's Manual (September 2010) at p. 4-1. Owner or Operator means the owner or operator of any facility or activity subject to regulation under the NPDES permit program. See 40 C.F.R. 122.2 and 33 U.S.C. §1316 of the CWA.

In this case, MWRA is the sole owner and operator of its CWWTP. MWRA is the only applicant for draft NPDES permit no. MA0100404 and is the only signatory on the application. MWRA's CWWTP has one outfall (001) or point source which discharges pollutant(s) directly into the South Branch of the Nashua River – the sole outfall covered by draft NPDES permit no. MA0100404. The Town of Clinton and the Lancaster Sewer District discharge sanitary flows to the MWRA sewer system. MWRA's sewer system conveys the sanitary flows to the CWWTP, which is designed to treat those flows. The Town of Clinton and the Lancaster Sewer District do not discharge sanitary flows from point sources directly to the waters of the United States. Therefore, MWRA is the only entity required under the CWA to be permitted for discharges from the CWWTP outfall (001).

Response E2: The Region has not waived the application requirement relative to the POTW in its entirety (a facility or activity, or "point source" that is subject to regulation under the NPDES program") under 40 C.F.R. § 122.21, from which the combined effluent from the treatment works is discharged, only as to the operators of the satellite collection systems. The Region still required and received an application for the POTW discharge by the MWRA. Receiving a single application from the operator of a portion of the discharging POTW is a reasonable way to structure the permit application process, particularly in the case of a regionally integrated treatment works where there is a centralized administrative entity responsible for operating the POTW Treatment Plant and coordinating wastewater flows from the multiple satellite collection system operators. The Region has determined that "requiring a single permit application executed by the regional POTW treatment plant owner/operator will deliver 'substantially identical information'" to any application submitted by the Towns. Appendix A, at 27. Therefore, Region 1 decided to "waiv[e] NPDES permit application and signatory requirements applicable to the . . . municipal satellite collection systems." *Id.* See also Responses A1 and E6.

Comment E3: Municipal satellite sewage systems are not "treatment works."

EPA's rationale for requiring NPDES permits for municipal satellite sewage collections systems that discharge to a POTW is based primarily on its reliance on the following definition of "treatment works" in 33 U.S.C. §1292 of the Clean Water Act, which relates to grants for construction of treatment works.

(A) The term “treatment works” means any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature to implement section 1281 of this title, or necessary to recycle or reuse water at the most economical cost over the estimated life of the works, including intercepting sewers, outfall sewers, sewage collection systems, pumping, power, and other equipment, and their appurtenances; extensions, improvements, remodeling, additions, and alterations thereof; elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities; and any works, including site acquisition of the land that will be an integral part of the treatment process (including land used for the storage of treated wastewater in land treatment systems prior to land application) or is used for ultimate disposal of residues resulting from such treatment.

(B) In addition to the definition contained in subparagraph (A) of this paragraph, “treatment works” means any other method or system for preventing, abating, reducing, storing, treating, separating, or disposing of municipal waste, including storm water runoff, or industrial waste, including waste in combined storm water and sanitary sewer systems. Any application for construction grants which includes wholly or in part such methods or systems shall, in accordance with guidelines published by the Administrator pursuant to subparagraph (C) of this paragraph, contain adequate data and analysis demonstrating such proposal to be, over the life of such works, the most cost efficient alternative to comply with sections 1311 or 1312 of this title, or the requirements of section 1281 of this title.

Response E3: Here the MWRA relies on an overly restrictive interpretation of treatment works. It is immaterial that the co-permittees have no jurisdiction over the treatment plant; the treatment works “includes sewers, pipes and other conveyances . . . if they convey wastewater to a POTW Treatment Plant.” 40 C.F.R. § 403.3(q). As stated supra at Response E1, satellite collection systems are point sources and constitute a portion of the larger treatment works. Therefore, satellite communities meet the CWA’s definition of municipality because they have jurisdiction over a portion of the system for disposal of sewage. See also Appendix A at 12-13.

Region 1 retains the option to treat a POTW comprised of a treatment plant and municipal satellite collection systems as a single, integrated discharger and imposes protective permit conditions on the several operators of satellite collection facilities, as appropriate to assure compliance with the Act, including but not limited to the prevention or minimization of SSOs, as explained more fully in the legal analysis in Appendix A. The Region’s decision to condition the permit for the discharge in this manner falls within its authority under the Act and implementing regulations. See CWA §§ 402(a)(2) (“The Administrator shall prescribe conditions for such permits to assure compliance with the requirements of paragraph (1) of this subsection, including conditions on data and information collection, reporting, and such other requirements as he deems appropriate.”); 301(b)(1)(C) (requiring “any more stringent limitation, including those necessary to meet water quality standards . . . or required to implement any applicable water quality standard established pursuant to this Act”); 40 C.F.R. §§ 122.4(a) (no permit may be issued, “When the conditions of the permit do not provide for compliance with the applicable requirements of the CWA, or regulations promulgated under CWA”); 122.43 (“In addition to conditions required in all permits (122.41 and 122.42), the Director shall establish conditions, as required on a case by case basis, to provide for and assure compliance with all applicable

requirements of the CWA and regulations.”); 122.44(d)(5) (requiring inclusion of “any more stringent limitations...in accordance with section 301(b)(1)(C) of the Act.”)¹¹

Comment E4: EPA should not use the definition of treatment works found in the Construction Grants section of the CWA.

The purpose of the Grants for Construction Provision of Treatment Works or 33 U.S.C. §1281 is to require and assist the development and implementation of the waste treatment management plans (which include municipal sewage collection systems) and practices to achieve the goals of the Clean Water Act by making grants available to components related to wastewater. 33 U.S.C. §1281 gives EPA the general authority to make grants to state and local governments for the development and implementation of waste treatment management plans and practices to achieve the water quality goals of the CWA. The definition is purposely broad to make federal grants available for all components related to wastewater. This definition includes site acquisition of the land that will be an integral part of the treatment process (including land used for the storage of treated wastewater in land treatment systems prior to land application) or is used for ultimate disposal of residues resulting from such treatment. A reading of this definition in the context of the CWA and the Code of Federal Regulations clearly shows that the definition is for funding purposes and that it does not extend to issuing NPDES permits to municipal satellite sewage collections systems that do not discharge pollutants directly to the waters of the United States. Even if a court determines that this definition is relevant to what is included in a treatment works, EPA fails to make the case that municipal satellite sewage collection systems are direct dischargers that would require NPDES permits under the CWA.

Response E4: EPA’s reference to the definition of “sewage collection system” from the construction grants regulations for interpretative guidance is reasonable because these regulations at 40 C.F.R. Part 35, subpart E pertain to grants specifically for POTWs, the entity that is the subject of this NPDES policy. Additionally, the term “sewage collection systems” expressly appears in the definition of treatment works under section 212 of the Act.

Comment E5: Satellite sewer systems fit neither the definitions of indirect discharger nor direct discharger under the CWA.

In its supporting documentation, EPA also makes the argument that municipal satellite sewage collection systems do not fit within the definition of an “indirect discharger” under 40 C.F.R. 303.3(i), which applies to 33 U.S.C. §1317 of the CWA dealing with pretreatment program requirements. While this is true, it does not mean that because “indirect discharger” has a specific meaning under the CWA that municipal satellite sewage collection systems are therefore direct dischargers that require NPDES permits. 33 U.S.C. §1317 of the CWA directs EPA to promulgate pretreatment standards for pollutants that may interfere with, pass through, or otherwise be incompatible with POTWs to prevent the discharge of any pollutant through treatment works that require pretreatment as opposed to flows from municipal satellite sewage

¹¹ This approach is analogous to EPA practice with respect to stormwater permits where multiple entities are treated as co-permittees when operating different portions of a storm sewer system. *See* National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges, 55 Fed. Reg. 47,990, 48,044 (Nov. 16, 1990).

collection systems, which POTWs are designed to treat. Accordingly, the CWA distinguishes indirect sources requiring pretreatment from other indirect sources such as municipal satellite sewage collection systems.

Response E5: Satellite communities are “persons” who “discharge” within the meaning of the Act and implementing regulations because they own or operate portions of the POTW and add pollutants to the waters of the United States. As discussed above at Response A1, the satellite collection systems constitute portions of a point source (the POTW) that discharges to U.S. waters; this interpretation is consistent with the definitions of “point source,” “treatment works,” “POTW” and “discharge” in the CWA and its regulations.¹²

The comment misapprehends EPA’s statements regarding whether the Towns should be treated as indirect dischargers. As noted in the footnote, EPA disagrees with the contention that conveyances that lead to a “treatment plant” are excluded; the definition in 122.2 references conveyances that lead to a “treatment works”, not a treatment plant. Collection systems do not discharge through pipes that lead to a treatment works, they are part of the treatment works. Further, an indirect discharge is “the introduction of pollutants into a POTW from any *non-domestic* source” that is regulated by EPA’s pretreatment regulations. 40 C.F.R. § 403.3(i). Non-domestic discharges are regulated separately because “Congress recognized that the pollutants which some indirect dischargers release into POTWs could interfere with the operation of the POTWs.” *Environmental Protection Agency v. City of Green Forest*, 921 F.2d 1394, 1398 (8th Cir. 1990). Because of this, indirect dischargers are subject to separate pretreatment standards to avoid interfering with the operation of POTWs. See *Natural Resources Defense Council, Inc. v. Environmental Protection Agency*, 790 F.2d 289, 293 (Apr. 30, 1986). This exception cannot reasonably be construed to include the Towns because they discharge domestic sewage and would not be subject to the pretreatment program.

Comment E6: EPA may not unilaterally waive application requirements.

EPA’s rationale for waiving the application and signatory requirements in the federal regulations is equally flawed. While 40 C.F.R. 122.21(j), cited by EPA in support of its waiver, allows the director to waive any requirements where he or she has access to substantially identical information or where the requirement is not of material concern, it does not address the fact that neither the Town of Clinton nor the Lancaster Sewer District submitted any application or information whatsoever to EPA. EPA is bypassing the whole application process and unilaterally designating the Town of Clinton and the Lancaster Sewer District as permittees. Sections 33 U.S.C. §1341 and 1342 (j) of the CWA, clearly require an application for the issuance of a federal license to discharge into navigable waters. In this instance, Region 1 appears to be adapting its application requirements to support its flawed argument that municipal satellite sewage collections systems that do not discharge pollutants directly to the waters of the United States are required under the CWA to have NPDES permits to operate.

¹² The Towns plainly fall within the definition of “municipality,” as public bodies with jurisdiction over disposal of sewage and other wastes, and as such also fall within the express definition of “person,” under 40 C.F.R. § 122.2.

Response E6: See Response A1. “The goal of the application requirements is to provide the permit writer with the information necessary to develop appropriate NPDES permits consistent with requirements of the CWA.” See NPDES Application Requirements for POTWs and other TWTDSs, 64 Fed. Reg. at 42440. In this case, a timely re-application for an NPDES permit for the discharge from the POTW has been received, signed and certified by the operator of the POTW Treatment Plant. As the recipient of contributing discharges from outlying portions of the POTW for final, combined discharge into the receiving water as well as the primary coordinator of the member communities, the POTW is uniquely positioned to provide information regarding the wider treatment works. EPA has the necessary information relative to the POTW’s collection system and system-wide I/I from the MWRA-Clinton’s application, DMR data and MassDEP’s database of reported SSOs.

MWRA claims that Region 1 may only waive permit application requirements after receiving a waiver application from the permit applicant. EPA disagrees, as 40 C.F.R. § 122.22(j) states, “The director may waive any requirement of this paragraph if he or she has access to substantially identical information.” The phrase “any requirement of this paragraph” includes the requirement to submit a waiver application in the first place.

As a general matter, EPA does not foresee the need to require individual permit applications from each municipal satellite collection system operator, and anticipates that information in the POTW Treatment Plant operator’s permit application and other information in the administrative record will be sufficient to establish permit terms for the entire treatment works. As EPA moves forward with its practice of co-permitting, as appropriate, municipal satellite collection facilities, it will indicate whether it requires additional material from those entities operating the outlying portions of the treatment works to render the permit application “complete” under 40 C.F.R. § 124.3(c) after receiving and reviewing the re-application for the permit from the primary permittee, typically the operator of the POTW Treatment Plant.

Comment E7: EPA and the state already have the authority to regulate satellite systems. Currently, under the CWA, EPA has the authority to take enforcement action against satellite sewer collection systems that have sanitary sewer overflows to the waters of the United States because these overflows would be unpermitted discharges of pollutants to the waters of the United States. In addition, MADEP is in the process of promulgating regulations that would subject municipal satellite sewer collections systems to requirements similar to those set forth in the operation and maintenance section and the unauthorized discharge section of the draft permit. Although MADEP’s proposed regulations require proper operation and maintenance of municipal satellite sewage collections systems, they do not subject these systems to NPDES permits. Therefore, EPA and MADEP already have the ability to require municipal satellite sewage collections systems to properly operate and maintain their systems without having to create an approach that is unsupported by the CWA and Code of Federal Regulations.

Response E7: For reasons explained elsewhere, EPA disagrees with the premise that the co-permittee is inconsistent with the Act and implementing regulations. While EPA has the authority to enforce SSOs, it must first be aware of them. If satellite communities have no responsibilities under an NPDES permit, then it is less likely the communities will report SSOs

to the EPA¹³. Enforcement of excessive I/I in the absence of SSO reporting would be limited to enforcing against the permittee when the excessive I/I causes permit limit violations. EPA has determined that co-permitting is the most efficient and effective means for regulating excessive flows in municipal sewer systems. The fact that the State also has regulations concerning municipal satellite collection systems points to the seriousness of the problem; it does not obviate the need for federally enforceable requirements applicable to these portions of the POTW. The proposed Massachusetts regulations are also not conterminous with the requirements imposed under the federal permit. EPA does not see any drawback from comprehensively regulating these important components of the POTW at both the state and federal level given their potential impacts on water quality and human health.

Comment E8: EPA proposed regulation of co-permittees is excessive and burdensome to satellite systems.

Requiring NPDES permits for municipal satellite sewage collections systems that do not discharge pollutants directly to the waters of the United States will effectively require all municipal satellite sewage collections systems to have NPDES permits to operate even if they do not discharge pollutants from a point source directly to the waters of the United States. In other words, it would make it illegal for municipal satellite sewage collections systems to operate without a NPDES permit. In addition, it will subject communities responsible for satellite collection systems to extensive new requirements which could have a substantial financial burden on both the communities and the POTW while subjecting the POTW to permit violations solely because it is a co-permittee. This action by EPA is not authorized under the CWA or the Code of Federal Regulations and is a fundamental change to the NPDES permitting process which would require changes to both the CWA and the Code of Federal Regulations in accordance with the Administrative Procedures Act ("APA") at 5 U.S.C § 500 et. seq.

Accordingly, MWRA requests that the following provisions in the draft permit and the fact sheet be modified to strike out any reference to co-permittees.

Response E8: Please see Response A1. The addition of co-permittees does not make it illegal for municipal satellite sewage systems to operate. EPA makes the decision of whether to include co-permittees on NPDES permits on a case-by-case basis, based on the individual circumstances of the facilities and receiving waters, and structures the permit authorizing the discharge from the POTW to include municipal satellite collection systems when it finds it to be necessary to protect water quality and ensure proper operation and maintenance of the POTW. With respect to cost, the co-permittee requirements in the final permit are basic collection systems management practices, which many towns have implemented already. System inventories and mapping allow towns to maintain infrastructure in a way that minimizes cost, instead of reacting to system failures. Smaller towns with aging infrastructure such as Clinton, which has reported six (6) SSOs since 2010, are in dire need of asset management to prevent these costly emergencies going forward.

¹³ Case in point, six SSOs have occurred in the Town of Clinton since 2010. While the Town reported the SSOs to MassDEP, no report was made to EPA.

With regard to the APA, the EPA's co-permittee approach does not signify a binding change in EPA national policy and does not require comment on the national level. First, the co-permittee approach merely interprets existing legal authority; it neither changes nor purports to change EPA's power with respect to NPDES permitting. See Appendix A at 1 ("This interpretative statement provides an explanation to the public of *EPA Region 1's* interpretation of the Clean Water Act," (emphasis added)). Second, the co-permittee approach does not establish binding changes to EPA's permitting practice in the future, but explicitly provides that "Region 1's decision will be made by applying the law and regulations to the specific facts" and not by automatically regulating operators of satellite collection systems through the co-permittee system. Id. Third, the co-permittee approach is distinguishable from EPA's previous inquiries into permitting satellite collection facilities. In 2010, EPA inquired into whether it should "propose to require permit coverage for municipal satellite collection systems." National Pollutant Discharge Elimination System (NPDES) Permit Requirements for Municipal Sanitary Sewer Collection Systems, Municipal Satellite Collection Systems, Sanitary Sewer Overflows, and Peak Wet Weather Discharges From Publicly Owned Treatment Works Treatment Plants Serving Separate Sanitary Sewer Collection Systems, 75 Fed. Reg. 30,395, 30,401 (June 1, 2010). The co-permittee approach, however, makes no binding changes to national NPDES regulations. Finally, even if Region 1's legal analysis of its legal authority is of national significance, MWRA cites no authority for the proposition that this significance alone should subject Region 1's co-permittee approach to national commentary if such commentary is not required by the Administrative Procedure Act. See Response E41 for discussion of the APA.

Comment E9: Delete the strikethrough language on Page 1 of 15.

"The Town Clinton and the Lancaster Sewer District are co-permittees for Part D., Operation and Maintenance, which include conditions regarding the operation and maintenance of the collection systems owned and operated by the Towns; and Part E., Unauthorized Discharges. The responsible Town Departments are:

Town of Clinton
Department of Public Works
242 Church Street
Clinton, MA 01510

Lancaster Sewer District
P.O. Box 773
226 Main Street
South Lancaster, MA 01561

Response E9: EPA is designating the Town of Clinton and the Lancaster Sewer District as co-permittees in the final permit. Therefore, the co-permittees will not be removed from the final permit, and the other edits suggested in the comment have not been made in the final permit. See Responses A1 and A2.

Comment E10: Language for co-permittees

Add the bolded language on page 10 in the first sentence of Section D. 5. Collection System Operation and Maintenance Plan

The Permittee shall develop and implement a Collection System Operation and Maintenance Plan **for the portion of the collection system that it owns and operates.**

Response E10: The specific change requested in the comment was not made; however, the language in Part I.D. has been amended to clarify the obligations of the permittee and co-permittees. See Response A1.

Comment E11: Delete the strikethrough language and add the bolded language on page 11 in Section E. (Unauthorized Discharges).

The permittee ~~and co-permittees~~ **is** ~~are~~ authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfall 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 **discharges from any other point sources from the sewer system that it owns and operates** shall be reported in accordance with section D.1.e.(1) of the general Requirements of this permit (Twenty-four hour reporting).

Response E11: EPA is designating the Town of Clinton and the Lancaster Sewer District as co-permittees in the final permit. Therefore, the co-permittees will not be removed from the final permit, and the other edits suggested in the comment have not been made in the final permit. See Responses A1 and A2.

Comment E12: Delete the strikethrough language on Page 1 of 29 of fact sheet

The Town of Clinton and Lancaster are co-permittees for specific activities required by the permit. See Sections II a., b., and c. of this fact sheet and Sections I.D. and I.E. of the draft permit. The responsible municipal departments are:

Town of Clinton
Department of Public Works
242 Church Street
Clinton, MA 01510

Lancaster Sewer District
P.O. Box 773
226 Main Street
South Lancaster, MA 01561

Response E12: EPA is designating the Town of Clinton and the Lancaster Sewer District as co-permittees in the final permit. Therefore, the co-permittees will not be removed from the final permit, and the other edits suggested in the comment have not been made in the final permit. See Responses A1 and A2.

Comment E13: Revise pages 3 and 4 of 7

Delete references to co-permittees in paragraphs a. and b. in Section II. PERMIT BASIS AND EXPLANATION OF CHANGES.

Response E13: EPA is designating the Town of Clinton and the Lancaster Sewer District as co-permittees in the final permit. Therefore, the co-permittees will not be removed from the final permit, and the other edits suggested in the comment have not been made in the final permit. See Responses A1 and A2.

Comment E14: General Comments.

There are typographical errors and numbering inconsistencies in the draft and Attachment E. All references to co-permittees should be deleted. Specific comments are as follows:

Response E14: EPA is designating the Town of Clinton and the Lancaster Sewer District as co-permittees in the final permit. Therefore, the co-permittees will not be removed from the final permit, and the other edits suggested in the comment have not been made in the final permit. See Responses A1 and A2. Also, Attachment E has been removed from the final permit. See Response D9.

Comment E20: Part I.E Unauthorized Discharges. (Page 11 of 15):

Only the discharge from the treatment plant, through outfall 001, is subject to the conditions in Part I.A.1. Delete the strikethrough language and add the bolded language as follows:

“The permittee ~~and co-permittee are~~ is authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfall listed in Par I.A.1 of this Permit. Discharges...including sanitary sewer overflows (SSOs) are not authorized by this permit and shall be reported in accordance with Section D.1.e (1) of ~~the General Requirements of Permit.~~ **Part II Standard Conditions of the Permit.**”

Response E20: EPA is designating the Town of Clinton and the Lancaster Sewer District as co-permittees in the final permit. Therefore, the co-permittees will not be removed from the final permit, and the other edits suggested in the comment have not been made in the final permit. See Responses A1 and A2.

Comment E31: Co-permittee deletions

All references to co-permittees should be deleted.

Response E31: EPA is designating the Town of Clinton and the Lancaster Sewer District as co-permittees in the final permit. Therefore, the co-permittees will not be removed from the final permit, and the other edits suggested in the comment have not been made in the final permit. See Responses A1 and A2.

Comment E41: (from 2nd MWRA comment letter): Including satellite communities as co-permittees is a legislative rule that must go through public comment.

Permitting of satellite communities is a legislative rule subject to public notice and comment.

The Massachusetts Water Resources Authority (“MWRA”) respectfully submits this Supplemental Comment on EPA’s Draft NPDES Permit No. MA0100404 (“draft permit”) for the Clinton Wastewater Treatment Plant. In its previous comments, MWRA expressed its opposition to the Environmental Protection Agency’s (“EPA”) proposed inclusion of the Town of Clinton and the Lancaster Sewer District as co-permittees in the permit and the inclusion of provisions therein which impose substantive obligations subject to enforcement by EPA. In its previous letter, MWRA noted that the issuance of the permit to satellite municipal collection systems that do not discharge directly to the waters of the United States is not authorized by the Clean Water Act, 33 U.S.C. § 1251 et seq., or by any applicable regulations in the Code of Federal Regulations. MWRA is today supplementing its comment to add that, EPA’s inclusion of co-permittees is also improper because EPA has adopted this new legislative rule without notice and opportunity for comment, in violation of mandatory provisions of the Administrative Procedure Act (“APA”), 5 U.S.C. § 500 et seq., which require such steps.

Narrow exceptions to the applicability of the otherwise mandatory notice and comment provisions of the APA, most notably found in § 553, are inapplicable here. For example, the APA procedures may be dispensed with if “good cause” exists, and the agency incorporates in its rule-making both that good cause finding and a brief statement why compliance would be “impracticable, unnecessary, or contrary to the public interest.” *Kollett v. Harris*, 619 F.2d 134, 144 (1st Cir. 1980), quoting 5 U.S.C. § 553(d). Here, EPA has done nothing to indicate its reliance upon any exception to the applicability of the APA’s provisions. Likewise, EPA cannot argue that it is exempt in this instance from the APA provisions due to its rule-making being “interpretive” rather than “legislative.” The Appendix A statement annexed to the draft permit creates: (i) a host of new legal requirements for municipal collection systems, (ii) enforcement avenues for EPA, and (iii) potential liabilities for the co-permittees. As such, it is clearly a “legislative” and not an “interpretive” rule and compliance with APA § 553 is mandatory. *Levesque v. Block*, 723 F.2d 175, 182 (1st Cir. 1983).

The Eighth Circuit Court of Appeals ruled recently that EPA cannot adopt binding “legislative rules” without going through the notice and comment procedures required by the APA. *Iowa League of Cities v. EPA*, 711 F.3d 844 (8th Cir. 2013). The Eighth Circuit decision, from which EPA has taken no appeal, ruled that “[w]hether or not a binding pronouncement is in effect a legislative rule that should have been subject to notice and comment procedures thus depends on whether it substantively amends or adds to, versus simply interpreting the contours of, a preexisting rule.” (*Id.*, 711 F.3d at 873). EPA’s proposed policy of including co-permittees, as set forth as a “permitting approach” in EPA’s “Appendix A” attached to the draft permit, imposes binding obligations upon the parties named as co-permittees, by requiring those parties to be subject to permit conditions. By imposing binding requirements on the co-permittees, the policy goes well beyond a merely interpretive function. EPA should therefore withdraw Appendix A, and delete all references to the “co-permittees” in the draft permit. EPA lacks the authority to implement the policy set forth in Appendix A unless it has duly promulgated that policy in accordance with the APA.

Response E41: See Response A1. The decision of whether to include co-permittees in any given NPDES permit is adjudicated on a case-by-case basis considering the facts and circumstances surrounding the discharge and receiving waters. Therefore, it is not subject to the “notice and comment” requirements of the APA. See Appendix A at 1. EPA’s co-permittee approach does not make it illegal for municipal satellite systems not listed as co-permittees to operate; rather, to the extent that such systems are added on to the NPDES permit for the discharge, they must comply with it. In sum, the practice of including municipal satellite collection system owners/operators as co-permittees on the NPDES permit issued to the POTW Treatment Plant is simply one way that a permit can be framed to assure compliance with the Act. The legal analysis in Appendix A merely outlines the legal and technical bases for this approach, which the Region undertakes at its discretion on a case-by-case basis, and does not mandate either Region 1 (or other Regions) to follow it. The issue of whether the legal analysis in Appendix A and Region’s co-permittee approach is a legislative rule has been comprehensively addressed by the EAB in the CRPCD Decision, which is described above.

Comment G2: Opposition to Co-permittees

In regard to specifics, the MWRA Advisory Board opposes EPA's proposed inclusion of the Town of Clinton and the Lancaster Sewer District as co-permittees in the draft NPDES permit and further opposes EPA implementation of a new requirement that municipal satellite Sewer collection systems that do not discharge directly to the waters of the United States obtain NPDES permits.

The Advisory Board strongly believes that EPA has overstepped its authority under the Clean Water Act, 33 U.S.C. § 1251.

EPA's desire to change the Federal Clean Water Act can only be legally accomplished through statute change, vetted and passed through Congress, which allows for a public process, and not through isolated policy changes in NPDES permits.

Response G2: Please see Response E41.

Comment G3: EPA misdefines the term "treatment works."

EPA conveniently relies on a definition of "treatment works" that relates to grants for construction of treatment works as its basis for requiring NPDES permits for municipal satellite Sewer collection systems.

The irony of this is not lost on the Advisory Board, considering the federal government has long abandoned its funding responsibility under the Clean Water Act and has squarely placed it on the backs of states and local communities.

Response G3: Please Responses A1 and E3.

Comment G4: EPA is pushing MWRA into active management of satellite sewer systems.

In addition, in the accompanying fact sheet, EPA lays out revisions to the operation and maintenance of a sewer system, which creates significant layers of reporting, mapping and financial responsibilities on the towns with deliverables starting within the first six months of the permit.

The Advisory Board believes that EPA's game plan to use the MWRA permit to gain access to communities will ultimately lead to EPA pushing the MWRA into the active management of local systems, which the Authority has neither the legal responsibility, nor the financial resources, to accomplish.

The Advisory Board has long voiced concern that MWRA cannot be a regulator against its communities, which is what no doubt will occur if communities are made co-permittees

Response G4: As described in Section II.B. Operation and Maintenance of the Sewer System of the fact sheet, each of the co-permittees is responsible for their portion of the collection system for activities required in Part I.D., Operation and Maintenance of the Sewer System, and Part I.E., Unauthorized Discharges in the permit. Specifically, Part I.D. of the permit places responsibility for the operation and maintenance of each Town's section of the collection system on the Town that owns and operates it. Each Town is expected to maintain their portion of the

collection system to prevent overflows. If an overflow does occur, the permit establishes that it is the respective Town's responsibility to address it. Part I.E. of the final permit requires each co-permittee to notify EPA and MassDEP of any discharge of wastewater from a point source (including sanitary sewer overflows (SSOs)) from any portion of the wastewater collection system they own and operate which are not authorized by the permit in accordance with Part II. Section D.1.e.1 (Standard Conditions – 24 - hour reporting).¹⁴

Inclusion of the Town of Clinton and the Lancaster Sewer District as co-permittees does not impose any responsibility upon the MWRA for the implementation of the terms and conditions required by the permit that extend beyond the scope of the MWRA's ownership or operational authority. In other words, EPA has not assigned any responsibility to MWRA for portions of the treatment works that are either owned and/or operated by another entity (i.e., the municipalities). Although the language on the face of the permit appears reasonably clear that it is the co-permittees rather than the MWRA who are subject to the subset of conditions of the permit described above relative to the portions of the sewer system that they own/operate, EPA hereby clarifies this interpretation of the permit for future purposes.

The intent of the co-permittee structure is not to increase MWRA's role in operating portions of the wider POTW or to force it into being a regulator of the communities. The co-permittee provisions would in EPA's view have the opposite effect, imposing CWA-based responsibilities on the communities themselves for the portions of the system that they operate. EPA recognizes that portions of the wastewater collection system that are used to transport wastewater to a POTW from surrounding communities may not be owned/operated by the MWRA. In EPA's view, the lack of jurisdiction by the operator of the treatment plant over outlying portions of the POTW supports the approach taken by the Region here, which is to impose a limited set of conditions, notably with respect to operation and maintenance, on those municipalities that do own and/or operate portions the POTW beyond the jurisdiction of the MWRA, and that do have the necessary operational experience, access and control to address, expeditiously and efficiently, impacts adversely affecting collection system performance, and ultimately affecting the quality of the final effluent discharge. EPA believes that structuring the permit to include conditions on owners/operator of all portions of the POTW is appropriate in this case to ensure proper operation and maintenance of the entire treatment works (not just a portion of it) and, consequently, to assure compliance with the Act, including through the prevention and minimization of SSOs. See CWA §§ 402(a)(2) and 301(b)(1)(C); 40 C.F.R. §§ 122.4(a) and (d); 122.41(e); 122.43; and 122.44(d) (identifying broad authority to condition a permit in order to carry out the objectives of the Act).

¹⁴ As this information will also be available for review by MWRA upon request, co-permitting municipalities that own/operate portions of the collection system will provide MWRA with greater information regarding satellite collection systems than it might otherwise have. This information will assist MWRA in assessing impacts that the collections systems are having on the portion of the POTW that MWRA operates, including interceptor sewers and the POTW Treatment Plant.

Comment G5: Regulating satellite communities will damage the relationship between those communities and MWRA.

MWRA's success to date, as well as in the future, is contingent on MWRA working in partnership with its communities. Placing communities as co-permittees will ultimately hinder the Authority's ability to work cooperatively with the communities.

For these reasons, the MWRA Advisory Board requests that any and all references to co-permittees be stricken from the draft permit and fact sheets.

Response G5: The comment seems to indicate a misunderstanding of the co-permittee requirements. By designating satellite communities as co-permittees, EPA is regulating operations and maintenance of the collection systems directly. In turn, this arrangement will lead to fewer treatment disruptions due to wet weather flows and fewer unauthorized discharges to waters of the U.S. EPA fails to see why this would "hinder" the cooperative relationship between the MWRA and its satellite communities.

Comment H1: Opposition to including co-permittees.

The Massachusetts Coalition for Water Resources Stewardship (MCWRS) is pleased to submit the following comments on the revised Draft NPDES Permit for the Clinton Wastewater Treatment Plant (WWTP) in Clinton, MA. MCWRS is a non-profit organization dedicated to the application of sound science, cost consideration and best use of fiscal resources in water resource management regulation. Aspects of the Clinton WWTP NPDES permit will have far-reaching impacts on our member communities and systems and municipalities throughout New England. We are thus compelled to offer these comments in hopes that EPA Region 1 and MassDEP will reconsider their approach.

The singular item of concern in the Clinton WWTP permit is the co-permittee issue. This permit proposes to make the towns of Clinton and Lancaster co-permittees. It includes expansive language on requirements for collection system mapping, operation and maintenance that apply to the co-permittees. The permit will thus increase costs for residential and business rate-payers first, by levying new, unfunded treatment mandates on the WWTP and second, by imposing new collection system unfunded mandates upon the communities that send wastewater to the WWTP. MCWRS believes the latter is beyond the authority of EPA Region 1 and should be stricken from the permit.

Response H1: EPA interprets the reference to "unfunded mandates" as a reference to the requirements of the Unfunded Mandate Reform Act of 1995 (UMRA). The UMRA, however, is inapplicable to this permitting action. The UMRA applies to rulemaking, and not individual NPDES permit decisions. For example, in *In re City of Blackfoot Wastewater Treatment Facility*, NPDES Appeal No. 00-32 (EAB September 17, 2001), the Environmental Appeals Board denied a petition for review of compliance with UMRA on grounds that UMRA applies only to regulations, not to individual NPDES permits, which are more akin to licenses than a regulation.

Comment H2: Satellite communities do not discharge pollutants.

The NPDES program under the Clean Water Act (CWA) is intended to regulate the discharge of pollutants to waters of the United States. Clearly, a WWTP discharges pollutants to receiving waters and is subject to a NPDES permit. A so-called satellite system that conveys wastewater to a permitted WWTP is not discharging pollutants to receiving waters except via combined sewer overflows (CSOs) or sanitary sewer overflows (SSOs). If CSOs are present, then that community would have its own NPDES permit for the CSO. NPDES permits do not allow SSOs, thus those inadvertent discharges to receiving waters are prohibited and not subject to a NPDES permit. Wastewater conveyed to a permitted entity (WWTP) is covered by the WWTP NPDES permit which dictates water quality compliance terms. To now regulate that same discharge via a co-permittee approach is, in essence, regulatory “double-dipping.” It is unnecessary and beyond a reasonable application of the law.

Response H2: Satellite communities are “persons” who “discharge” within the meaning of the Act and implementing regulations because they own or operate portions of the POTW and add pollutants to the waters of the United States. As discussed *supra* at Responses A1, E3, and E5, the satellite collection systems constitute portions of a point source (the POTW) that discharges to U.S. waters; this interpretation is consistent with the definitions of “point source,” “treatment works,” “POTW” and “discharge” in the CWA and its regulations.¹⁵ MCWRS argues that they merely “provide a conveyance for waste waters for treatment and discharge by another person from its point source.” According to this argument, only the POTW treatment plant, and no other portions of the integrated treatment works, discharges pollutants from a point source. However, this claim relies on an overly narrow definition of point source that would exclude large portions of the POTW without any principled basis, as well as an overly restrictive definition of discharge. The satellite communities’ collection and “conveyance” via connecting pipes and sewers of “waste waters” from one portion of the treatment works (the collection system) to another (the POTW treatment plant) before its ultimate discharge into the receiving water is an addition of a pollutant or combination of pollutants to water of the US from a point source. *See* 40 C.F.R. § 122.2 (defining “Discharge” and “Discharge of a pollutant”); *Id.* at 403.3(r) (defining the POTW treatment plant as a subset of the POTW).

Comment H3: EPA’s argument relies on its own documents, not any external authority.

It is clear from the permit, fact sheet and appended document “EPA Region 1 NPDES Permitting Approach for Publicly Owned Treatment Works That Include Municipal Satellite Sewage Collection Systems” that EPA Region 1 is confusing its desire to regulate collection systems with its authority to do so. EPA Region 1 uses a circuitous reasoning to arrive at its conclusion that it can and must take this approach. The explanation behind this understanding is void of any unambiguous statutory language or case law, but is instead totally dependent on other EPA-crafted documents for support. In essence, EPA Region 1 is saying that it can take the co-permittee approach because it has written other documents that state that it can.

¹⁵ The Towns plainly fall within the definition of “municipality,” as public bodies with jurisdiction over disposal of sewage and other wastes, and as such also fall within the express definition of “person,” under 40 C.F.R. § 122.2.

Response H3: The co-permittee approach outlined in Appendix A of this RTC is based on the Clean Water Act, implementing regulations and case law. As discussed in Response A1, the EAB upheld EPA's co-permittee approach in its February 2015 decision *In re: Charles River Pollution Control District*.

Comment H4: Assistance would be preferred over regulation.

There is a conundrum relative to collection systems and WWTPs. Most regional WWTPs are not regulatory agencies and do not have the ability to control their members in a regulatory sense. Thus addressing collection system issues is generally not within the purview of the WWTP. However, that does not open the door for EPA or states to step up and assume that role of collection system regulator. Until there is a clear statutory mandate and authority for the federal government to take such a step, controlling collection systems via WWTP NPDES permits is unacceptable. That, however, does not mean the matter is without solution. Most communities and WWTPs desire to do the right thing and are attempting to tackle collection system problems while also dealing with costly WWTP upgrades, CSO issues and stormwater matters. MCWRS encourages EPA Region 1 and MassDEP to develop a "carrot" rather than a "stick" approach to collection system operations and maintenance. We believe a comprehensive plan of assistance, education and support for collection system management would go a lot further toward meeting CWA goals than does the heavy handed, permit and enforcement approach. MCWRS would be pleased to work with both agencies in development of this approach.

We appreciate the opportunity to submit comments. Please do not hesitate to contact me if you have questions or would like to discuss this matter and opportunities to work together on an approach that is reasonable and sustainable for communities and utilities.

Response H4: Please see Response E1. EPA believes the co-permittee approach can provide a vehicle for the type of engagement with the member communities on wastewater and extraneous flows sought by the commenter. EPA has and will continue to put extensive resources into assistance, education, and financial support for communities to comply with these requirements and believes that this is important function in conjunction with implementing regulatory requirements.

Comment I1: Co-permittees

The following are the Nashua River Watershed Association's (NRWA) comments on the Partially Revised Draft NPDES permit for the Clinton Wastewater Treatment Facility. NRWA submitted comments on the original draft permit in 2010 and on the partially revised draft permit on October 17, 2013, before it was announced that an extension of the comment period would be granted. Please replace the letter of October 17th with this comment letter that supplies more detail.

The NRWA's goal for the Nashua River is to protect water quality for a variety of uses, including wildlife, fish and recreation. The South Nashua River joins the North Nashua to form the mainstem Nashua River, just a couple miles downstream of the Clinton WWTP.

The South and Mainstem Nashua Rivers are important recreational resources for local communities; the continued enjoyment of these rivers and the survivability of aquatic life and wildlife depend on ongoing improvements in water quality.

With this in mind we submit the following comments:

NRWA agrees with listing both the Clinton and Lancaster Sewer Districts as co-permittees, with the MWRA as lead permittee.

The financial arrangement between MWRA and the Town of Clinton does not encourage elimination of I/I.

NRWA agrees with listing both the Clinton and Lancaster Sewer Districts as co-permittees.

However, the NRWA believes that each entity should be held responsible and liable only for that part of the system that is under their control. That is, Clinton and Lancaster each should be held responsible for their own sanitary sewer collection systems in their respective towns, and MWRA should be responsible for their one mile of sewer line and the operations at the WWTP itself. Any fines for non-compliance should be the sole responsibility of the entity responsible for the infraction.

NRWA recognizes that the situation in Clinton is unique. The MWRA provides sewage treatment to the Town of Clinton at no cost to the town. MWRA cannot recoup the cost of treatment by charging for the volume of flow, and thus has no leverage to require that Clinton reduce its infiltration and inflow (I/I), although it is I/I from Clinton that has resulted in the plant exceeding its permitted flow rate 80% of the time in the last 3 years.

The MWRA offers other communities in its Deer Island plant service area financial incentives and assistance to reduce I/I. No financial opportunities are available to Clinton, and there is no incentive for Clinton to seek out opportunities, as all flow they send to the plant is treated free of charge. Likewise, the MWRA has no incentive to offer I/I assistance to Clinton, as it receives no revenue from Clinton.

NRWA is disappointed with the slow rate of progress in I/I reduction since Clinton's 1985 Consent Decree, and questions if an agreement between MWRA and the Town can be reached that will result in reduced I/I. For instance, if Clinton is charged for excess flow, the MWRA in turn could provide commensurate financial or technical assistance to the town to reduce I/I. The result would be a cost savings to the MWRA, as higher volumes at the treatment plant require more energy to process, increasing energy needs and carbon footprint. Such an agreement may have to proceed legislatively, as it may not be enforceable by the DEP or EPA.

Response I1: Thank you for the comment. EPA agrees that the current financial arrangement between the MWRA and the Town of Clinton does not promote I/I reduction. However, financial arrangements between permittees are outside of the scope of this permit.

EPA appreciates your support for the co-permittee provisions and confirms that co-permittees will be responsible only for their own collection system. See Responses A1 and G4.

Comment J1: The Region may not change its position

The Upper Blackstone Water Pollution Abatement District (the “District”) hereby comments on the co-permittee provisions of the draft National Pollution Discharge Elimination System (“NPDES”) Permit No. MA0100404 issued on September 18, 2013 to the Massachusetts Water Resource Authority (“MWRA”) for discharges from the Clinton Wastewater Treatment Plant (“CWTP”). The draft permit names the Town of Clinton and the Lancaster Sewer District (“Town” and “District”) as co-permittees “for Part D., Operation and Maintenance, which include conditions regarding the operation and maintenance of the collection systems owned and operated by the Towns; and Part E., Unauthorized Discharges.”

The District was a party to, and challenged similar co-permittee provisions in its NPDES permit, in the matter of Upper Blackstone Water Pollution Abatement District, NPDES Appeal Nos. 08-11 to 08-18 & 09-04, 14 E.A.D. __ (Order denying review in part and remanding in part, EAB, May 28, 2010 (“Upper Blackstone EAB Remand Order”) in which the U.S. EPA Environmental Appeals Board (“EAB”) remanded to Region 1 permit provisions that sought to regulate sewer lines owned, operated and maintained by separate municipalities as “co-permittees.” In the Upper Blackstone EAB Remand Order, the EAB found that “[t]he Region has not sufficiently articulated in the record of this proceeding a rule-of-decision, or interpretation, identifying the statutory and regulatory basis for expanding the scope of NPDES authority beyond the treatment plant owner and operator to separately owned and operated collections systems that discharge to the treatment plant.”

Remand Order, at 18.

In the draft permit issued to MWRA, the Region again fails to identify a legal basis for its position that it has authority to regulate the Town and District as co-permittees. While the draft MWRA permit fact sheet and document entitled Analysis Supporting EPA Region 1 NPDES Permitting Approach for Publicly Owned Treatment Works that include Municipal Satellite Sewage Collection Systems [“Region 1’s Analysis”, included in this RTC at Appendix A] seeks to respond to questions raised by the EAB in the Remand Order concerning EPA’s legal authority to regulate separately owned municipal collection systems, the Region simply sets forth a series of old and new arguments to justify the regulatory position it previously staked out: that satellite systems can be included in a POTW permit. At footnote 10 of Region 1’s Analysis, the Region acknowledges that its “position differs from that taken by the Region in the Upper Blackstone litigation. There, the Region argues that the treatment plant was the sole discharging entity for regulatory purposes.” Now, according to the Region, it “has revised this view upon further consideration of the statute, regulations and case law and determined that a the POTW as a whole is the discharging entity.”

The Region’s position is different from the one the Region staked out on its authority to permit co-permittees just a few months earlier in draft NPDES permits issued for public comment. See e.g. Draft Permit No. MA0102598, issued August 29, 2012 to the Charles River Pollution Control District (CRPCD); Draft Permit No. MA0100897, issued on March 20, 2013 to the City of Taunton; Draft Permit No. MA0100501 issued on September 24, 2013 to the South Essex Sewer District. In connection with those draft permits, the Region issued and relied upon an “Analysis” with the same title in which it said the Region “clarified [its] view” and “determined

that a municipal satellite collection system in a POTW is a discharging entity for regulatory purposes.” (“Region 1’s Original Analysis”) Now the Region has yet another position: that scope of NPDES authority extends beyond the owners/operators of the treatment plant to include the owners/operators of portions of “the wider POTW.” The Region, however, gives no better explanation in its third try.

The Region’s explanation for its changing positions is insufficient and contrary to law. “[A]n agency changing its course must supply a reasoned analysis.” *Motor Vehicle Manufacturers Association v. State Farm Mutual Automobile Insurance Co.*, 463 U.S. 29, 57 (1983). The Region must “explain the evidence which is available” supporting that change and “must offer a ‘rationale connection between the facts found and the choice made.’” *Id.* 52. The Region does not, and cannot, identify new evidence or facts. The discharge point, at Outfall 001 at CWTP, and at other facilities it seeks to impose co-permittee requirements, has not changed. There have been no changes to the owners or operators of the POTW and satellite collection systems.

In sum, the fact sheet and the Region 1’s Analysis fail to demonstrate that EPA has legal authority under the Clean Water Act (“CWA”) or any NPDES regulation or sound factual basis to include the Town or District as “co-permittees” to a NPDES permit. The Region has no authority to regulate separately owned and operated municipal satellite collection systems that do not discharge from point sources to waters of the United States, that do not own or operate any point source, and that have not applied for any NPDES permit. For the reasons set forth in this letter, EPA should strike the co-permittee provisions from the draft MWRA permit.

In Section III, Legal Authority, of its Analysis, EPA seeks to justify the imposition of co-permittee requirements upon the Town or District based upon the definition of “publicly owned treatment works” or “POTW.” Citing to the broad definition of “POTW” which includes the term “sewage collection systems,” EPA contends that a POTW includes not only the treatment works, owned and operated by MWRA, but also the sewers, pipes, equipment, and other systems owned, operated and maintained by the Town or District. Based on the definition of POTW at 40 CFR 122.2, EPA concludes,

... municipal satellite collection systems are part of a POTW by definition (i.e. they are “sewerage collection systems” under section 212 (A) and “sanitary sources under section 212 (B)). There are also conveyances that send wastewater to a POTW treatment plant for treatment under 40 C.F.R. § 403.3(q).

Analysis, p. 10.

Under this approach, the POTW in its entirety is subject to NPDES regulation as a point source discharger under the Act.

Attachment 1 [Appendix A to this RTC], p. 2.

Response J1: Please see Response A1. The legal analysis in Appendix A to this RTC, which is the Region’s clarification of the legal basis for its permitting practice, is in response to the remand order of the EAB. *See* Upper Blackstone Remand Order at 18-20. Furthermore, any

changes in the Region's position are only changes to the legal basis for its action, not a change to the action itself. *Motor Vehicle Manufacturers Association* deals with multiple changes to agency regulations instead of merely clarifications of the legal basis for action; therefore, the case is inapplicable here. 463 U.S. at 37-38.

It is not clear why the commenter considers the EAB's rejection of one of the Region's previous arguments as an "insufficient" basis for EPA to reconsider and clarify the legal basis for its policy. In light of the EAB's remand, the Region reexamined its policy and performed a thorough and reasoned analysis of the legal and policy basis for its determination that co-permitting is an appropriate and necessary approach to the issues raised by satellite collection systems. That legal analysis has been documented in the 16-page explanation with supporting exhibits that is included as Appendix A to this RTC and was included as Attachment 1 to the Revised Fact Sheet.

EPA agrees that the facts have remained the same, and that indeed that is why its determination that satellite collection systems should be regulated as co-permittees has also remained the same. EPA has simply proffered an alternative legal theory in light of the EAB remand. This is not an agency "changing its course" as suggested in the comment, but a revised legal analysis. That legal analysis demonstrates that EPA has legal authority to include the Towns as "co-permittees." This policy regarding Region 1's permitting practice is not a legislative rule and did not require formal notice and comment. There is no change in substantive law or policy. Since it started imposing specific collection system requirements EPA has consistently expressed its view that satellite collection systems were in the scope of NPDES jurisdiction and that permit coverage could be required. EPA's national rulemaking starts from the same premise, asking whether EPA should, in all NPDES programs delegated or otherwise, *require* permit coverage for satellite systems. This question clearly assumes that such coverage is within the scope of the CWA's NPDES program. The salient point was not that there was a change in the definition of discharge or the scope of EPA's authority, but that EPA would have required that all permitting authorities exercise their authority in this specific way.

Comment J2: Satellite communities do not discharge from a point source

Missing from Region 1's Analysis is any acknowledgement of or reference to the operative terms of the CWA that trigger NPDES permitting: "discharge of any pollutant by any person" from a point source. CWA § 301(a). It is the act of discharging a pollutant from a point source that gives rise to NPDES permitting. The ownership of a collection system, as part of a greater POTW, does not require a NPDES permit under the CWA. The Town and District's collection systems have no point source. The Town and District do not own, operate or control any point source. Instead, the Town and District send waste water to a separately owned treatment plant for treatment and discharge at a point source. MWRA, not the Town or District, is a person who discharges from a point source. Consequently, the reach of EPA's authority to regulate "dischargers" is limited to MWRA.

The CWA at Section 301(a) provides that "except in compliance [with a NPDES Permit] the discharge of any pollutant by any person shall be unlawful." The term "discharge of a pollutant" means "any addition of any pollutant to navigable waters from any point source." CWA § 502(12). The CWA authorizes EPA to "issue a permit for the discharge of any pollutant." CWA

§ 402(a)(1). Thus, under the CWA it is only those persons who discharge a pollutant from any point source to navigable waters who are subject to NPDES permitting requirements. CWA § 502(14) (defining point source as “any discernable, confined and discreet conveyance . . . from which pollutants are . . . discharged”).

Region 1 incorrectly states that the “NPDES regulations . . . identify the “POTW” as the entity subject to regulation,” citing to 40 C.F.R. § 122.21(a). Analysis, p. 8. The “entity” subject to regulation is the “person who discharges or proposes to discharge.” 40 C.F.R. § 122.21(a)(1). Such persons are required make application for a permit and “[a]pplicants for new or existing POTWs must submit information required” by 40 C.F.R. § 122.21(j), using Form 2A. 40 C.F.R. § 122.21(a)(2)(B).

The Region say that it addresses the questions posed by the EAB in the Upper Blackstone EAB Remand Order. But in Region 1’s Analysis, it seeks to recast the questions that EAB asked. The Region has changed the question from:

In the case of a regionally integrated POTW composed of municipal satellite collection systems owned by different entities and a treatment plant owned by another, is the scope of the NPDES authority limited to owners or operators of the municipal satellite collection systems that convey wastewater to the POTW treatment plant? (Region 1’s Original Analysis, p. 8)

to

Is the scope of NPDES authority limited to owners/operators of the treatment plant, or does the authority extend to owners/operators of municipal satellite collection systems that comprise of the wider POTW? (Region 1’s Analysis, p. 8))

Region 1’s new question assumes the answer: that “the wider POTW” – a new term created by the Region – includes satellite collection systems that convey wastewater to a treatment plan. That, however, is not the question the EAB asked.

EAB’s direction to the Region was to consider “the extent to which the NPDES requirements applied to collection systems that discharge to the treatment plan that are owned by entities other than the District.” Upper Blackstone EAB Remand Order, p. 19 (emphasis supplied). The Region ignores the fact that there are separate owners and operators and says conclusively that “NPDES authority extends beyond the owners and operators of the treatment plant to include owners and operators of portions of the wider POTW.” The Region goes on to state “The entire POTW is the entity that discharges pollutants to waters of the U.S. through point source outfalls typically located at the treatment plant, but also occasionally through other outfalls within the overall system.” Region 1’s Analysis, p. 8. But neither the Town nor the District are the entity that discharges pollutants to the waters of the U.S. through point source outfalls.

According to the permit, at Part I. A.1., “the permittee [i.e. MWRA] is authorized to discharge from outfall serial number 001, treated effluent to the South Branch of the Nashua River.” The Town and District do not own or operate outfall 001.

The Town and District are not persons who discharge from a point source. The Town and District do not “discharge a pollutant” as the term is defined under CWA. No doubt, the Town and District “discharge” – as that term commonly used – wastewater via conveyance systems to a point source. The CWA, however, is specific: persons who discharge pollutants from a point source need a NPDES permit to do so. The Town and District have no “direct discharge.” See 40 CFR 122.2 (defining “direct discharge” to mean “discharge of a pollutant”).

Toward explaining how the Region may “draw a predictable and readily ascertainable boundary between the POTW collection system and the user,” the Region describes satellite collection systems as “a common carrier of wastewater for others to a POTW treatment plant for treatment”. Region 1’s Analysis, p.10. The Region’s analysis is flawed. It relies upon the definition of “sewerage collections systems” at 40 C.F.R. § 35.905, which is applicable to only to grants to assist in the construction of wastewater treatment works. This definition is necessarily broad to make federal grants applicable for all components related to wastewater. The plain reading of this definition in the context of the Act demonstrates it relates solely to funding and does not extend to NPDES permitting.

EPA seeks to conflate the term “discharge” used in “discharge of a pollutant” with the “transfer of flow” or “conveyance” from a municipal conveyance system to the POTW treatment plant or works that has a point source “from which pollutants are discharged.” The word “discharge” is a defined term: “when used without qualification [it] means the “discharge of a pollutant.” 40 CFR 122.2. There is no “discharge” from a municipal conveyance system. And in this case, there is but one discharge point from a POTW. See draft permit Part I. A. 1. It is that point source “from which pollutants are discharged” that triggers NPDES permitting, and only those persons who own or operate that point source are subject to such permitting. That point source is not owned by the Town and District. In short, the jurisdictional reach under the CWA does not include persons, such as the Town and District that own, operate and maintain sewer lines, that provide a conveyance for waste waters for treatment and discharge by another person from its point source.

The Region’s rationale for seeking to impose co-permittee requirements upon the Town and District is not consistent with the references to “municipality” in the definition of POTW found at 40 C.F.R. § 403.3(q), and the definition’s statement that “[t]he term also means the municipality . . . which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.” The final sentence of the regulatory definition of POTW in the pretreatment regulations at 40 C.F.R. § 403.3(q), refers to municipalities that have “jurisdiction over . . . the discharges from such a treatment works.” The term “municipality” as defined in CWA § 502(4) “means a city, town, borough, county, parish, district, association, or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes....” (emphasis supplied). The Town and District have jurisdiction over only their collection systems. They have no jurisdiction over the treatment plant or point source of discharge. Thus, the Region’s view that a satellite collection system is part of a POTW is inconsistent with the final sentence of the regulatory definition of POTW in the pretreatment regulations. That that sentence provides that “POTW” may “also” mean a municipality has no bearing on this limitation.

Response J2: Please see Responses E3 and E5.

Comment J3: Application requirements

The absence of EPA authority to make the Town and District co-permittees is borne out by the permitting process and EPA's regulations at 40 CFR § 122.21, Subpart B, Permit Application Requirements. 40 CFR § 122.21(a), entitled "Duty to Apply," provides that "[a]ny person who discharges or proposes to discharge pollutants . . . must submit a complete application . . . in accordance with this section [122.21] and part 124 of this chapter." 40 CFR § 122.21(a)(i). (emphasis supplied). Consistent with the CWA, EPA regulations require persons "who discharge pollutants" have a NPDES Permit. See CWA § 301(a) ("except in compliance with this section and [other sections] of this title, the discharge of any pollutant by any person shall be unlawful"), and CWA § 402(a) (authorizing EPA to issue a permit "for the discharge of any pollutant"). Throughout, the permit application regulations at 40 CFR § 122.21 contemplate that it is the "person" who discharges pollutants who must obtain a NPDES Permit. No where in 40 CFR § 122.21 is there any reference to "co-permittee" or any suggestion that separately owned and operated conveyance systems are subject to NPDES permitting. Consistent with CWA, it is the person who discharges a pollutant from a point source who is subject to NPDES permitting requirements.

While 40 CFR § 122.21(a)(1) requires an application only from those persons who discharge from a point source, the regulations anticipate circumstances when a facility may be owned or operated by separate entities. The permit application regulations provide that "[w]hen a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit." 40 CFR § 122.21(b). Thus, it is operator of the "point source" that must have the permit. "Owner or operator" means "the owner or operator of any "facility or activity" subject to regulation under the NPDES program." 40 CFR § 122.2. "Facility or activity" means "any NPDES "point source" or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the NPDES program." 40 CFR § 122.2. (emphasis supplied).

Nothing in 40 CFR § 122.21 requires or suggests that "satellite collection systems" need to make application for a NPDES permit. While the regulations contemplate that "[m]ore than one application form may be required from a facility," multiple applications are only required where there may be multiple point sources, not multiple owned parts of a POTW. See, 40 CFR § 122.21(a)(2)(i) ("More than one application form may be required from a facility depending on the number and types of discharges or outfalls found there."). Again, the regulations require persons who discharge from point sources to have the NPDES permit.

Nowhere in Application Form 2A is there any reference to a "co-permittee" or suggestion that a person may make application, with a treatment works applicant, as co-permittee. See <http://www.epa.gov/npdes/pubs/final2a.pdf>. At page 1 of 21 of Form 2A, applicants "must complete questions A.8. through A.8. A treatment works that discharges effluent to surface waters of the United States must also answer questions A.9. through A.12." Part A.1 through A.8. of Form 2A asks for information about the facility and applicant, and asks "is the applicant the owner or operator (or both) of the treatment works?" (A.1., A.2.). Form 2A asks for collection system information; specifically, "information on municipalities and areas served by

the facility . . . type of collection system (combined vs. separate) and its ownership (municipal, private, etc.)." (A.4.). Form 2A asks for information about the "collection system(s) used by the treatment plant." (A.7.). If the NPDES regulations contemplated permitting of collection systems, one would expect to see in each of these parts of the NPDES Application Form 2A some reference to the owners or operators of collection systems as "co-permittees." There is none. Form 2A also requires information on discharges. At Part A.8.a., Form 2A asks "Does the treatment works discharge effluent to waters of the U.S.? ____ Yes ____ No." Form 2A obviously contemplates "discharges" from a "treatment works," not a POTW. Finally, at Part A. 1.8.a.(i)-(v), Form 2A seeks information on the "types of discharge points the treatment works uses." No "collection system" or "satellite collection system" is listed here. This should be no surprise; collection systems and satellite collection systems do not have "discharge points" under the NPDES regulations.

In its Analysis, EPA would "waive" the Town and District's permit applications and all requirements of 40 CFR § 122.21. In its effort to justify including the Town and District as co-permittees, EPA both misapplies and takes 40 CFR § 122.21(j) entirely out of context. First, waivers can only be granted to those persons who have submitted applications. Nothing in the fact sheet suggests that the Town and District applied for any NPDES permit. § 122.21(j) provides that:

Permit applicants must submit all information available at the time of permit application. . . . The Director may waive any requirement of this paragraph if he or she has access to substantially identical information. (emphasis supplied).

40 CFR § 122.21(j) does not support the EPA's proposed waiver of any application by the Town and District; it allows only for the waiver of certain information in a permit application submitted by the applicant.

Second, EPA cannot unilaterally waive requirements of an application without a request to do so; the person must seek a waiver and that waiver must be approved by EPA. 40 CFR § 122.21(e) requires a complete application before EPA may issue a permit "([EPA] shall not issue a permit before receiving a complete application for a permit"), and a "waiver application" must be made, and approved, or not acted upon by EPA. 40 CFR § 122.21(e)(2) provides:

A permit application shall not be considered complete if a permitting authority has waived application requirements under paragraphs (j) or (q) of this section and EPA has disapproved the waiver application. If a waiver request has been submitted to EPA more than 210 days prior to permit expiration and EPA has not disapproved the waiver application 181 days prior to permit expiration, the permit application lacking the information subject to the waiver application shall be considered complete.

Nothing in the fact sheet suggests that the Town and District have made application for a waiver from the application requirements. 40 CFR § 122.21(j) says only that the "Director may waive any requirement of this paragraph if he or she has access to substantially identical information." This provision, in context, is obviously designed to allow waiver of some of the detailed and often duplicate information required under Section 122.21 and in EPA's permit application

forms. As noted above, Form 2A consists of 21 pages and requires detailed information about the “treatment works.” See Form 2A at <http://www.epa.gov/npdes/pubs/final2a.pdf>. Nothing in Section 122.21(j) suggests EPA may waive the requirement at 40 CFR § 122.21(a)(1) mandating an application from those persons who discharge from a point source. Likewise, nothing in Section 122.21(j) suggests EPA may waive the requirement for application signatures and certifications and authorizations required by 40 CFR § 122.22, none of which the Town and District have provided. EPA seeks to ignore its own regulations and to issue a permit the Town and District who have not applied for an NPDES permit.

In its Analysis, the Region creates a whole new rationale to justify the absence of any signed permit application by the Town or District from that set forth in Region 1’s Original Analysis. The Region now says that “EPA has authority to require municipal satellite collection systems to submit permit applications” for the reason that “these entities are operators or parts of the POTW.” (Analysis, p. 10) Instead of exercising that purported authority, Region 1 “believes that it will typically receive information sufficient for NPDES permitting purposes” and that it “intends to issue waivers to exempt municipal satellite collection systems from permit application and signatory requirements in accordance with 40 C.F.R. § 122.21 (j). This new position is different from the position the Region took with in its Original Analysis in which it would have caused the Town and the District to consult and coordinate with the regional POTW treatment plant operator to ensure that any information provided to EPA about their respective entities is accurate and complete. Exhibit C to Original Analysis. The Region gives no explanation for its changed position between its Original Analysis and the analysis provided with the MWRA permit. The Region would then use its authority, under CWA § 308, to compel information from the Town and District, should the Region deem information provided by the permit applicant incomplete. CWA § 308, however, applies to “the owner or operator of any point source.” CWA § 308(a) (A). Information may be obtained only from such owner or operator of the “point source,” the “effluent source” or “the owner or operator of such source.” CWA § 308(a)(B)(i) and (ii). Again, because the Town and District do not own or operate any point source, CWA § 308 would not apply to them. Under EPA’s Analysis, it would read out of the regulations the entire Section 122.21. EPA’s cobbled approach and legal analysis toward finding authority where there is none is not supported by its own regulations.

Response J3: Please see Responses A1, E2, and E4.

Comment J4: The Region’s Approach is inconsistent with the Permit Writer’s Manual

Nothing in the EPA’s permit writers’ manual evidences any authority to permit satellite collection systems as part of a greater POTW. Indeed, EPA’s permit writers’ manual make no reference to permitting of satellite collection systems or to the owner of such systems being subject to a NPDES permit as a co-permittee. See EPA NPDES Permit Writers’ Manual, September 2010 http://www.epa.gov/npdes/pubs/pwm_2010.pdf. Instead, the Permit Writers’ Manual supports the analysis provided above. It says: “Under the national program, NPDES permits are issued only to direct dischargers.” Permit Writers’ Manual Section 1.3.4. (emphasis supplied). As noted above, a “direct discharge” means the “discharge of a pollutant” and “discharge of a pollutant” means “any addition of any pollutant to navigable waters from any point source.” CWA § 502(12). 40 CFR 122.2.

Section 4.1 of Permit Writers' Manual addresses "Who Applies for a NPDES Permit?" No mention is made in this section to satellite collection systems or to the owners of such systems. Instead, the Permit Writers' Manual states:

The NPDES regulations at Title 40 of the Code of Federal Regulations (CFR) 122.21(a) require that any person, except persons covered by general permits under § 122.28, who discharges pollutants or proposes to discharge pollutants to waters of the United States must apply for a permit. Further, § 122.21(e) prohibits the permitting authority from issuing an individual permit until and unless a prospective discharger provided a complete application. This regulation is broadly inclusive and ties back to the Clean Water Act (CWA) section 301(a) provision that, except as in compliance with the act, "...the discharge of any pollutant by any person shall be unlawful." In most instances, the permit applicant will be the owner (e.g., corporate officer) of the facility. However, the regulations at § 122.21(b) require that when a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit. The regulations also require the application to be signed and certified by a high-ranking official of the business or activity. The signatory and certification requirements are at § 122.22. Permits (and applications) are required for most discharges or proposed discharges to waters of the United States; however, NPDES permits are not required for some activities as specified under the Exclusions provision in § 122.3.

Section 4.3. of the Permit Writers' Manual addresses what forms must be submitted and at Exhibit 4-3 describes "the types of dischargers required to submit NPDES application forms, identifies the forms that must be submitted, and references the corresponding NPDES regulatory citation." Again, in Section 4.3 there is no mention of satellite collection systems or need for the owners of such systems to have a NPDES permit.

Response J4: Please see Response A1. UBWPAD's attempt to read the quoted language from the Manual as some sort of limitation on permit coverage, or the extent of EPA's legal authority under Section 301 and 402, is unconvincing. The Permit Writers Manual does not address every permitting scenario. For example, it does not address the procedures by which dischargers into privately owned treatment systems may be designated as needing permits. Nor does it discuss the permitting of industrial discharges into a separately permitted municipal storm system. Moreover, the Permit Writers' Manual (the "Manual") is a guidance and does not contain legally binding standards concerning the issuance of NPDES permits:

CWA provisions and regulations contain legally binding requirements. This document does not substitute for those provisions or regulations. Recommendations in this guidance are not binding; the permitting authority may consider other approaches consistent with the CWA and EPA regulations. When EPA makes a permitting decision, it will make each decision on a case-by-case basis and will be guided by the applicable requirements of the CWA and implementing regulations, taking into account comments and information presented at that time by interested persons regarding the appropriateness of applying these recommendations to the situation. This guidance incorporates, and does not modify, existing EPA policy and guidance on developing NPDES permits. EPA may change this guidance in the future.

NPDES Permit Writers' Manual, U.S. Environmental Protection Agency at inside cover page (Sept. 2010) (*available at* <http://cfpub.epa.gov/npdes/writermanual.cfm>). Therefore, the discussion of EPA regulations at Responses E1 through E6 takes precedence over any inferences drawn from the Manual. Furthermore, the Manual's discussion of POTWs makes clear that it intends to cover the entirety of the POTW and not merely the treatment plant:

The federal regulations at § 403.3 define a POTW as a treatment works . . . that is owned by a state or municipality [as defined in CWA section 502(4)]. The definition includes any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. It *also includes sewers, pipes, and other conveyances* only if they convey wastewater to a POTW.

NPDES Permit Writers' Manual at § 2.3.1. The Permit Writers Manual's discussion of the definition of "point source" also demonstrates that the term has a broad reach and includes the POTW:

Pollutants can enter water via a variety of pathways including agricultural, domestic and industrial sources. For regulatory purposes, these sources generally are categorized as either point sources or nonpoint sources. The term point source is defined in CWA section 502(14) and § 122.2 to include *any* discernible, confined, and discrete conveyance from which pollutants are or may be discharged. *Point source discharges include discharges from publicly owned treatment works (POTWs), industrial process wastewater discharges, runoff conveyed through a storm sewer system, and discharges from concentrated animal feeding operations (CAFOs), among others* (see Exhibit 1-2). Return flows from irrigated agriculture and agricultural stormwater runoff specifically are excluded from the definition of a point source.

NPDES Permit Writers' Manual at § 1.3.4 (emphasis added). The preceding passages demonstrate that, to the extent that inferences may be drawn from the Permit Writer's Manual, any inferences support the Region's co-permittee approach.

Comment J5: State regulations

The fact sheet and Analysis does not explain why operation and maintenance of the Town and District's sewer systems are not being adequately regulated by under State regulations at 310 CMR 12.00. 312 CMR 12.02 defines "Sewer Systems" to mean "pipelines or conduits, pumping stations, force mains, and all other structures, devices, appurtenances, and facilities used for collecting and conveying wastes to a site or works for treatment or disposal." The purpose of 314 CMR 12.00 is to insure "proper operation and maintenance of . . . sewer systems within the Commonwealth," and sets forth numerous requirements for the proper operation and maintenance of such systems. See 314 CMR 12.03(4), (10), and (11); 12.04(4); 12.05(5), (6) and (12); and 12.07(7). The Region says that it "considered the co-permittee approach in light of state regulations and policy contained in the wastewater treatment." The Region says that it "found its approach to be consistent with such requirements. The Region, however, does not explain why operation and maintenance of the Town and District's sewer systems are not being adequately regulated by state regulations.

Response J5: See Response E7.

Comment J6: Insufficient Coordination within EPA

In its Determination on Remand issued to the District on July 7, 2010, the Region indicated it would “coordinate broadly within EPA in developing a response” to the Upper Blackstone EAB Remand Order. Nothing in Region 1’s Analysis indicates this was done. The Region says only that it also considered “other EPA guidance in coming to its determination to employ a co-permittee structure or regionally integrated POTW. The Regions says that it referred to a 1994 Pretreatment Guidance Manual. This is hardly the type of “broad coordination” that the Region indicated that it would conduct. Because EPA’s authority to permit satellite collection systems impacts not only the Region, but is of national significance, and because the issues raised by the EAB concerning EPA’s legal authority to regulate co-permittees were limited to those raised by the District, the Region’s effort to permit satellite collection systems as co-permittees or otherwise through separate permits should be presented to the public for review and comment on a national level.

Response J6: The Region coordinated within EPA, including with EPA Headquarters, in developing a response to the remand. EPA did not at any time state that it would defer this issue to a national rulemaking. New England states are unusual nationwide for the strong level of local control exercised by relatively numerous cities and towns (351 in Massachusetts), leading to at times to extensive collection systems controlled by local authorities but discharging via a regional treatment plant such as the MWRA-Clinton facility. EPA Region 1 also has extensive experience in permitting of these facilities as the direct permitting authority in two states. In this context this issue is both distinctive and a high priority for the Region, apart from any national rulemaking.

Comment J7: This is a legislative rule in disguise

EPA’s attempt to change the legal requirements applicable to satellite systems is a legislative rule that EPA is issuing without formal notice and comment rulemaking in violation of the Administrative Procedure Act (“APA”). In trying to distinguish between legislative rules and policy statements, courts have found that “if a document expresses a change in substantive law or policy the agency intends to make binding, or administers with binding effect, the agency may not rely upon the statutory exemption for policy statements, but must observe the APA’s legislative rulemaking procedures.” *Gen. Elec. Co. v. E.P.A.*, 290 F.3d 377, 383-84 (D.C. Cir. 2002). See also *Appalachian Power Co. v. EPA*, 208 F.3d 1015 (D.C. Cir. 2000) (finding that an EPA guidance document that imposed new monitoring requirements relating to the operation of permit programs under the Clean Air Act was a legislative rule because it was treated as binding), *Nat’l Mining Ass’n v. Jackson*, 816 F. Supp. 2d 37, 42-49 (D.D.C. 2011) (finding a violation of the Administrative Procedure Act where EPA sought to impose a new process for obtaining section 404 permits without notice and comment rulemaking), *New Hope Power Co. v. U.S. Army Corps of Eng’rs*, 746 F. Supp. 2d 1272, 1283-84 (S.D. Fla. 2010) (striking Corps guidance purporting to amend the prior converted croplands exclusion because it amounted to new legislative rules that created a binding norm and the Corps failed to comply with the APA). *Iowa League of Cities v. EPA*, 711 F.3d 844 (8th Cir. 2013), petition for rehearing denied (July 10, 2013) (vacating new rule banning bacteria mixing zones in waters designated for primary contact recreation and new rule on blending peak wet weather flows because new rules had the effect of legislative rule that violated the APA’s procedural requirements by not using notice and

comment procedures and because rules were promulgated “without observance of procedure required by law.”)

In the case of the draft MWRA permit, there is no question that EPA intends its new position regarding satellite system to have binding effect. Moreover, it is telling that in 2001, EPA began a rulemaking that purported to give the agency direct authority over satellite systems, in the context of a propose rule pertaining to sanitary sewer systems. See National Pollutant Discharge Elimination System (NPDES) Permit Requirements for Municipal Sanitary Sewer Collection Systems, Municipal Satellite Collection Systems, and Sanitary Sewer Overflows (proposal signed Jan. 4, 2001) (formerly available at http://cfpub.epa.gov/npdes/regresult.cfm?program_id=4&view=all&type=3, but now withdrawn from EPA’s website). EPA later withdrew that proposed rule.

In June 2010, EPA did seek through “listening sessions” information from the public concerning permitting of satellite collection systems. See 75 Fed. Reg. 30395 (June 1, 2010) (“EPA is considering whether to propose modifying the [NPDES] regulations as they apply to municipal sanitary sewer collection systems”). In contemplating a potential regulatory change, EPA asked specifically for input on the question: Should EPA propose to require permit coverage for municipal satellite collections systems? The Region says that it “also took notice” of the listening session materials and states that the model documents “generally conform to the Region’s co-permittee approach.” Such “notice” is not further explained. Because EPA was “considering clarification of the framework for regulating municipal satellite collection systems under the NPDES program,” and doing so via a regulatory change, the Region should not include at this time, and based on unsupported legal authority outlined above, the Town and District as co-permittees in this permit. Until such time as EPA addresses this issue on a national level and gives the public the opportunity review and comment on the legal Analysis set forth by the Region, it should not include co-permittee provisions in this permit.

For these reasons, Region 1’s Analysis should be withdrawn and the co-permittee provisions of the draft MWRA permit should be stricken.

Response J7: Please see Responses A1 and E41.

2. METALS AND WHOLE EFFLUENT TOXICITY

Comment E16: Aluminum

Part I.A. Effluent limitations and monitoring requirements. 1. (Page 3 of 15). TOTAL ALUMINUM: As stated in the partially revised fact sheet, the new evaluation found no reasonable potential for effluent aluminum to cause a violation of water quality standards. In May 2011, the coagulant used in phosphorus removal was changed from aluminum sulfate to ferric chloride. Since that time, the aluminum levels in the effluent have been at or below detection levels, as shown in Figure 1 of the accompanying partially revised fact sheet. Figure 1 also shows that aluminum concentrations in the effluent are well below the chronic criterion of 0.087 µg/L [sic]. Since aluminum sulfate will not be used in the treatment process, the potential to exceed the criterion is no longer an issue. The monitoring requirement should be removed

from the permit, or at a minimum, reduced to 1/week, consistent with the monitoring frequency for copper, which also meets water quality standards.

Response E16: There is currently no reasonable potential for the MWRA-Clinton discharge to cause an exceedance of water quality standards for aluminum, and in fact the facility no longer uses aluminum as a coagulant. Therefore, the aluminum monitoring requirement has been removed from the permit. The permittee will still be required to report effluent aluminum measured during quarterly WET testing.

The Region's determination that there is no reasonable potential is based, in part, on the assumption that the facility will not be using aluminum in their treatment processes. In order to ensure that this assumption remains valid for the term of the permit, EPA pursuant to Sections 402 and 301 of the Act is imposing a protective condition regarding the use of aluminum at the facility. This does not preclude the permittee from using aluminum in the future, but in order to do so it must first seek a modification of the permit.

Comment E34: Copper Limit is incorrect given the sampling frequency of four times per month.

Part I.A. Effluent limitations and monitoring requirements. 1. (Page 3 of 15). TOTAL COPPER. MWRA believes that the monthly copper limitation should be 11.59 µg/L. MWRA believes there is an error in the calculation of the monthly copper limitation; the draft monthly limitation is unduly conservative and would be exceeded almost 20% of the time even though water quality criteria are being met.

The existing permit only requires one copper measurement per month, and it is that measurement that is used to calculate the new copper limitation. However, EPA's calculation of the new monthly limitation apparently treated the single monthly measurement as if it was an average of four measurements. This mistake results in an unduly conservative limitation. Using the same calculations provided in the 2010 draft permit and substituting one sample per month, the resultant monthly variance is 0.078 and the monthly average limit is 11.59 µg/L. Therefore, MWRA believes that the monthly copper limitation should be 11.59 µg/L, which is still below the chronic criterion of 18.1 µg/L.

Response E34: The copper limit was not re-opened for public comment. MWRA made a similar comment, however, on the 2010 draft permit. Please see Response A4.

Comment I4: Aluminum monitoring.

We agree with the requirement to continue monitoring aluminum concentrations, to verify that the reduction in aluminum recently achieved can be maintained in the long term.

Response I4: The twice per week monitoring requirement for aluminum has been removed from the permit. However, the facility will still need to report effluent aluminum as part of quarterly WET testing. Also, a clause has been added to Part I.A. prohibiting the use of aluminum in the treatment process. See Response E16.

Comment I5: WET Testing.

We agree with the WET test revision. This is a sound change and will be protective of the receiving water quality and aquatic life.

Response I5: EPA has taken notice of the comment in deciding to revise WET testing requirements. The comment is now part of the public record for this permit reissuance.

3. PHOSPHORUS

Comment E18: Total phosphorus and orthophosphate sampling should be simultaneous.

Part I.A. Effluent limitations and monitoring requirements. 1. (Page 5 of 15). Footnote 13:

The footnote assumes that the maximum total phosphorus concentrations will be measured on the same day as the maximum orthophosphate concentrations also occurs. Given that the measurement frequency is not the same, it is likely that these two high measurements will not occur on the same day. MWRA suggests that EPA amend I.A.1 to require sampling frequency and time of sampling for both total phosphorus and orthophosphate be the same for the period November 1 – March 31 and that Footnote 13 be revised as follows:

“The maximum daily concentration reports for dissolved orthophosphate shall be values from the same day that the maximum daily total phosphorus concentration was measured. The Total Phosphorus and Orthophosphate samples shall be collected concurrently”

Response E18: Effluent monitoring requirements were not reopened for comment in the re-noticed permit. However, because orthophosphate reporting is no longer the standard practice in permits, the monitoring requirement has been removed from the final permit. For the rationale behind this change, please refer the list of changes made from the 2013 draft permit to the final permit in the beginning of this response document.

Comment E25: Compliance schedule change.

Part I.B. COMPLIANCE SCHEDULE (Page 7 of 15): Based on our current engineering evaluation, MWRA requests the following changes to the Compliance Schedule:

1. 150 µg/L Total Phosphorus Limitation (April 1st - October 31st)

This limit shall be achieved in accordance with the following schedule:

- a. Complete plans and specifications for necessary upgrades no later than ~~twelve months~~ 24 months from the effective date of the permit.
- b. Start construction of necessary upgrades and submit a status report to EPA no later than ~~twenty-four~~ 30 months from the effective date of the permit.
- c. Complete construction of necessary upgrades and attain compliance with the April 1st - October 31st final effluent limit for total phosphorus no later than forty-eight months from the effective date of the permit.

d. During this four-year period, the following total phosphorus limitations shall be met from April 1st – October 31st: 1.0 mg/l average monthly. The permittee shall monitor the total phosphorus concentration in the discharge at the frequency specified in A.1.a. of this permit.

Response E25: Since the public notice period, MWRA has given EPA an update on the construction status of upgrades to attain the total phosphorus limit. In a phone call on November 21, 2016, MWRA staff informed EPA that construction of the upgrades will be substantially complete by September 2017. MWRA requested, and EPA granted, eighteen months to test and optimize the treatment processes before the final phosphorus limit go into effect. Compliance with the warm weather 150 µg/L total phosphorus limit will be required starting April 1, 2019 and the cool weather limit of 1.0 mg/L will go into effect November 1, 2019.

Comment E32: Phosphorus Compliance Schedule

d. Compliance Schedule for Total Phosphorus (Page 4 of 7): Based on current engineering estimates, we request that the last sentence in this section be modified to say “Additionally, based on feedback from the permittee, the time allowed for the development of plans and specifications has been expanded to 24 months, instead of 12 months, time allowed for the start of construction has been reduced from 12 months to 6 months, and time allowed for construction...”

Response E32: The fact sheet cannot be modified after the public notice period. However, the requested change to the final permit has been made. See Response E25, above.

Comment E36: Clarify total residual chlorine reporting requirement.

Part I.A. Effluent limitations and monitoring requirements. 1. Footnote 9. (Page 4 of 15):

MWRA on occasion, may collect more than the required number of Total Residual Chlorine samples. If the analysis used was EPA approved, the extra results are submitted along with the other chemical analyses results, and included in the DMR calculations. Extra samples may be collected to confirm results. It is unclear however when EPA requires MWRA to submit process control and screening data. It is MWRA’s understanding that submitting copies of process control or screening results (analyzed by non-EPA approved method) is required only if an operational modification was required to achieve the required bacterial kill or adequate dechlorination. MWRA suggests that the following language be included:

“For every day that more than two chlorine grab samples are analyzed on the final effluent for **NPDES permit compliance using an EPA-approved analytical method**, the monthly DMR shall include an attachment documenting the individual final effluent grab sample results for that day, the date and time of each sample, and the analytical method used. ~~and a summary of~~ If operational modifications are implemented in response to the sample results, submit a summary of the operational changes and results of measurements. This requirement applies to all samples taken on the final effluent, including screening level and process control samples. All final effluent test results utilizing an EPA-approved analytical method shall be used in the calculation and reporting of the monthly average and maximum daily discharge values submitted on the DMR.”

Response E36: This requirement was not re-opened for comment under the 2013 Re-notice. EPA has addressed MWRA's 2010 comment on this requirement. See Response A11.

Comment E37: Interim phosphorus monitoring.

Part I.A. Effluent limitations and monitoring requirements. 1. Footnote 10. (Page 4 of 15): MWRA agrees with this footnote but requests a rewrite to make it clearer. MWRA suggests the following:

“For the first four years that this permit is in effect, the permittee shall achieve the following total phosphorus limitations from April 1 – October 31 while working towards achieving compliance with the new 150 µg/L seasonal total phosphorus limitation (See Part I.B. of this permit, Schedule of Compliance): 1000 µg/L average monthly, report maximum daily in µg/L and report average monthly loadings in pounds per day while working towards achieving compliance with the new 150 µg/L seasonal total phosphorus limitation (See Part I.B. of this permit, Schedule of Compliance).

Response E37: Because the proposed change in wording does not change the meaning of Footnote 10, it will be incorporated into the permit, with the exception of the words “while working towards achieving compliance with the new 150 µg/L seasonal total phosphorus limitation (See Part I.B. of this permit, Schedule of Compliance).” This part of the suggested change appeared to be redundant, since it also appears earlier in the footnote.

Comment E38: Clarify the phosphorus footnote.

Part I.A. Effluent limitations and monitoring requirements. 1. Footnote 11. (Page 5 of 15): MWRA agrees with this footnote but requests a rewrite to make it clearer. MWRA suggests the following:

“The 150 µg/L total phosphorus limit is a monthly average limit and applies to the period of April 1 – October 31 upon completion of the Compliance Schedule referenced above. In addition, the maximum daily concentration value must be reported for each month.”

Response E38: Because the proposed change in wording does not change the meaning of Footnote 11, it will be incorporated into the permit.

Comment E19: O & M Plan deletion

Delete the strikethrough language on page 10 in the first sentence of Section D. 5.b. Collection System Operation and Maintenance Plan.

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

Response E19: The inclusion of the word “full” in Section D.5. distinguishes the plan to be submitted six months after the effective date from the more extensive full plan submitted twenty-four months after the effective date. The language is not changed.

Comment I6: Phosphorus.

NRWA supports the phosphorus limit of 150 µg/l for the April through October months.

Response I6: EPA has taken notice of the comment in setting the phosphorus limit. The comment is now part of the public record for this permit reissuance.

4. OPERATIONS AND MAINTENANCE

Comment E40: Modify pretreatment requirements to comply with MWRA's TRAC program.

Part I.C. Industrial Pretreatment Program. C.5.b. (Page 8 of 15):

MWRA's Toxic Reduction and Control Department (TRAC) administers the Industrial Pretreatment Program and follow the same rules for the Clinton industrial facilities as for the Boston Harbor facilities. Procedures have been established to allow staff to track the 120 and 180 day deadlines. The TRAC program has been very successful in meeting the requirements of the Boston Harbor permit (with minor exceptions: In FY13, we were able to issue 94% of SIU permits within 120 days and 97% within 180 days of application or expiration, whichever came later. Any permits that took longer than 180 days were delayed due to the complex nature of their discharges). MWRA has been operating under these procedures and requests that language in the current language in the Clinton Permit be consistent with the Boston Harbor Permit. MWRA requests that item 5.b be revised as follows:

~~"Issue or renew 90% of all necessary permits for significant industrial users control mechanisms within 90-120 days of their expiration or application, whichever is later, dates the industry has been determined to be a and 100% or within 180 days of their expiration or application, whichever is later, after the industry has been determined to be a significant industrial use permits for SIUs within 120 days of their expiration or application, whichever is later, and 100% within 180 days of their expiration or application, whichever is later."~~

Response E40: Pretreatment requirements were not open for comment as part of the 2013 Re-notice and accordingly will not be considered.

Comment G1: Will the public comment period be extended?

With the federal government shutdown leaving the "approved" extension of the 30-day comment period in flux, the Advisory Board of the Massachusetts Water Resources Authority (MWRA), representing the interests of the 44 communities who receive wholesale wastewater services from the Authority, has reviewed the revised NPDES Draft No. MA0100404 and accompanying fact sheet and offers these comments on the Draft National Pollutant Discharge Elimination System Permit for the Clinton Wastewater Treatment Plant.

First, it is our expectation that EPA honor its commitment to extend the comment period beyond October 17, 2013, which would provide the Advisory Board et al additional opportunities to comment on the draft permit.

Response G1: EPA extended the public comment period an additional 30 days beyond the original period, to November 17, 2013.

Comment I2: Extend O&M compliance deadlines.

NRWA agrees with EPA's requirement that the permittees submit collection system descriptions, maps, management goals, etc. leading to an O&M Plan, and finally to O&M Plan Implementation.

Developing an operation & maintenance plan and mapping the sewer collection system should help reduce and control excessive I/I, which can disrupt the treatment process, contribute to less efficient and complete treatment of wastewater at the WWTP and reduce operating costs. Having a map of the sewer collection system also contributes to the goal of reducing pollution into our waterways as it helps with planning, quicker response times during an emergency, and provides a tool to help identify problems with dry and wet weather overflows. However, after consultation with the Lancaster Sewer District we feel the deadlines for compliance should be extended to give the permittees more time to develop a comprehensive and thorough O&M plan and additional time for implementation.

Response I2: In cases where a permittee requests an extended compliance deadline, EPA will consider such requests on their merits. In this instance, however, Lancaster Sewer District has not requested an extension, nor did it comment on the re-noticed draft permit.

Furthermore, EPA believes that the timetables provided in the permit are sufficient for most towns to complete the O&M activities required.

Comment I3: Wastewater effluent flow limit.

We agree with EPA's decision not to grant an increase in the permitted flow to the plant beyond its current limit of 3.01 MGD.

Reductions in flow can be obtained through I/I reductions, and the current discharge is already a large percentage of the dry weather flow in the river.

Response I3: EPA has taken notice of the comment in its decision not to grant an increase permitted wastewater effluent flow. The comment is now part of the public record for this permit reissuance.

5. MONITORING AND REPORTING

Comment E21: Submittal of reports via NetDMR is unfeasible.

Part I.G MONITORING AND REPORTING. G.1 and G.2 (Page 13 of 15): Sections G.1 and G.2 of the draft permit describe submitting "discharge monitoring reports (DMRs) and other required reports" via NetDMR. The EPA's NetDMR tool is for submission of DMRs only, with supporting data. EPA does not have the capability to accept "other required reports" via NetDMR. Such reports have various due dates, which do not coincide with the due dates of DMRs. Therefore, although it is possible for MWRA to submit DMRs via NetDMR, it is both technically and administratively infeasible to submit other required reports via NetDMR.

- EPA's proposed NPDES Electronic Reporting Rule (78 Fed. Reg. 146; July 30, 2013) does not require the submission of reports other than DMRs in "Phase I" of its implementation. EPA anticipates that it will take a few years to develop software to handle electronic submissions

other than DMRs. Even this later “Phase II” of the proposed rule’s implementation does not include electronic submission of all of the reports required under this draft permit.

- Section G.4 states "All reports required under this permit...shall be submitted as an attachment to the DMRs." This does not make sense. As noted above, NetDMR is designed for submission of DMRs and their supporting documents only, and the due dates of most other reports differ from the due dates of DMRs.
- Attachment E of the draft permit summarizes required report submittals. With the exception of Whole Effluent Toxicity Test Reports (Part I.A.1), which are routinely attached to the toxicity DMR, it is not feasible to submit these via NetDMR. In fact, none of the listed reports have due dates coinciding with the 15th of the month.
- The Town of Clinton and Lancaster Sewer District do not submit DMRs and will not have access to NetDMR.

Response E21: The NetDMR provisions of the draft permit were not open for public comment in the 2013 re-notice. MWRA made a similar comment on the 2010 draft permit. See Response A19.

Comment E22: Monthly Operations and Maintenance Report.

Part I.G MONITORING AND REPORTING. G.2.b. (Page 13 of 15): This section makes reference to a DEP Monthly Operations and Maintenance Report. Staff cannot find the section where a monthly report is required.

Response E22: See Response E21.

Comment E23: Attachment E. Summary of Required Submittals:

The “Submitted to” column identifies Item 1 as being submitted to EPA, via NetDMR. As itemized above, NetDMR is not the vehicle to submit these reports.

Response E23: See Response E21.

Comment E35: Clarify requirement for routine sampling program.

Part I.A. Effluent limitations and monitoring requirements. 1. Footnote 3. (Page 4 of 15): The requirement to develop a routine sampling program “in which samples are taken at the same location, same time, and same day(s) of every month” is difficult to understand. Some samples are collected continuously; some are collected 1, 2, or 3/week, 1/day, 2/day; and some are collected quarterly. In fact, there are no samples which clearly fit into the requirement to “sample the same day(s) every month.” Therefore, the requirement to report on deviations from the sampling plan is unclear. For example, what period of time constitutes a “deviation” from sampling “at the same time”? Is it five minutes or is it five hours? Note, MWRA sampling and operational personnel are in separate functional units. Operational personnel are not involved in determining when samples are collected. MWRA suggests the following:

Delete the strikethrough language and add the bolded language in Footnote 3.

“A routine sampling program shall be developed in which samples are taken at the same location, same time and same day(s) of every month. Any deviations from the routine sampling program shall be documented in correspondence appended to the applicable discharge monitoring report that is submitted to EPA. in which samples are taken on a consistent schedule as much as practicable. If substantial deviations from the sampling plan occur, these changes shall be noted in the DMR cover letter.”

Response E35: This section of the permit was not re-opened for public comment in the 2013 Re-notice. However, this issue is addressed in EPA’s Response to MWRA’s comments on the 2010 draft permit. See Response A7.

Comment E39: DMR due dates.

Part I.A. Effluent limitations and monitoring requirements. 1. Footnote 15. (Page 5 of 15): Please add language that allows for submitting reports the following business day if the due date falls on a weekend or holiday.

Response E39: This part of the permit was not open for public comment as part of the 2013 Re-notice. (EPA does, however, note that the period between testing and report, which is at least one month, gives the permittee more than enough time to submit the whole effluent toxicity reports and toxicity DMRs. Therefore, it is not necessary to grant extensions to the reporting deadline to account for holidays or weekends.)

6. CORRECTIONS

Comment E15: Part I.A. Effluent limitations and monitoring requirements.

1. (Page 3 of 15). ORTHOPHOSPHORUS: Orthophosphorus is incorrect. It should be “orthophosphate,” as is correctly referenced in Footnotes 13 and 14.

Response E15: The terms “orthophosphorus” and “orthophosphate” are used interchangeably, and both refer to the form of inorganic phosphorus with the chemical formula H_3PO_4 . In any event, the orthophosphate monitoring requirement has been removed from the final permit. For the rationale behind this change, please refer the list of changes made from the 2013 draft permit to the final permit in the beginning of this response document.

Comment E17: Part I.A. Effluent limitations and monitoring requirements.

1. (Page 3 of 15). WHOLE EFFLUENT TOXICITY: Footnote 5 should be referenced in the SAMPLE TYPE column.

Response E17: This correction has been made.

Comment E24: Reports

All required reports should reference the correct location in the Permit as follows:

- All reports required by the OPERATION AND MAINTENANCE section (formerly Section C) are now located in Sections I.D.5.a, I.D.5.b, and I.D.6;
- Notification of Sanitary Sewer Overflows in Section II.D.1.e.1;

- Annual Sludge Report in Section I.F.5;
- Local Limits evaluation in Section I.C.3;
- Pretreatment Annual Report in Section I.C; and
- Revisions to Pretreatment Program in Section I.C.9.

Response: See Response E21.

Comment E26: Part I.C INDUSTRIAL PRETREATMENT (Page 8 of 15):

C.4 Formatting centered on the last two lines in paragraph.

Response E26: The formatting error has been corrected.

Comment E27: D.7 Alternate Power Source (Page 11 of 15):

There is a typo on the last line. Delete the strikethrough from the following: "...the publicly owned treatment works~~4~~ it owns..."

Response E27: The numeral "1," to which the comment refers, indicates a footnote. The numeral has been changed to superscript to more clearly denote a footnote.

Comment E28: Part I.F SLUDGE (Page 12-13 of 15)

F.3 There is a typo on the first line. ..." Delete the strikethrough from the following: "...compliance guidance document~~2~~

Response E28: The numeral indicates a footnote and has been changed to superscript to more clearly denote a footnote.

Comment E29: Formatting Errors

F.4.b There is a formatting error. Insert a space after "than" in "290 less than1500."

F.4.d There is a formatting error. Align "1/month" with the rest of the text in this section.

Response E29: The formatting corrections have been made.

Comment E30: Part I.G STATE PERMIT CONDITIONS (Page 15 of 15): This section should be labeled Part H.

Response E30: The correction has been made.

Comment E33: Whole Effluent Toxicity Testing (Page 6 of 7). There is a typo in the first paragraph on the page. "...as Attachments B and C respectively" should say "...as Attachments A and B respectively.

Response E33: The fact sheet provides the basis for the draft permit and is not subsequently modified with issuance of a final permit. The requested clarification in the fact sheet is noted for the record.

APPENDIX A
EPA REGION 1 NPDES PERMITTING APPROACH FOR PUBLICLY OWNED
TREATMENT WORKS THAT INCLUDE MUNICIPAL SATELLITE SEWAGE
COLLECTION SYSTEMS

This interpretative statement provides an explanation to the public of EPA Region 1's interpretation of the Clean Water Act ("CWA" or "Act") and implementing regulations, and advises the public of relevant policy considerations, regarding the applicability of the National Pollutant Discharge Elimination System ("NPDES") program to publicly owned treatment works ("POTWs") that are composed of municipal satellite sewage collection systems owned by one entity and treatment plants owned by another ("regionally integrated POTWs"). When issuing NPDES permits to these types of sanitary sewer systems, it is EPA Region 1's practice to directly regulate, as necessary, the owners/operators of the municipal satellite collection systems through a co-permitting structure. This interpretative statement is intended to explain, generally, the basis for this practice. In determining whether to include municipal satellite collection systems as co-permittees in any particular circumstances, Region 1's decision will be made by applying the law and regulations to the specific facts of the case before the Region.

EPA has set out a national policy goal for the nation's sanitary sewer systems to adhere to strict design and operational standards:

"Proper [operation and maintenance] of the nation's sewers is integral to ensuring that wastewater is collected, transported, and treated at POTWs; and to reducing the volume and frequency of ...[sanitary sewer overflow] discharges. Municipal owners and operators of sewer systems and wastewater treatment facilities need to manage their assets effectively and implement new controls, where necessary, as this infrastructure continues to age. Innovative responses from all levels of government and consumers are needed to close the gap."¹

Because ownership/operation of a regionally integrated POTW is sometimes divided among multiple parties, the owner/operator of the treatment plant many times lacks the means to implement comprehensive, system-wide operation and maintenance ("O & M") procedures. Failure to properly implement O & M measures in a POTW can cause, among other things, excessive extraneous flow (*i.e.*, inflow and infiltration) to enter, strain and occasionally overload treatment system capacity. This failure not only impedes EPA's national policy goal concerning preservation of the nation's wastewater infrastructure assets, but also frustrates achievement of the water quality- and technology-based requirements of CWA § 301 to the extent it results in sanitary sewer overflows and degraded treatment plant performance, with adverse impacts on human health and the environment.

In light of these policy objectives and legal requirements, it is Region 1's permitting practice to subject all portions of the POTW to NPDES requirements in order to ensure that the treatment system as a whole is properly operated and maintained and that human health and water quality impacts resulting from excessive extraneous flow are minimized. The approach of addressing

¹ See *Report to Congress: Impacts and Control of CSOs and SSOs* (EPA 833-R-04-001) (2004), at p. 10-2. See also "1989 National CSO Control Strategy," 54 Fed. Reg. 37371 (September 8, 1989).

O&M concerns in a regionally integrated treatment works by adding municipal satellite collection systems as co-permittees is consistent with the definition of “publicly owned treatment works,” which by definition includes sewage collection systems. Under this approach, the POTW in its entirety will be subject to NPDES regulation as a point source discharger under the Act. Region 1’s general practice will be to impose permitting requirements applicable to the POTW treatment plant along with a more limited set of conditions applicable to the connected municipal satellite collection systems.

The factual and legal basis for the Region’s position is set forth in greater detail below.

Analysis Supporting EPA Region 1 NPDES Permitting Approach For Publicly Owned Treatment Works That Include Municipal Satellite Sewage Collection Systems

<i>Exhibit A</i>	List of POTW permits that include municipal satellite collection systems as co-permittees
<i>Exhibit B</i>	Analysis of extraneous flow trends and SSO reporting for representative systems
<i>Exhibit C</i>	Form of Regional Administrator’s waiver of permit application requirements for municipal satellite collection systems

Introduction

On May 28, 2010, the U.S. EPA Environmental Appeals Board (“Board”) issued a decision remanding to the Region certain NPDES permit provisions that included and regulated satellite collection systems as co-permittees. *See In re Upper Blackstone Water Pollution Abatement District*, NPDES Appeal Nos. 08-11 to 08-18 & 09-06, 14 E.A.D. __ (Order Denying Review in Part and Remanding in Part, EAB, May 28, 2010).² While the Board “did not pass judgment” on the Region’s position that its NPDES jurisdiction encompassed the entire POTW and not only the treatment plant, it held that “where the Region has abandoned its historical practice of limiting the permit only to the legal entity owning and operating the wastewater treatment plant, the Region had not sufficiently articulated in the record of this proceeding the statutory, regulatory, and factual bases for expanding the scope of NPDES authority beyond the treatment plant owner/operator to separately owned/operated collection systems that do not discharge directly to waters of the United States, but instead that discharge to the treatment plant.” *Id.*, slip op. at 2, 18. In the event the Region decided to include and regulate municipal satellite collection systems as co-permittees in a future permit, the Board posed several questions for the Region to address in the analysis supporting its decision:

² The decision is available on the Board’s website via the following link:
http://yosemite.epa.gov/oa/EAB_Web_Docket.nsf/30b93f139d3788908525706c005185b4/34e841c87f346d94852577360068976f!OpenDocument.

- (1) In the case of a regionally integrated POTW composed of municipal satellite collection systems owned by different entities and a treatment plant owned by another, is the scope of NPDES authority limited to owners/operators of the POTW treatment plant, or does the authority extend to owners/operators of the municipal satellite collection systems that convey wastewater to the POTW treatment plant?
- (2) If the latter, how far up the collection system does NPDES jurisdiction reach, *i.e.*, where does the “collection system” end and the “user” begin?
- (3) Do municipal satellite collection systems “discharge [] a pollutant” within the meaning of the statute and regulations?
- (4) Are municipal satellite collection systems “indirect dischargers” and thus excluded from NPDES permitting requirements?
- (5) Is the Region’s rationale for regulating municipal satellite collection systems as co-permittees consistent with the references to “municipality” in the regulatory definition of POTW, and the definition’s statement that “[t]he term also means the municipality...which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works”?
- (6) Is the Region’s rationale consistent with the permit application and signatory requirements under NPDES regulations?

See *Blackstone, slip op.* at 18, 20, n. 17.

This regional interpretative statement is, in part, a response to the Board’s decision. It details the legal and policy bases for regulating publicly owned treatment works (“POTWs”) that include municipal satellite collection systems through a co-permittee structure. Region 1’s analysis is divided into five sections. First, the Region provides context for the co-permitting approach by briefly describing the health and environmental impacts associated with poorly maintained sanitary sewer systems. Second, the Region outlines its evolving permitting practice regarding regionally integrated POTWs, particularly its attempts to ensure that such entity’s municipal satellite collection systems are properly maintained and operated. Third, the Region explains the legal authority to include municipal satellite collection systems as co-permittees when permitting regionally integrated POTWs. In this section, the Region answers the questions posed by the Board in the order presented above. Fourth, the Region sets forth the basis for the specific conditions to which the municipal satellite collection systems will be subject as co-permittees. Finally, the Region discusses other considerations informing its decision to employ a co-permittee structure when permitting regionally integrated POTWs.

I. Background

A sanitary sewer system (SSS) is a wastewater collection system owned by a state or municipality that conveys domestic, industrial and commercial wastewater (and limited amounts

of infiltrated groundwater and some storm water runoff) to a POTW.³ See 40 C.F.R. § 35.2005(b)(37) (defining “sanitary sewer”). The purpose of these systems is to transport wastewater uninterrupted from its source to a treatment facility. Developed areas that are served by sanitary sewers often also have a separate storm sewer system (*e.g.*, storm drains) that collects and conveys runoff, street wash waters and drainage and discharges them directly to a receiving water (*i.e.*, without treatment at a POTW). While sanitary sewers are not designed to collect large amounts of runoff from precipitation events or provide widespread drainage, they typically are built with some allowance for higher flows that occur during periods of high groundwater and storm events. They are thus able to handle minor and controllable amounts of extraneous flow (*i.e.*, inflow and infiltration, or I/I) that enter the system. Inflow generally refers to water other than wastewater—typically precipitation like rain or snowmelt—that enters a sewer system through a direct connection to the sewer. Infiltration generally refers to other water that enters a sewer system from the ground, for example through defects in the sewer.

Municipal sanitary sewer collection systems can consist of a widespread network of pipes and associated components (*e.g.*, pump stations). These systems provide wastewater collection service to the community in which they are located. In some situations, the municipality that owns the collector sewers may not provide treatment of wastewater, but only conveys its wastewater to a collection system that is owned and operated by a different municipal entity (such as a regional sewer district). This is known as a satellite community. A “satellite” community is a sewage collection system owner/operator that does not have ownership of the treatment facility and the wastewater outfall but rather the responsibility to collect and convey the community’s wastewater to a POTW treatment plant for treatment. See 75 Fed. Reg. 30395, 30400 (June 1, 2010).

Municipal sanitary sewer collection systems play a critical role in protecting human health and the environment. Proper operation and maintenance of sanitary sewer collection systems is integral to ensuring that wastewater is collected, transported, and treated at POTW treatment plants. Through effective operation and maintenance, collection system operators can maintain the capacity of the collection system; reduce the occurrence of temporary problem situations such as blockages; protect the structural integrity and capacity of the system; anticipate potential problems and take preventive measures; and indirectly improve treatment plant performance by minimizing I/I-related hydraulic overloading.

Despite their critical role in the nation’s infrastructure, many collection systems exhibit poor performance and are subjected to flows that exceed system capacity. Untreated or partially treated overflows from a sanitary sewer system are termed “sanitary sewer overflows” (SSOs). SSOs include releases from sanitary sewers that reach waters of the United States as well as those that back up into buildings and flow out of manholes into city streets.

There are many underlying reasons for the poor performance of collection systems. Much of the nation’s sanitary sewer infrastructure is old, and aging infrastructure has deteriorated with time. Communities also sometimes fail to provide capacity to accommodate increased sewage delivery

³ See generally Report to Congress: Impacts and Control of CSOs and SSOs (EPA 833-R-04-001) (2004), from which EPA Region 1 has drawn this background material.

and treatment demand from increasing populations. Furthermore, institutional arrangements relating to the operation of sewers can pose barriers to coordinated action, because many municipal sanitary sewer collection systems are not entirely owned or operated by a single municipal entity.

The performance and efficiency of municipal sanitary sewer collection systems influence the performance of sewage treatment plants. When the structural integrity of a municipal sanitary sewer collection system deteriorates, large quantities of infiltration (including rainfall-induced infiltration) and inflow can enter the collection system, causing it to overflow. These extraneous flows are among the most serious and widespread operational challenges confronting treatment works.⁴

Infiltration can be long-term seepage of water into a sewer system from the water table. In some systems, however, the flow characteristics of infiltration can resemble those of inflow, *i.e.*, there is a rapid increase in flow during and immediately after a rainfall event, due, for example, to rapidly rising groundwater. This phenomenon is sometimes referred to as rainfall-induced infiltration.

Sanitary sewer systems can also overflow during periods of normal dry weather flows. Many sewer system failures are attributable to natural aging processes or poor operation and maintenance. Examples include years of wear and tear on system equipment such as pumps, lift stations, check valves, and other moveable parts that can lead to mechanical or electrical failure; freeze/thaw cycles, groundwater flow, and subsurface seismic activity that can result in pipe movement, warping, brittleness, misalignment, and breakage; and deterioration of pipes and joints due to root intrusion or other blockages.

Inflow and infiltration impacts are often regional in nature. Satellite collection systems in the communities farthest from the POTW treatment plant can cause sanitary sewer overflows (“SSOs”) in communities between them and the treatment plant by using up capacity in the interceptors. This can cause SSOs in the interceptors themselves or in the municipal sanitary sewers that lead to them. The implication of this is that corrective solutions often must also be regional in scope to be effective.

The health and environmental risks attributed to SSOs vary depending on a number of factors including location and season (potential for public exposure), frequency, volume, the amount and type of pollutants present in the discharge, and the uses, conditions, and characteristics of the receiving waters. The most immediate health risks associated with SSOs to waters and other areas with a potential for human contact are associated with exposure to bacteria, viruses, and other pathogens.

Human health impacts occur when people become ill due to contact with water or ingestion of water or shellfish that have been contaminated by SSO discharges. In addition, sanitary sewer

⁴ In a 1989 Water Pollution Control Federation survey, 1,003 POTWs identified facility performance problems. Infiltration and inflow was the most frequently cited problem, with 85 percent of the facilities reporting I/I as a problem. I/I was cited as a major problem by 41 percent of the facilities (32 percent as a periodic problem).

systems can back up into buildings, including private residences. These discharges provide a direct pathway for human contact with untreated wastewater. Exposure to land-based SSOs typically occurs through the skin via direct contact. The resulting diseases are often similar to those associated with exposure through drinking water and swimming (*e.g.*, gastroenteritis), but may also include illness caused by inhaling microbial pathogens. In addition to pathogens, raw sewage may contain metals, synthetic chemicals, nutrients, pesticides, and oils, which also can be detrimental to the health of humans and wildlife.

II. Region 1 Past Practice of Permitting POTWs that Include Municipal Satellite Collection Systems

Region 1's practice in permitting regionally integrated POTWs has developed in tandem with its increasing focus on addressing I/I in sewer collection systems, in response to the concerns outlined above. Up to the early 1990s, POTW permits issued by Region 1 generally did not include specific requirements for collection systems. When I/I and the related issue of SSOs became a focus of concern both nationally and within the region in the mid-1990s, Region 1 began adding general requirements to POTW permits that required the permittees to "eliminate excessive infiltration and inflow" and provide an annual "summary report" of activities to reduce I/I. As the Region gathered more information and gained more experience in assessing these reports and activities, it began to include more detailed requirements and reporting provisions in these permits.

MassDEP also engaged in a parallel effort to address I/I, culminating in 2001 with the issuance of MassDEP Policy No. BRP01-1, "Interim Infiltration and Inflow Policy." Among other provisions, this policy established a set of standard NPDES permit conditions for POTWs that included development of an I/I control plan (including funding sources, identification and prioritization of problem areas, and public education programs) and detailed annual reporting requirements (including mapping, reporting of expenditures and I/I flow calculations). Since September 2001, these requirements have been the basis for the standard operation and maintenance conditions related to I/I.

Regional treatment plants presented special issues as I/I requirements became more specific, as it is generally the member communities, rather than the regional sewer district, that own the collection systems that are the primary source of I/I. Before the focus on I/I, POTW permits did not contain specific requirements related to the collection system component of POTWs. Therefore, when issuing NPDES permits to authorize discharges from regionally integrated treatment POTWs, Region 1 had generally only included the legal entity owning and/or operating the regionally centralized wastewater treatment plant as the permittee. As the permit conditions were focused on the treatment plant and its effluent discharge, a permit issued only to the owner or operator of the treatment plant was sufficient to ensure that permit conditions could be fully implemented and that EPA had authority to enforce the permit requirements.

In implementing the I/I conditions, Region 1 initially sought to maintain the same structure, placing the responsibility on the regional sewer district to require I/I activities by the contributing systems and to collect the necessary information from those systems for submittal to EPA.

MassDEP's 2001 Interim I/I Policy reflected this approach, containing a condition for regional systems:

((FOR REGIONAL FACILITIES ONLY)) The permittee shall require, through appropriate agreements, that all member communities develop and implement infiltration and inflow control plans sufficient to ensure that high flows do not cause or contribute to a violation of the permittee's effluent limitations, or cause overflows from the permittee's collection system.

As existing NPDES permittees, the POTW treatment plants were an obvious locus of regulation. The Region assumed the plants would be in a position to leverage preexisting legal and/or contractual relationships with the satellite collection systems they serve to perform a coordinating function, and that utilizing this existing structure would be more efficient than establishing a new system of direct reporting to EPA by the collection system owners. The Region also believed that the owner/operator of the POTW treatment plant would have an incentive to reduce flow from contributing satellite systems because doing so would improve treatment plant performance and reduce operation costs. While relying on this cooperative approach, however, Region 1 also asserted that it had the authority to require that POTW collection systems be included as NPDES permittees and that it would do so if it proved necessary. Indeed, in 2001 Region 1 acceded to Massachusetts Water Resources Authority's ("MWRA") request to include as co-permittees the contributing systems to the MWRA Clinton wastewater treatment plant ("WWTP") based on evidence provided by MWRA that its relationship with those communities would not permit it to run an effective I/I reduction program for these collection systems. Region 1 also put municipal satellite collection systems on notice that they would be directly regulated through legally enforceable permit requirements if I/I reductions were not pursued or achieved.

In time, the Region realized that its failure to assert direct jurisdiction over municipal satellite dischargers was becoming untenable in the face of mounting evidence that cooperative (or in some cases non-existent) efforts on the part of the POTW treatment plant and associated satellites were failing to comprehensively address the problem of extraneous flow entering the POTW. The ability and/or willingness of regional sewer districts to attain meaningful I/I efforts in their member communities varied widely. The indirect structure of the requirements also tended to make it difficult for EPA to enforce the implementation of meaningful I/I reduction programs.

It became evident to Region 1 that a POTW's ability to comply with CWA requirements depended on successful operation and maintenance of not only the treatment plant but also the collection system. For example, the absence of effective I/I reduction and operation/maintenance programs was impeding the Region's ability to prevent or mitigate the human health and water quality impacts associated with SSOs. Additionally, these excess flows stressed POTW treatment plants from a hydraulic capacity and performance standpoint, adversely impacting effluent quality. *See Exhibit B* (Analysis of extraneous flow trends and SSO reporting for representative systems). Addressing these issues in regional systems was essential, as these include most of the largest systems in terms of flow, population served and area covered.

The Region's practice of imposing NPDES permit conditions on the municipal collection systems in addition to the treatment plant owner/operator represents a necessary and logical progression in its continuing effort to effectively address the serious problem of I/I in sewer collection systems.⁵ In light of its past permitting experience and the need to effectively address the problem of extraneous flow on a system-wide basis, Region 1 decided that it was necessary to refashion permits issued to regionally integrated POTWs to include all owners/operators of the treatment works (*i.e.*, the regional centralized POTW treatment plant and the municipal satellite collection systems).⁶ Specifically, Region 1 determined that the satellite systems should be subject as co-permittees to a limited set of O&M-related conditions on permits issued for discharges from regionally integrated treatment works. These conditions pertain only to the portions of the POTW collection system that the satellites own. This ensures maintenance and pollution control programs are implemented with respect to all portions of the POTW. Accordingly, since 2005, Region 1 has generally included municipal satellite collection systems as co-permittees for limited purposes while it required the owner/operator of the treatment plant, as the primary permittee, to comply with the full array of NPDES requirements, including secondary treatment and water-quality based effluent limitations. The Region has identified 25 permits issued by the Region to POTWs in New Hampshire and Massachusetts that include municipal satellite collection systems as co-permittees. *See Exhibit A.* The 25 permits include a total of 55 satellite collection systems as co-permittees.

III. Legal Authority

The Region's prior and now superseded practice of limiting the permit only to the legal entity owning and/or operating the wastewater treatment plant had never been announced as a regional policy or interpretation. Similarly, the Region's practice of imposing NPDES permit conditions on the municipal collection systems in addition to the treatment plant owner/operator has also

⁵ Although the Region has in the past issued NPDES permits only to the legal entities owning and operating the wastewater treatment plant (*i.e.*, only a portion of the "treatment works"), the Region's reframing of permits to include municipal satellite collection systems does not represent a break or reversal from its historical legal position. Region 1 has never taken the legal position that the satellite collection systems are beyond the reach of the CWA and the NPDES permitting program. Rather, the Region as a matter of discretion had merely never determined it necessary to exercise its statutory authority to directly reach these facilities in order to carry out its NPDES permitting obligations under the Act.

Although the Region adopted a co-permittee structure to deal I/I problems in the municipal satellite collection systems, that decision does nothing to foreclose a permitting authority from opting for alternative permitting approaches that are consistent with applicable law. Each permitting authority has the discretion to determine which permitting approach best achieves the requirements of the Act based on the facts and circumstances before it. Upon determining that direct regulation of a satellite collection system via an NPDES permit is warranted, a permitting authority has the discretion to make the owner or operator of the collection system a co-permittee, or to cover it through an individual or general permit. Nothing in EPA regulations precludes the issuance of a separate permit to an entity that is part of the larger system being regulated. As in the pretreatment program, there are many ways to ensure that upstream collection systems are adequately contributing to the successful implementation of a POTW's permit requirements.

⁶ EPA has "considerable flexibility in framing the permit to achieve a desired reduction in pollutant discharges." *Natural Resources Defense Council, Inc. v. Costle*, 568 F.2d 1369, 1380 (D.C.Cir.1977). ("[T]his ambitious statute is not hospitable to the concept that the appropriate response to a difficult pollution problem is not to try at all.").

never been expressly announced as a uniform, region-wide policy or interpretation. Upon consideration of the Board's decision, described above, Region 1 has decided to supply a clearer, more detailed explanation regarding its use of a co-permittee structure when issuing NPDES permits to regionally integrated POTWs. In this section, the Region addresses the questions posed by the Board in the *Upper Blackstone* decision referenced above.

(1) In the case of a regionally integrated POTW composed of municipal satellite collection systems owned by different entities and a treatment plant owned by another, is the scope of NPDES authority limited to owners/operators of the POTW treatment plant, or does the authority extend to owners/operators of the municipal satellite collection systems that convey wastewater to the POTW treatment plant?

The scope of NPDES authority extends beyond the owners/operators of the POTW treatment plant to include the owners/operators of the municipal satellite collection systems conveying wastewater to the treatment plant for the reasons discussed below.

The CWA prohibits the "discharge of any pollutant by any person" from any point source to waters of the United States, except, *inter alia*, in compliance with an NPDES permit issued by EPA or an authorized state pursuant to Section 402 of the CWA. CWA § 301, 402(a)(1); 40 C.F.R. § 122.1(b).

"Publicly owned treatment works" are facilities that, when they discharge, are subject to the NPDES program. Statutorily, POTWs as a class must meet performance-based effluent limitations based on available wastewater treatment technology. *See* CWA § 402(a)(1) ("[t]he Administrator may...issue a permit for the discharge of any pollutant...upon condition that such discharge will meet (A) all applicable requirements under [section 301]..."); § 301(b)(1)(B) ("In order to carry out the objective of this chapter there shall be achieved...for publicly owned treatment works in existence on July 1, 1977...effluent limitations based upon secondary treatment[.]"); *see also* 40 C.F.R. pt 133. In addition to secondary treatment requirements, POTWs are also subject to water quality-based effluent limits if necessary to achieve applicable state water quality standards. *See* CWA § 301(b)(1)(C). *See also* 40 C.F.R. § 122.44(a)(1) ("...each NPDES permit shall include...[t]echnology-based effluent limitations based on: effluent limitations and standards published under section 301 of the Act") and (d)(1) (same for water quality standards and state requirements). NPDES regulations similarly identify the "POTW" as the entity subject to regulation. *See* 40 C.F.R. § 122.21(a) (requiring "new and existing POTWs" to submit information required in 122.21(j)," which in turn requires "all POTWs," among others, to provide permit application information).

The CWA and its implementing regulations broadly define "POTW" to include not only wastewater treatment plants but also the sewer systems and associated equipment that collect wastewater and convey it to the treatment plants. When a municipal satellite collection system conveys wastewater to the POTW treatment plant, the scope of NPDES authority extends to both the owner/operators of the treatment facility and the municipal satellite collection system, because the POTW is discharging pollutants.

Under section 212 of the Act,

“(2)(A) The term ‘treatment works’ means any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature to implement section 1281 of this title, or necessary to recycle or reuse water at the most economical cost over the estimated life of the works, including intercepting sewers, outfall sewers, *sewage collection systems* [emphasis added], pumping, power, and other equipment, and their appurtenances; extensions, improvements, remodeling, additions, and alterations thereof; elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities; and any works, including site acquisition of the land that will be an integral part of the treatment process (including land used for the storage of treated wastewater in land treatment systems prior to land application) or is used for ultimate disposal of residues resulting from such treatment.

(B) In addition to the definition contained in subparagraph (A) of this paragraph, ‘treatment works’ means any other method or system for preventing, abating, reducing, storing, treating, separating, or disposing of municipal waste, including storm water runoff, or industrial waste, including waste in combined storm water and *sanitary sewer systems* [emphasis added]. Any application for construction grants which includes wholly or in part such methods or systems shall, in accordance with guidelines published by the Administrator pursuant to subparagraph (C) of this paragraph, contain adequate data and analysis demonstrating such proposal to be, over the life of such works, the most cost efficient alternative to comply with sections 1311 or 1312 of this title, or the requirements of section 1281 of this title.”

EPA has defined POTW as follows:

“The term *Publicly Owned Treatment Works* or *POTW* [emphasis in original]...includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in section 502(4) of the Act, which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.”

See 40 C.F.R. §§ 403.3(q) and 122.2.

Thus, under the CWA and its implementing regulations, wastewater treatment plants and the sewer systems and associated equipment that collect wastewater and convey it to the treatment plants fall within the broad definition of “POTW.”

The statutory and regulatory definitions plainly encompass both the POTW treatment plant and municipal satellite collection systems conveying wastewater to the POTW treatment plant even if the treatment plant and the satellite collection system have different owners. Municipal satellite collection systems indisputably fall within the definition of a POTW. First, they are “sewage collection systems” under section 212(A) and “sanitary sewer systems” under section 212(B). Second, they convey wastewater to a POTW treatment plant for treatment under 40 C.F.R. §

403.3(q)). The preamble to the rule establishing the regulatory definition of POTW supports the reading that the treatment plant comprises only one portion of the POTW. *See* 44 Fed. Reg. 62260, 62261 (Oct. 29, 1979).⁷ Consistent with Region 1's interpretation, courts have similarly taken a broad reading of the terms treatment works and POTW.⁸ Finally, EPA has long recognized that a POTW can be composed of different parts, and that sometimes direct control is required under a permit for all parts of the POTW system, not just the POTW treatment plant segment. *See Multijurisdictional Pretreatment Programs Guidance Manual*, Office of Water (4203) EPA 833-B-94-005 (June 1994) at 19. ("If the contributing jurisdiction owns or operates the collection system within its boundaries, then it is a co-owner or operator of the POTW. As such, it can be included on the POTW's NPDES permit and be required to develop a pretreatment program. Contributing jurisdictions should be made co-permittees where circumstances or experience indicate that it is necessary to ensure adequate pretreatment program implementation."). The Region's interpretation articulated here is consistent with the precepts of the pretreatment program, which pertains to the same regulated entity, i.e., the POTW.⁹

Thus, under the statutory and regulatory definitions, a satellite collection system owned by one municipality that transports municipal sewage to another portion of the POTW owned by another municipality can be classified as part of a single integrated POTW system discharging to waters of the U.S.

(2) *If the latter, how far up the collection system does NPDES jurisdiction reach, i.e., where does the "collection system" end and the "user" begin?*

NPDES jurisdiction extends beyond the treatment plant to the outer boundary of the municipally-owned sewage collection systems, that is, to the outer bound of those sewers whose purpose is to transport wastewater for others to a POTW treatment plant for treatment, as explained below.

⁷ "A new provision...defining the term 'POTW Treatment Plant' has been added to avoid an ambiguity that now exists whenever a reference is made to a POTW (publicly owned treatment works). ...[T]he existing regulation defines a POTW to include both the treatment plant and the sewer pipes and other conveyances leading to it. As a result, it is unclear whether a particular reference is to the pipes, the treatment plant, or both. The term "POTW treatment plant" will be used to designate that portion of the municipal system which is actually designed to provide treatment to the wastes received by the municipal system."

⁸ *See, e.g., United States v. Borowski*, 977 F.2d 27, 30 n.5 (1st Cir. 1992) ("We read this language [POTW definition] to refer to such sewers, pipes and other conveyances that are publicly owned. Here, for example, the City of Burlington's sewer is included in the definition because it conveys waste water to the Massachusetts Water Resource Authority's treatment works."); *Shanty Town Assoc. v. Env'tl. Prot. Agency*, 843 F.2d 782, 785 (4th Cir. 1988) ("As defined in the statute, a 'treatment work' need not be a building or facility, but can be any device, system, or other method for treating, recycling, reclaiming, preventing, or reducing liquid municipal sewage and industrial waste, including storm water runoff.") (citation omitted); *Comm. for Consideration Jones Fall Sewage System v. Train*, 375 F. Supp. 1148, 1150-51 (D. Md. 1974) (holding that NPDES wastewater discharge permit coverage for a wastewater treatment plant also encompasses the associated sanitary sewer system and pump stations under § 1292 definition of "treatment work").

⁹ The fact that EPA has endorsed a co-permittee approach in addressing pretreatment issues in situations where the downstream treatment plant was unable to adequately regulate industrial users to the collection system in another jurisdiction reinforces the approach taken here.

As discussed in response to Question 1 above, the term “treatment works” is defined to include “sewage collection systems.” CWA § 212. In order to identify the extent of the sewage collection system for purposes of co-permittee regulation—*i.e.*, to identify the boundary between the portions of the collection system that are subject to NPDES requirements and those that are not—Region 1 is relying on EPA’s regulatory interpretation of the term “sewage collection system.” In relevant part, EPA regulations define “sewage collection system” at 40 C.F.R. § 35.905 as:

“.... each, and all, of the common lateral sewers, within a publicly owned treatment system, which are primarily installed to receive waste waters directly from facilities which convey waste water from individual structures or from private property and which include service connection “Y” fittings designed for connection with those facilities. The facilities which convey waste water from individual structures, from private property to the public lateral sewer, or its equivalent, are specifically excluded from the definition....”

Put otherwise, a municipal satellite collection system is subject to NPDES jurisdiction under the Region’s approach insofar as it transports wastewater for others to a POTW treatment plant for treatment. This test (*i.e.*, common sewer installed to receive and carry waste water from others) allows Region 1 to draw a principled, predictable and readily ascertainable boundary between the POTW’s collection system and the users. This test would exclude, for example, single user branch drainpipes that collect and transport wastewater from plumbing fixtures in a commercial building or public school to the common lateral sewer, just as service connections from private residential structures to lateral sewers are excluded. This type of infrastructure would not be considered part of the collection system, because it is not designed to receive and carry wastewaters from other users. Rather, it is designed to transport its users’ wastewater to such a common collection system at a point further down the sanitary sewer system.

EPA’s reliance on the definition of “sewage collection system” from the construction grants regulations for interpretative guidance is reasonable because these regulations at 40 C.F.R. Part 35, subpart E pertain to grants specifically for POTWs, the entity that is the subject of this NPDES policy. Additionally, the term “sewage collection systems” expressly appears in the definition of treatment works under section 212 of the Act as noted above.

(3) Do municipal satellite collection systems “discharge [] a pollutant” within the meaning of the statute and regulations?

Yes, the collection system “discharges a pollutant” because it adds pollutants to waters of the U.S. from a point source. This position is consistent with the definition of “discharge of a pollutant” at 40 C.F.R. § 122.¹⁰ The fact that a collection system may be located in the upper reaches of the POTW and not necessarily near the ultimate discharge point at the treatment plant,

¹⁰ This position differs from that taken by the Region in the *Upper Blackstone* litigation. There, the Region stated that the treatment plant was the discharging entity for regulatory purposes. The Region has clarified this view upon further consideration of the statute, EPA’s own regulations and case law and determined that a municipal satellite collection system in a POTW is a discharging entity for regulatory purposes.

or that its contribution may be commingled with other wastewater flows prior to the discharge point, is not material to the question of whether it “discharges” a pollutant and consequently may be subject to conditions of an NPDES permit issued for discharges from the POTW.¹¹ 40 C.F.R. § 122.2 defines “discharge of a pollutant” as follows:

“Discharge of a pollutant means:

- (a) Any addition of any ‘pollutant’ or combination of pollutants to ‘waters of the United States’ from any ‘point source,’ or
- (b) Any addition of any pollutant or combination of pollutants to the waters of the ‘contiguous zone’ or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any ‘indirect discharger.’”

POTW treatment plants as well as the municipal satellite collection systems that comprise portions of the larger POTW and that transport flow to the POTW treatment plant clearly add pollutants or combinations of pollutants to waters of the U.S. and to waters of the “contiguous zone” and are thus captured under sections (a) and (b) of this definition.¹²

(4) Are municipal satellite collection systems “indirect dischargers” and thus excluded from NPDES permitting requirements?

No, municipal satellite collection systems that convey wastewater from domestic sources to another portion of the POTW for treatment are not “indirect dischargers” to the POTW.

¹¹ As explained more fully below, non-domestic contributors of pollutants to the collection system and treatment plant do not require NPDES permits because they are regulated through the pretreatment program under Section 307 of the CWA and are specifically excluded from needing an NPDES permit. 40 C.F.R. § 122.3(c).

¹² Some municipal satellite collection systems have argued that the addition of pollutants to waters of the United States from pipes, sewers or other conveyances that go to a *treatment plant* are not a “discharge of a pollutant” under 40 C.F.R. § 122.2. This is erroneous. Only one category of such discharges is excluded: indirect discharges. For the reasons explained below in section 4, the satellite system discharges at issue here are not indirect discharges. It is correct that the discharge of wastewater that does not go to the treatment works is included as a discharge under the definition. However, interpreting the *inclusion* of such discharges under the definition as categorically *excluding* the conveyance of other discharges that do go to the treatment works is not a reasonable reading of the regulation. This argument is also flawed in that it incorrectly equates “treatment works,” the term used in the definition above, with “treatment plant.” To interpret “treatment works” as it appears in the regulatory definition of “discharge of a pollutant” as consisting of only the POTW treatment plant would be inconsistent with the definition of “treatment works” at 40 C.F.R. § 403.3(q), which expressly includes the collection system. *See also* § 403.3(r) (defining “POTW Treatment Plant” as “*that portion* [emphasis added] of the POTW which is designed to provide treatment (including recycling and reclamation) of municipal sewage and industrial waste.”)

Section 307(b) of the Act requires EPA to establish regulatory pretreatment requirements to prevent the “introduction of pollutants into treatment works” that interfere, pass through or are otherwise incompatible with such works. Section 307 is implemented through the General Pretreatment Regulations for Existing and New Sources of Pollution (40 C.F.R. Part 403) and categorical pretreatment standards (40 C.F.R. Parts 405-471). Section 403.3(i) defines “indirect discharger” as “any non-domestic” source that introduces pollutants into a POTW and is regulated under pretreatment standards pursuant to CWA § 307(b)-(d). The source of an indirect discharge is termed an “industrial user.” *Id.* at § 403.3(j). Under regulations governing the NPDES permitting program, the term “indirect discharger” is defined as “a non-domestic discharger introducing ‘pollutants’ to a ‘publicly owned treatment works.’” 40 C.F.R. § 122.2. Indirect dischargers are excluded from NPDES permit requirements at 40 C.F.R. § 122.3(c), which provides, “The following discharges do not require an NPDES permit: . . . The introduction of sewage, industrial wastes or other pollutants into publicly owned treatment works by indirect dischargers.”

Municipal satellite collection satellite systems are not indirect dischargers as that term is defined under part 122 or 403 regulations. Unlike indirect dischargers, municipal satellite collection systems are not a non-domestic discharger “introducing pollutants” to POTWs as defined in 40 C.F.R. § 122.2. Instead, they themselves fall within the definition of POTW, whose components consist of the municipal satellite collection system owned and operated by one POTW and a treatment system owned and operated by another POTW. Additionally, they are not a non-domestic *source* regulated under section 307(b) that introduces pollutants into a POTW within the meaning of § 403.3(i). Rather, they are part of the POTW and collect and convey municipal sewage from industrial, commercial and domestic users of the POTW.

The Region’s determination that municipal satellite collection systems are not indirect dischargers is, additionally, consistent with the regulatory history of the term indirect discharger. The 1979 revision of the part 122 regulations defined “indirect discharger” as “a non-municipal, non-domestic discharger introducing pollutants to a publicly owned treatment works, which introduction does not constitute a ‘discharge of pollutants’...” *See* National Pollutant Discharge Elimination System, 44 Fed. Reg. 32854, 32901 (June 7, 1979). The term “non-municipal” was removed in the Consolidated Permit Regulations, 45 Fed. Reg. 33290, 33421 (May 19, 1980) (defining “indirect discharger” as “a nondomestic discharger...”). Although the change was not explained in detail, the substantive intent behind this provision remained the same. EPA characterized the revision as “minor wording changes.” 45 Fed. Reg. at 33346 (Table VII: “Relationship of June 7[, 1979] Part 122 to Today’s Regulations”). The central point again is that under any past or present regulatory incarnation, municipal satellite collection systems, as POTWs, are not within the definition of “indirect discharger,” which is limited to non-domestic sources subject to section 307(b) that introduce pollutants to POTWs.

(5) How is the Region’s rationale consistent with the references to “municipality” in the regulatory definition of POTW found at 40 C.F.R. § 403.3(q), and the definition’s statement that “[t]he term also means the municipality....which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works?”

There is no inconsistency between the Region's view that municipally-owned satellite collection systems fall within the definition of POTW, and the references to municipality in 40 C.F.R. § 403.3(q), including the final sentence of the regulatory definition of POTW in the pretreatment regulations.

The Region's co-permitting rationale is consistent with the first part of the pretreatment program's regulatory definition of POTW, because the Region is only asserting NPDES jurisdiction over satellite collection systems that are owned by a "State or municipality (as defined by section 502(4) of the Act)." The term "municipality" as defined in CWA § 502(4) "means a city, town, borough, county, parish, district, association, or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes..." Thus, in order to qualify under this definition, a wastewater collection system need only be "owned by a State or municipality." There is no requirement that the constituent components of a regionally integrated POTW, *i.e.*, the collection system and regional centralized POTW treatment plant, be owned by the same State or municipal entity.

Furthermore, there is no inconsistency between the Region's view that a satellite collection system is part of a POTW, and the final sentence of the regulatory definition of POTW in the pretreatment regulations. As noted above, the sentence provides that "POTW" may "also" mean a municipality which has jurisdiction over indirect discharges to and discharges from the treatment works. This is not a limitation because of the use of the word "also" (contrast this with the "only if" language in the preceding sentence of the regulatory definition).

(6) How does the Region's rationale comport with the permit application and signatory requirements under NPDES regulations?

"Any person who discharges or proposes to discharge pollutants"... must comply with permit application requirements set forth in 40 C.F.R. § 122.21 ("Application for a Permit"), including the duty to apply in subsection 122.21(a). It is the operator's duty to obtain a permit. *See* 40 C.F.R. § 122.21(b). An operator of a sewage collection system in a regionally integrated treatment works is operating a portion of the POTW and thus can be asked to submit a separate permit application pursuant to § 122.21(a) (requiring applicants for "new and existing POTWs" to submit information required in 122.21(j)," which in turn requires "all POTWs," among others, to provide permit application information). In the Region's experience, however, sufficient information about the collection system can be obtained from the treatment plant operator's permit application. The NPDES permit application for POTWs solicits information concerning portions of the POTW beyond the treatment plant itself, including the collection system used by the treatment works. *See* 40 C.F.R. § 122.21(j)(1). Where this information is not sufficient for writing permit conditions that apply to a separately owned municipal satellite system, EPA can request that the satellite system to submit an application with the information required in 122.21(j), or alternatively use its authority under CWA section 308 to solicit the necessary information. Because Region 1 believes that it will typically receive information sufficient for NPDES permitting purposes from the POTW treatment plant operator's application, the Region will formalize its historical practice by issuing written waivers to exempt municipal satellite collection systems from permit application and signatory requirements in accordance with 40

C.F.R. § 122.21(j).¹³ To the extent the Region requires additional information, it intends to use its information collection authority under CWA § 308.

IV. Basis for the Specific Conditions to which the Municipal Satellite Collection Systems are Subject as Co-permittees

Section 402(a) of the CWA is the legal authority for extending NPDES conditions to all portions of the municipally-owned treatment works to ensure proper operation and maintenance and to reduce the quantity of extraneous flow into the POTW. This section of the Act authorizes EPA to issue a permit for the “discharge of pollutants” and to prescribe permit conditions as necessary to carry out the provisions of the CWA, including Section 301 of the Act. Among other things, Section 301 requires POTWs to meet performance-based requirements based on secondary treatment technology, as well as any more stringent requirements of State law or regulation, including water quality standards. *See* CWA § 301(b)(1)(B),(C).

The Region imposes requirements on co-permittees when it determines that they are necessary to assure continued achievement of effluent limits based on secondary treatment requirements and state water quality standards in accordance with sections 301 and 402 of the Act, and to prevent unauthorized discharges of sewage from downstream collection systems. With respect to achieving effluent limits, the inclusion of the satellite systems as co-permittees may be necessary when high levels of I/I dilute the strength of influent wastewater and increase the hydraulic load on treatment plants, which can reduce treatment efficiency (*e.g.*, result in violations of technology-based percent removal limitations for BOD and TSS due to less concentrated influent, or violation of other technology-based or water quality-based effluent limitations due to reduction in treatment efficiency). Excess flows from an upstream collection system can also lead to bypassing a portion of the treatment process, or in extreme situations make biological treatment facilities inoperable (*e.g.*, wash out the biological organisms that treat the waste).

By preventing excess flows, the co-permittee requirements will also reduce water quality standards violations that result from SSOs by lessening their frequency and extent. *See Exhibit B* (Analysis of extraneous flow trends and SSO reporting for representative systems). SSOs that reach waters of the U.S. are discharges in violation of section 301(a) of the CWA to the extent not authorized by an NPDES permit.

Imposing standard permit conditions on the satellite communities may be necessary to give full effect to some of the standard permit conditions applicable to all NPDES permits at 40 C.F.R. § 122.41. To illustrate, NPDES permitting regulations require standard conditions that “apply to all NPDES permits,” pursuant to 40 C.F.R. § 122.41, including a duty to mitigate and to properly operate and maintain “all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the

¹³ EPA may waive applications for municipal satellite collection systems, when requiring such applications may result in duplicative or immaterial information. The Regional Administrator (“RA”) may waive any requirement of this paragraph if he or she has access to substantially identical information. 40 C.F.R. § 122.21(j). *See generally*, 64 Fed. Reg. 42440 (August 4, 1999). The RA may also waive any application requirement that is not of material concern for a specific permit. *Id.*

conditions of the permit.” *Id.* at § 122.41(d), (e). If the owner or operator of a downstream POTW treatment plant is unable, due to legal constraints for example, or unwilling to ensure that upstream collection systems are implementing requirements concerning the collection system, such as I/I requirements, making the upstream POTW collection system subject to its own permit requirements may be the only or best available option to give full effect to these permit obligations.

V. Conclusion

For all the reasons above, Region 1 has determined that it is reasonable to, as necessary, directly regulate municipal satellite collection systems as co-permittees when issuing NPDES permits for discharges from regionally integrated treatment works.

Exhibit A

Name	Issue Date
Massachusetts Water Resources Authority – Clinton (NPDES Permit No. MA0100404)	September 27, 2000
City of Brockton (NPDES Permit No. MA0101010)	May 11, 2005
City of Marlborough (NPDES Permit No. MA0100480)	May 26, 2005
Westborough Wastewater Treatment Plant (NPDES Permit No. MA0100412)	May 20, 2005
Lowell Regional Wastewater Utilities (NPDES Permit No. MA0100633)	September 1, 2005
Town of Webster Sewer Department (NPDES Permit No. MA0100439)	March 24, 2006
Town of South Hadley, Board of Selectmen (NPDES Permit No. MA0100455)	June 12, 2006
City of Leominster (NPDES Permit No. MA0100617)	September 28, 2006
Hoosac Water Quality District (NPDES Permit No. MA0100510)	September 28, 2006
Board of Public Works, North Attleborough (NPDES Permit No. MA0101036)	January 4, 2007
Town of Sunapee (NPDES Permit No. 0100544)	February 21, 2007
Lynn Water and Sewer Commission (NPDES Permit No. MA0100552)	March 3, 2007
City of Concord (NPDES Permit No. NH0100331)	June 29, 2007
City of Keene (NPDES Permit No. NH0100790)	August 24, 2007
Town of Hampton (NPDES No. NH0100625)	August 28, 2007
Town of Merrimack, NH (NPDES No. NH0100161)	September 25, 2007
City of Haverhill (NPDES Permit No. MA0101621)	December 5, 2007
Greater Lawrence Sanitary District (NPDES Permit No. MA0100447)	August 11, 2005
City of Pittsfield, Department of Public Works (NPDES No. MA0101681)	August 22, 2008

City of Manchester (NPDES No. NH0100447)	September 25, 2008
City of New Bedford (NPDES Permit No. MA0100781)	September 28, 2008
Winnepesaukee River Basin Program Wastewater Treatment Plant (NPDES Permit No. NH0100960)	June 19, 2009
City of Westfield (NPDES Permit No. MA0101800)	September 30, 2009
Hull Permanent Sewer Commission (NPDES Permit No. MA0101231)	September 1, 2009
Gardner Department of Public Works (NPDES Permit No. MA0100994)	September 30, 2009

Exhibit B

Analysis of extraneous flow trends and SSO reporting for representative systems

I. Representative POTWS

The **South Essex Sewer District (SESD)** is a regional POTW with a treatment plant in Salem, Massachusetts. The SESD serves a total population of 174,931 in six communities: Beverly, Danvers, Marblehead, Middleton, Peabody and Salem. The **Charles River Pollution Control District (CRPCD)** is a regional POTW with a treatment plant in Medway, Massachusetts. The CRPCD serves a total population of approximately 28,000 in four communities: Bellingham, Franklin, Medway and Millis. The CRPCD has been operating since 2001 under a permit that places requirements on the treatment plant to implement I/I reduction programs with the satellite collection systems, while SESD's existing permit does not include specific I/I requirements related to the satellite collection systems, in contrast to Region 1's current practice of including the satellite collection systems as co-permittees.

II. Comparison of flows to standards for nonexcessive infiltration and I/I

Flow data from the facilities' discharge monitoring reports (DMRs) are shown in comparison to the EPA standard for nonexcessive infiltration/inflow (I/I) of 275 gpcd wet weather flow and the EPA standard for nonexcessive infiltration of 120 gallons per capita per day (gpcd) dry weather flow; the standards are multiplied by population served for comparison with total flow from the facility. See *I/I Analysis and Project Certification*, EPA Ecol. Pub. 97-03 (1985); 40 CFR 35.2005(b)(28) and (29).

Figures 1 and 2 show the daily maximum flows (the highest flow recorded in a particular month) for the CRPCD and SESD, respectively, along with monthly precipitation data from nearby weather stations. Both facilities experience wet weather flows far exceeding the standard for nonexcessive I/I, particularly in wet months, indicating that these facilities are receiving high levels of inflow and wet weather infiltration.

Figure 1. CRPCD Daily Maximum Flow Compared to Nonexcessive I/I Standard

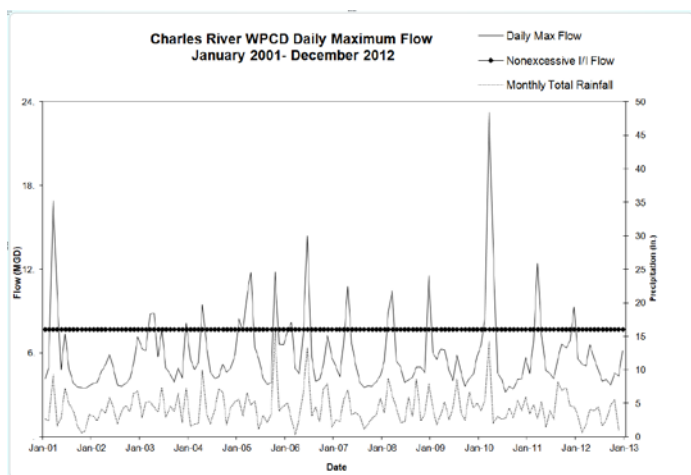
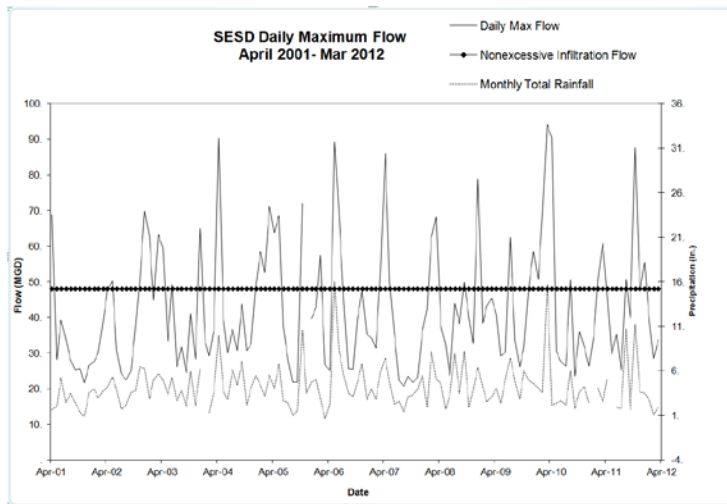


Figure 2. SESD Daily Maximum Flow Compared to Nonexcessive I/I Standard



Figures 3 and 4 shows the average flows for the CRPCD and SESD, which exceed the nonexcessive infiltration standard for all but the driest months. This indicates that these systems experience high levels of groundwater infiltration into the system even during dry weather.

Figure 3. CRPCD 12 Month Average Flow Compared to Nonexcessive Infiltration Standard

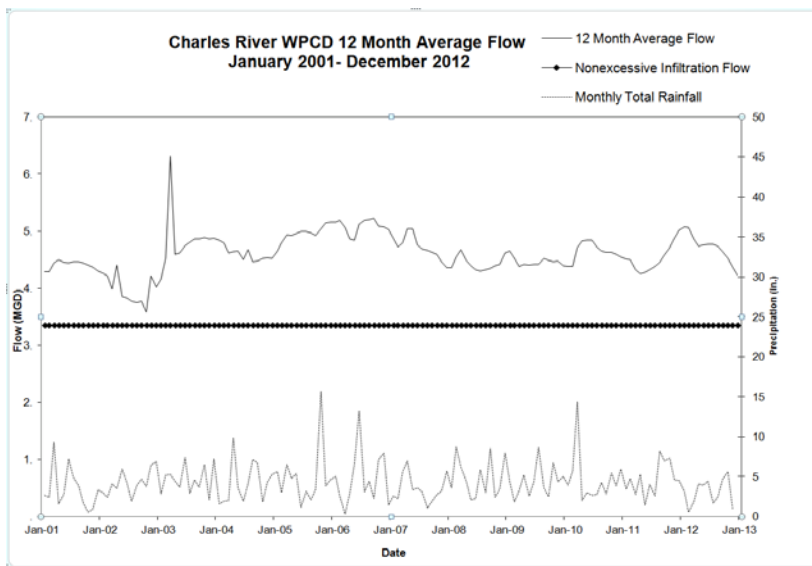
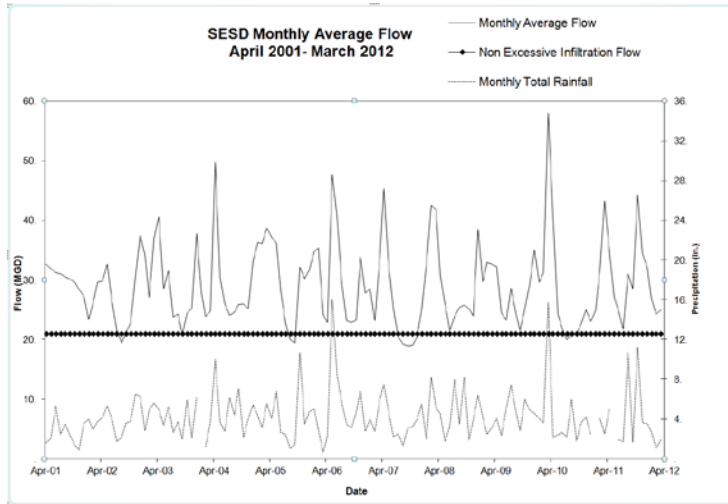


Figure 4. SESD Monthly Average Flow Compared to Nonexcessive Infiltration Standard

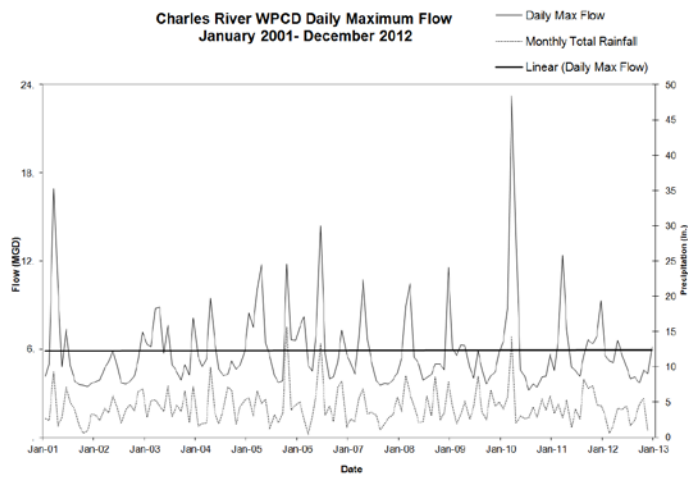


II. Flow Trends

Successful I/I reduction programs should result in decreases in wet weather flows to the treatment plant over the long term. Figures 5 and 6 show the trend in maximum daily flows since 2001. The maximum daily flow reflects the highest wet weather flow for each month. Charts are shown for both the reported maximum daily flow and for a one year rolling average of the maximum daily flow (provided to reduce the impact of seasonality on the regression results). The linear regressions indicates a weak trend over this time period of increasing maximum daily flow; while most of the variability from year to year is due to changes in precipitation, the trends are generally inconsistent with reduction in maximum daily flow over this time period. This indicates that I/I has not been reduced in either system.

Figure 5. CRPCD Daily Maximum Flow Trends

a. Reported Daily Maximum Flows



b. One Year Rolling Average of Daily Maximum Flows

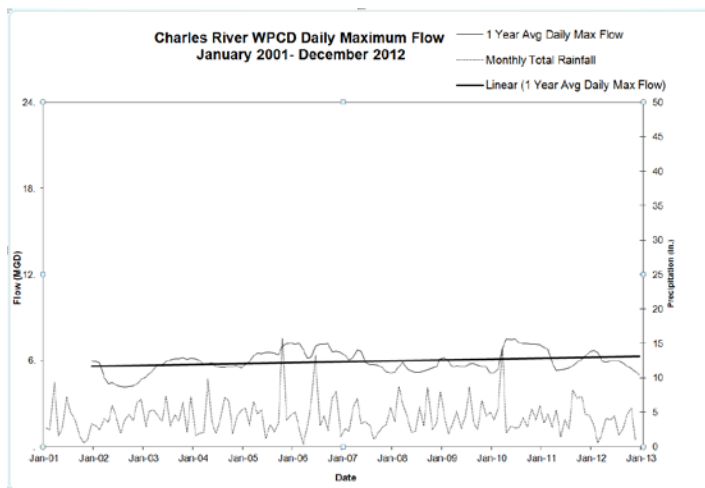
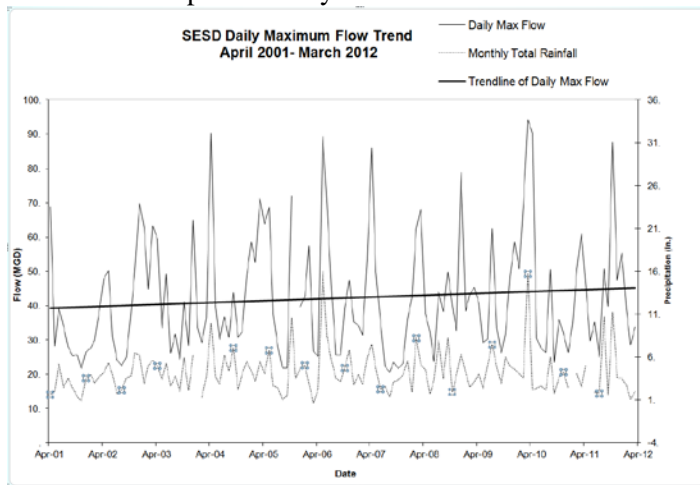
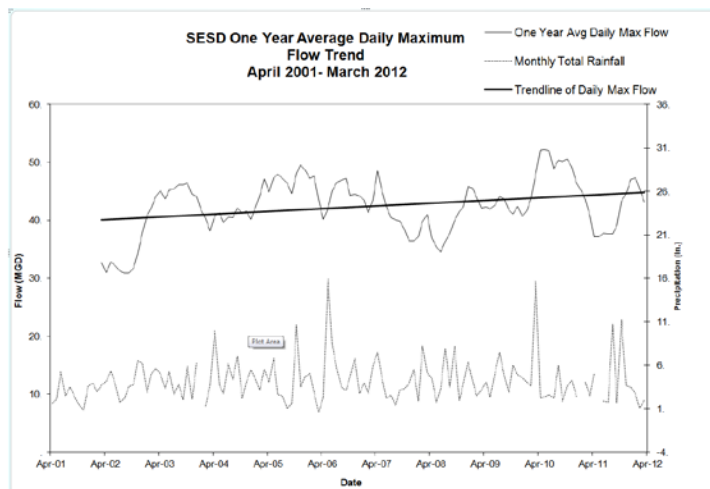


Figure 6. SESD Daily Maximum Flow Trend

a. Reported Daily Maximum Flows



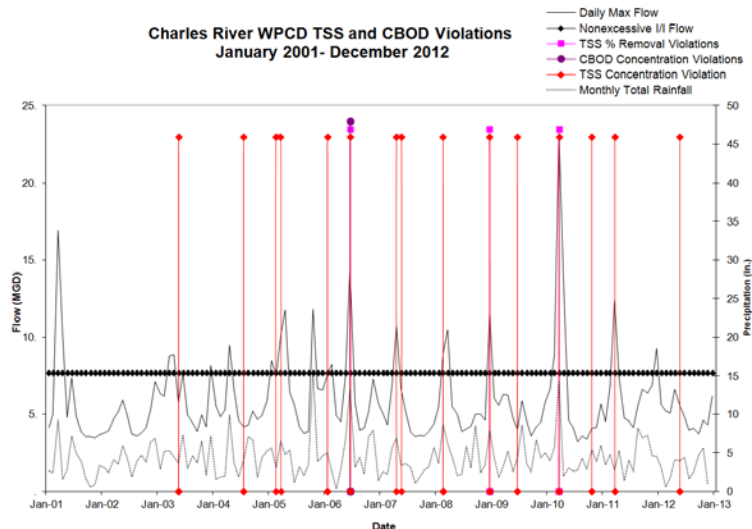
b. One Year Rolling Average of Daily Maximum Flows



III. Violations Associated with Wet Weather Flows

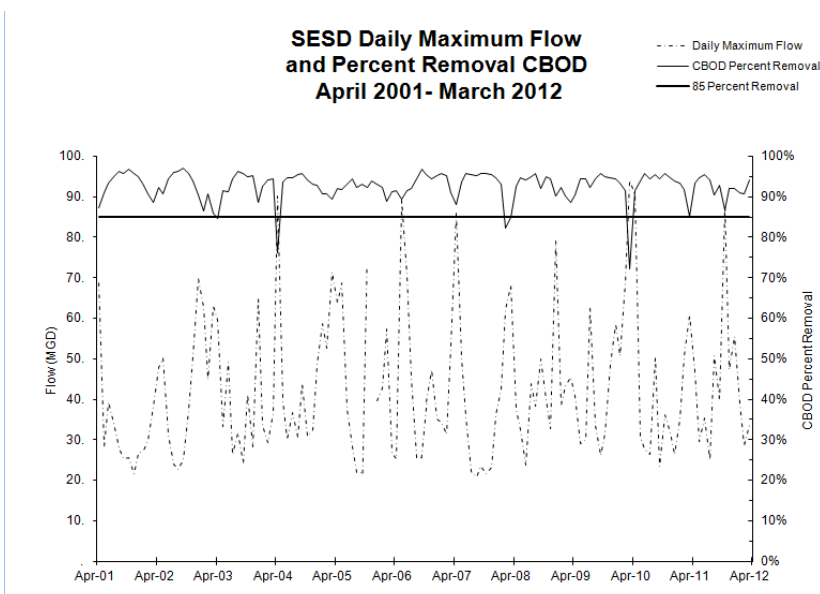
The CRPCD has experienced permit violations that appear to be related to I/I, based on their occurrence during wet weather months when excessive I/I standards are exceeded. Figure 7 shows violations of CRPCD's effluent limits for CBOD (concentration) and TSS (concentration and percent removal). Thirteen of the nineteen violations occurred during months when daily maximum flows exceeded the EPA standard.

Figure 7. CRPCD CBOD and TSS Effluent Limit Violations



In addition, SESD has been unable to achieve the secondary treatment requirement of 85% CBOD removal, also related to I/I. Figure 8 shows SESD's results for removal of CBOD, in percentage, as compared to maximum daily flow. SESD had three months where CBOD removal fell below 85%, all during months with high maximum daily flows. While SESD's current permit requires 85% removal in dry weather, so that these excursions did not constitute permit violations, SESD's proposed draft permit does not limit this requirement to dry weather. Relief from the 85% removal requirement is allowed only when the treatment plant receives flows from CSOs or if it receives less concentrated influent wastewater from separate sewers that is not the result of excessive I/I (including not exceeding the 275 gpcpd nonexcessive I/I standard). 40 CFR § 133.103(a) and (d).

Figure 8. SESD CBOD Percent Removal



IV. SSO Reporting

In addition, both of these regional POTWs have experienced SSOs within the municipal satellite collection systems. In the SEDS system, Beverly, Danvers, Marblehead and Peabody have reported SSOs between 2006 and 2008, based on data provided by MassDEP. In the CRPCD system, Bellingham reported SSOs in its system between 2006 and 2009.

Exhibit C

Form of Regional Administrator's or Authorized Delegate's Waiver of Permit Application Requirements for Municipal Satellite Collection Systems



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

Re: Waiver of Permit Application and Signatory Requirements for [Municipal Satellite Sewage Collection System]

Dear _____:

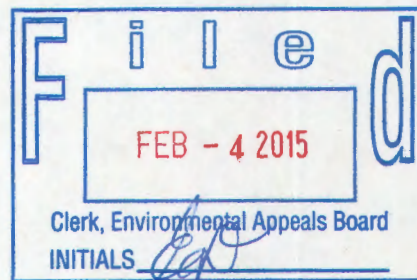
Under NPDES regulations, all POTWs must submit permit application information set forth in 40 C.F.R. § 122.21(j) unless otherwise directed. Where the Region has “access to substantially identical information,” the Regional Administrator [or Authorized Delegate] may waive permit application requirements for new and existing POTWs. *Id.* Pursuant to my authority under this regulation, I am waiving NPDES permit application and signatory requirements applicable to the above-named municipal satellite collection systems.

Although EPA has the authority to require municipal satellite collection systems to submit individual permit applications, in this case I find that requiring a single permit application executed by the regional POTW treatment plant owner/operator will deliver “substantially identical information,” and will be more efficient, than requiring separate applications from each municipal satellite collection system owner/operator. Municipal satellite collection system owners/operators are expected to consult and coordinate with the regional POTW treatment plant operators to ensure that any information provided to EPA about their respective entities is accurate and complete. In the event that EPA requires additional information, it may use its information collection authority under CWA § 308. 33 U.S.C. § 1318.

This notice reflects my determination based on the specific facts and circumstances in this case. It is not intended to bind the agency in future determinations where a separate permit for municipal satellites would not be duplicative or immaterial.

If you have any questions or would like to discuss this decision, please contact [EPA Contact] at [Contact Info].

Sincerely,
Regional Administrator



(Slip Opinion)

NOTICE: This opinion is subject to formal revision before publication in the Environmental Administrative Decisions (E.A.D.). Readers are requested to notify the Environmental Appeals Board, U.S. Environmental Protection Agency, Washington, D.C. 20460, of any typographical or other formal errors, in order that corrections may be made before publication.

**BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.**

In re:

Charles River Pollution Control
District

NPDES Permit No. MA 0102598

)
)
)
)
) NPDES Appeal
) No. 14-01
)
)
)

[Decided February 4, 2015]

ORDER DENYING REVIEW

***Before Environmental Appeals Judges Leslye M. Fraser,
Randolph L. Hill, Kathie A. Stein.***

IN RE CHARLES RIVER POLLUTION CONTROL DISTRICT

NPDES Appeal No. 14-01

ORDER DENYING REVIEW

Decided February 4, 2015

Syllabus

The Massachusetts towns of Franklin, Medway, Millis, and Bellingham (“Towns”) own and operate satellite sewer collection systems that convey wastewater to a wastewater treatment plant (“WWTP”) for treatment and discharge into waters of the United States. The Charles River Pollution Control District (“Charles River”) owns the WWTP, which is part of a publicly owned treatment works. Charles River was the only entity that applied to the U.S. Environmental Protection Agency (“EPA”), Region 1 (“Region”), for a National Pollutant Discharge Elimination System (“NPDES”) permit to authorize discharges from the WWTP pursuant to Clean Water Act section 402, 33 U.S.C. § 1342. Nonetheless, the Region issued the NPDES permit to Charles River *and* to the Towns as co-permittees. Together with the Upper Blackstone Water Pollution Abatement District, the Towns petitioned the Environmental Appeals Board (“Board”) to review both their status as co-permittees and the permit conditions (Parts I.B. and I.C.) that apply to them.

Held: The Board denies the petition for review. The Region has authority under the Clean Water Act and EPA’s regulations to include the Towns as co-permittees to the permit, and the administrative record supports the Region’s decision to include the Towns as co-permittees.

The Region reasonably construed the NPDES regulatory definition of “publicly owned treatment works” to include the Towns’ municipal satellite sewer collection systems. Because the Towns’ sewer collection systems are components of a publicly owned treatment works that directly discharges pollutants from the Charles River WWTP into waters of the United States, the Towns are subject to NPDES regulation.

The Board also concludes that the administrative record adequately explains the Region’s decision to treat the Towns as co-permittees. The record includes the Region’s “Permitting Approach” document, which describes the applicability of the NPDES program to POTWs that are composed of municipal satellite sewage collection systems owned by one entity and treatment plants owned by another and provides the Region’s rationale for directly regulating the Towns through a co-permitting structure. In that document, the Region stated that a co-permitting approach would minimize human health and water quality impacts resulting from excessive inflow and infiltration. Although State regulations also address inflow and infiltration control, the Petitioners

2 **CHARLES RIVER POLLUTION CONTROL DISTRICT**

failed to address why the Region’s approach to control excessive extraneous flow by regulating the Towns is clearly erroneous.

The Region has interpreted the permit as subjecting the Towns to only Parts I.B. and I.C. of the permit, and then only with respect to the portions of the collection system that each Town owns. The Board adopts this interpretation as an authoritative reading of the permit that is binding on EPA.

The Region did not circumvent the NPDES permit application requirements because the duty for the Towns to apply for a permit was met by the Charles River WWTP permit application. The NPDES regulations pertaining to a discharger’s “duty to apply” is susceptible to a reading that if, as here, there are multiple dischargers responsible for the same discharge, then an application from one of the dischargers constitutes an application from all. Additionally, the Region appropriately waived the requirement for separate permit applications from the Towns because the Region determined that the information the Towns would provide in their applications would be “substantially identical” to information provided in the WWTP’s application.

The Region’s Permitting Approach is not a legislative rule. An adequate basis exists under EPA regulations to regulate satellite collection systems in the document’s absence, and the document does not amend a prior rule. The Board upholds the Region’s decision to regulate satellite systems as co-permittees based on the Clean Water Act and EPA regulations, not on the Permitting Approach.

***Before Environmental Appeals Judges Leslye M. Fraser,
Randolph L. Hill, and Kathie A. Stein.***

Opinion of the Board by Judge Hill:

I. STATEMENT OF THE CASE

Four Massachusetts towns – Franklin, Medway, Millis, and Bellingham (“Towns”) – and the Upper Blackstone Water Pollution Abatement District together petition the Environmental Appeals Board (“Board”) to review certain conditions of a National Pollutant Discharge Elimination System (“NPDES”) permit that authorizes discharges from the Charles River Pollution Control District’s Wastewater Treatment Plant (“WWTP”) in Medway, Massachusetts, to the Charles River. The U.S. Environmental Protection Agency, Region 1 (“Region”), issued the

permit on July 23, 2014, pursuant to Clean Water Act (“CWA”) section 402, 33 U.S.C. § 1342.

Petitioners challenge the permit terms that treat the Towns as “co-permittees” with responsibility to comply with a small subset of the permit’s requirements. The National Association of Clean Water Agencies¹ (“NACWA”) is participating as amicus curiae and supports the challenge to the co-permittee provisions.

Petitioners claim that the Region clearly erred in imposing these requirements on the Towns as part of the NPDES permit for the Charles River Pollution Control District WWTP. The Towns own satellite sewer collection systems that convey wastewater to the WWTP for treatment and discharge. The Charles River Pollution Control District, which the Towns claim is the sole discharger of pollutants to waters of the United States, is the only entity that applied for the NPDES permit. Petitioners seek a remand directing the Region to strike all references to and requirements imposed upon the Towns as “co-permittees” in the permit. For the reasons discussed below, the Board denies the petition for review.

II. PRINCIPLES GUIDING BOARD REVIEW

Under 40 C.F.R. § 124.19, the Board has discretion to grant or deny review of a permit decision. Consolidated Permit Regulations, 45 Fed. Reg. 33,290, 33,412 (May 19, 1980). Ordinarily, the Board will deny review of a permit decision and thus not remand it unless the permit decision either is based on a clearly erroneous finding of fact or conclusion of law, or involves a matter of policy or exercise of discretion that warrants review. 40 C.F.R. § 124.19(a)(4)(i)(A)-(B); *accord, e.g., In re Prairie State Generating Co.*, 13 E.A.D. 1, 10 (EAB 2006), *aff’d*

¹ NACWA “is a voluntary, non-profit trade association representing the interests of the nation’s publicly-owned wastewater and stormwater utilities. NACWA’s members include nearly 300 of the nation’s municipal clean water agencies * * *.” NACWA Br. at 1.

sub nom. Sierra Club v. EPA, 499 F.3d 653 (7th Cir. 2007); *see also* Revisions to Procedural Rules Applicable in Permit Appeals, 78 Fed. Reg. 5,281, 5,282 (Jan. 25, 2013). In considering whether to grant or deny review of a permit decision, the Board is guided by the preamble to the regulations authorizing appeal under part 124, in which the Agency stated that the Board’s power to grant review “should be only sparingly exercised” and that “most permit conditions should be finally determined at the [permit issuer’s] level.” 45 Fed. Reg. at 33,412; *see also* 78 Fed. Reg. at 5,282.

The burden of demonstrating that the Board should review a permit decision rests with the petitioner. 40 C.F.R. § 124.19(a)(4). A petitioner seeking review must demonstrate that any issues and arguments it raises on appeal have been raised previously in comments on the draft permit and thus preserved for Board review, unless the issues or arguments were not reasonably ascertainable before the close of the public comment period. 40 C.F.R. §§ 124.13, .19(a)(4)(i); *see In re City of Moscow*, 10 E.A.D. 135, 141 (EAB 2001); *In re City of Phoenix*, 9 E.A.D. 515, 524 (EAB 2000). Assuming that the issues have been preserved, the petitioner must specifically state its objections to the permit and explain why the permit issuer’s previous responses to those comments were clearly erroneous or otherwise warrant review. 40 C.F.R. § 124.19(a)(4)(i)-(ii); *see, e.g., In re Teck Cominco Alaska, Inc.*, 11 E.A.D. 457, 494-95 (EAB 2004); *In re Westborough*, 10 E.A.D. 297, 305, 311-12 (EAB 2002); *In re City of Irving*, 10 E.A.D. 111, 129-30 (EAB 2001), *review denied sub nom. City of Abilene v. EPA*, 325 F.3d 657 (5th Cir. 2003).

When evaluating a challenged permit decision for clear error, the Board examines the administrative record that serves as the basis for the permit decision to determine whether the permit issuer exercised his or her “considered judgment.” *See, e.g., In re Steel Dynamics, Inc.*, 9 E.A.D. 165, 191, 224-25 (EAB 2000); *In re Ash Grove Cement Co.*, 7 E.A.D. 387, 417-18 (EAB 1997). The permit issuer must articulate with reasonable clarity the reasons supporting its conclusion and the

significance of the crucial facts it relied upon when reaching its conclusion. *E.g.*, *In re Shell Offshore, Inc.*, 13 E.A.D. 357, 386 (EAB 2007). As a whole, the record must demonstrate that the permit issuer “duly considered the issues raised in the comments” and ultimately adopted an approach that “is rational in light of all information in the record.” *In re Gov’t of D.C. Mun. Separate Storm Sewer Sys.*, 10 E.A.D. 323, 342 (EAB 2002); *accord City of Moscow*, 10 E.A.D. at 142; *In re NE Hub Partners, LP*, 7 E.A.D. 561, 567-68 (EAB 1998), *review denied sub nom. Penn Fuel Gas, Inc. v. EPA*, 185 F.3d 862 (3d Cir. 1999). On matters that are fundamentally technical or scientific in nature, the Board typically will defer to a permit issuer’s technical expertise and experience, as long as the permit issuer adequately explains its rationale and supports its reasoning in the administrative record. *See In re Dominion Energy Brayton Point, LLC*, 12 E.A.D. 490, 510, 560-62, 645-47, 668, 670-74 (EAB 2006); *see also, e.g., In re Russell City Energy Ctr.*, PSD Appeal Nos. 10-01 through 10-05, slip op. at 37-41, 88 (EAB Nov. 18, 2010), 15 E.A.D. ___, *petition denied sub nom. Chabot-Las Positas Cmty. Coll. Dist. v. EPA*, 482 F. App’x 219 (9th Cir. 2012); *NE Hub*, 7 E.A.D. at 570-71.

In reviewing an exercise of discretion by the permit issuer, the Board applies an abuse of discretion standard. *See In re Guam Waterworks Auth.*, NPDES Appeal Nos. 9-15 & 9-16, slip op. at 9 n.7 (EAB Nov. 16, 2011), 15 E.A.D. ___. The Board will uphold a permit issuer’s reasonable exercise of discretion if that decision is cogently explained and supported in the record. *See Ash Grove*, 7 E.A.D. at 397 (“[A]cts of discretion must be adequately explained and justified.”); *see also Motor Vehicles Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 48 (1983) (“We have frequently reiterated that an agency must cogently explain why it has exercised its discretion in a given manner * * *.”).

III. PROCEDURAL AND FACTUAL HISTORY

The Charles River Pollution Control District (“Charles River”) owns and operates a wastewater treatment plant (“WWTP”) in Medway, Massachusetts, that is part of a publicly owned treatment works (“POTW”). The WWTP discharges into a water of the United States. The four Towns own satellite sewer collection systems that convey wastewater to Charles River’s WWTP for treatment and discharge. Town-owned satellite sewer collection systems consist of approximately 227 miles: 125 miles owned by Franklin, 53 miles owned by Medway, 27 miles owned by Millis, and 22 miles owned by Bellingham. Charles River owns and operates the remaining 13 miles of interceptor lines. In total, over 238 miles of sewer lines convey wastewater to the Charles River WWTP.

A. Permit

In June 2004, Charles River applied to renew its NPDES permit to discharge from the WWTP. The Region released a draft permit in 2008 for public review and comment. Although none of the Towns had submitted an NPDES permit application to the Region, the 2008 draft permit included the Towns for the first time as co-permittees with Charles River. Fact Sheet for the Revised Permit (“Fact Sheet”) at 5 (Administrative Record (“A.R.”) A.26). While the 2008 draft permit was pending, this Board issued its decision in *In re Upper Blackstone Water Pollution Abatement District*, 14 E.A.D. 577 (EAB 2010). The issues raised in *Upper Blackstone* also concerned the Region’s co-permittee approach, but involved different municipalities and a different wastewater treatment plant than the instant case.

In the *Upper Blackstone* decision, the Board questioned the Region’s approach of including municipalities that owned satellite sewer collection systems as co-permittees of a permit issued to a POTW treatment plant. 14 E.A.D. at 585-91. The Board concluded that the Region had not adequately explained its reasoning for including several

municipalities as co-permittees with the owner/operator of the wastewater treatment plant. *Id.* at 591. Accordingly, the Board remanded that issue to the Region.

Charles River, Charles River Watershed Association, and the Towns of Franklin, Medway and Millis submitted comments on the 2008 draft permit. *See* EPA and MassDEP Joint Response to Public Comments (“RTC”) 1 (A.R. B.1). In 2012, the Region released another draft permit for the Charles River WWTP, which continued to propose including the Towns as co-permittees because of their ownership of their respective sewer collection systems. Fact Sheet at 5. The Region provided its legal theory for including the Towns as co-permittees in an attachment to the Fact Sheet, the “EPA Region 1 NPDES Permitting Approach for Publicly Owned Treatment Works that Include Municipal Satellite Sewage Collection Systems” (“Permitting Approach”) document. *Id.* In the Permitting Approach, the Region explained it was necessary to include the Towns as co-permittees to address problems of wet weather infiltration and inflow into the Charles River sewer system. Fact Sheet, Attach. 1 (“Permitting Approach”), Attach. A (“Analysis”) at 7 (identifying when it would be appropriate to include satellite system owners and operators as co-permittees for permits issued to regionally integrated treatment works) (A.R. K.1); *see also* Analysis Ex. B at 19-21 (identifying the Charles River WWTP as experiencing excess influent flows during wet weather periods, which is evidence of excessive infiltration and inflow); Analysis Ex. B at 22 (identifying the Charles River WWTP as experiencing permit violations associated with wet weather infiltration and inflow).

The Towns, Charles River,² and the Upper Blackstone Water Pollution Control Abatement District submitted comments on the 2012 draft permit that raised the same challenges to the draft permit as the

² Charles River did not petition for review of the permit. Its comments address the inclusion of the Towns as co-permittees and other issues that are not raised in this permit appeal. RTC at 51-58.

petition now before the Board. *See* RTC at 75-87. The Region responded to comments on both the 2008 and 2012 draft permits and issued the final permit in 2014, which retained the co-permittee provisions.

B. Permitting Approach Document

The Region prepared the Permitting Approach and its attached Analysis to respond to concerns the Board raised in the *Upper Blackstone* decision. Analysis at 1; *see also* 14 E.A.D. at 590-91 & n.17 (describing concerns). The Permitting Approach, which was finalized in 2012, Oral Arg. Tr. at 89, addresses “the applicability of the [NPDES] program to publicly owned treatment works (‘POTWs’) that are composed of municipal satellite sewage collection systems owned by one entity and treatment plants owned by another (‘regionally integrated POTWs’).” Permitting Approach at *i*. In particular, the Region states its practice is to “directly regulate, if necessary, the owners/operators of the municipal satellite collection systems through a co-permitting structure” on a case-by-case basis to ensure that human health and water quality impacts from excessive extreme flow are minimized. *Id.* at *i*-1.

The decision to subject all portions of a POTW, including satellite collection systems, to NPDES permitting requirements in appropriate cases arises from the Agency’s national policy goal of ensuring that sanitary sewer systems adhere to strict design and operational standards. *Id.* The Region explained in the Permitting Approach that

[b]ecause ownership/operation of a regionally integrated POTW is sometimes divided among multiple parties, the owner/operator of the treatment plant many times lacks the means to implement comprehensive, system-wide operation and maintenance (“O & M”) procedures. Failure to properly implement O & M measures in a POTW can cause, among other things, excessive

extraneous flow (*i.e.*, inflow and infiltration³) to enter, strain and occasionally overload treatment system capacity.

Id.; see also Analysis at 5. Sanitary sewer systems, while neither designed nor intended to “collect large amounts of runoff from precipitation events or [to] provide widespread drainage[,]” are able to “handle minor and controllable amounts of extraneous flow (*i.e.* inflow and infiltration, or I/I) that enter the system” during periods of high groundwater or stormwater events. Analysis at 3. However, as the Region further explained, many sanitary sewer systems are aging. *Id.* “When the structural integrity of a municipal sanitary sewer collection system deteriorates, large quantities of infiltration (including rainfall-induced infiltration) and inflow can enter the collection system, causing it to overflow. These extraneous flows are among the most serious and widespread operational challenges confronting treatment works.” *Id.*

The Region asserted that “a POTW’s ability to comply with CWA requirements depend[s] on successful operation and maintenance of not only the treatment plant but also the collection system.” *Id.* at 6. Yet, the Region noted wide variation in “[t]he [legal] ability and/or willingness of regional sewer districts to attain meaningful I/I efforts” in satellite collection systems owned or operated by member communities. Furthermore, relying on the regional districts to ensure proper infiltration and inflow controls “tend[s] to make it difficult for EPA to enforce the implementation of meaningful I/I reduction programs” in such communities. *Id.* The Region ultimately concluded that it may be necessary to include satellite systems as “co-permittees to a limited set of O&M-related conditions on permits issued for discharges from

³ “Inflow generally refers to water other than wastewater — typically precipitation like rain or snowmelt — that enters a sewer system through a direct connection to the sewer. Infiltration generally refers to other water that enters a sewer system from the ground, for example through defects in the sewer.” Analysis at 3.

regionally integrated treatment works.” *Id.* at 7. In particular, the Region stated

the inclusion of the satellite systems as co-permittees may be necessary when high levels of I/I dilute the strength of influent wastewater and increase the hydraulic load on treatment plants, which can reduce treatment efficiency * * *. Excess flows from an upstream collection system can also lead to bypassing a portion of the treatment process, or in extreme situations make biological treatment facilities inoperable * * *.

Id. at 15-16.

The Region appended three exhibits to the Analysis. Exhibit A lists permits the Region has issued to POTWs that included municipal satellite collection systems as co-permittees. Exhibit B is an analysis of extraneous flow trends and sanitary sewer overflow reporting for the South Essex Sewer District and the Charles River Pollution Control District. The analysis in Exhibit B shows a correlation between periods of wet weather and levels of flow to the Charles River WWTP, *id.* at 19-21, and further shows a correlation between effluent limit violations at the Charles River WWTP and periods of wet weather flows, *id.* at 22. Exhibit C is a blank form letter from the Regional Administrator to owners of municipal satellite sewage collection systems, waiving municipalities operating satellite collection systems from NPDES permit application and signatory requirements.

C. Permit Appeal

The Towns, along with the Upper Blackstone Water Pollution Abatement District, challenge permit conditions at Parts I.B. and I.C., which are the sole provisions that apply to the Towns. Part I.B. limits authorized discharges only to the outfall listed in the permit (that is, from the Charles River WWTP). Part I.C. pertains to the operation and

maintenance of the sewer systems. Specifically, Part I.C. requires Charles River and the Towns to (1) maintain adequate staff to carry out the functions to comply with the permit, (2) maintain a specified preventative maintenance program, (3) control infiltration and inflow, (4) map the sewer collection that each entity owns, (5) develop and implement a Collection System Operation and Maintenance Plan for the collection system that each entity owns, (6) submit an annual report, and (7) provide an alternate power source sufficient to operate the portion of the publicly owned treatment works that each entity owns.

Petitioners and amicus curiae NACWA make five basic arguments against the co-permittee provisions. First, they argue that the language of the Clean Water Act and the NPDES regulations do not authorize the inclusion of satellite sewer collection system owners as co-permittees of a permit for a publicly owned treatment works (“POTW”) treatment plant. In particular, Petitioners challenge the Region’s reliance on a statutory definition of POTW to interpret the NPDES permitting provisions imposed here because, Petitioners contend, the statutory definition applies only to the Clean Water Act program for federal grants and loans to municipalities, not to the NPDES regulatory program. Petition at 9.

Second, Petitioners argue that there is only one discharge point through which wastewater is discharged to waters of the United States – the outfall named in the permit – and the Towns do not own the outfall. *Id.* at 7. Therefore, the Towns do not need a permit because they are conveying their wastewater to the POTW treatment plant, not discharging directly into the waters of the United States themselves. *Id.*

Third, Petitioners argue that the Towns are indirect dischargers, which are excluded from NPDES permitting requirements. *Id.* at 11.

Fourth, Petitioners contend that existing Massachusetts regulations adequately regulate the operation and maintenance of the

Towns' sewer systems, obviating the need for the co-permittee provisions in the NPDES permit for Charles River. *Id.* at 27.

Last, Petitioners contend that the Region's Permitting Approach is a legislative rule that must undergo notice and comment under the Administrative Procedure Act, and thus the permit is invalid because the Region relied on the Permitting Approach as legal authority for the permit. *Id.* at 21.

IV. ANALYSIS

Congress enacted the Clean Water Act "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." CWA § 101(a), 33 U.S.C. § 1251(a). To achieve this objective, the Act prohibits the discharge of pollutants into the waters of the United States, unless authorized by an NPDES or other Clean Water Act permit. *See* CWA §§ 301(a), 402, 33 U.S.C. §§ 1311(a), 1342. The term "discharge of a pollutant" means "any addition of any pollutant to navigable waters from any point source." CWA § 502(12), 33 U.S.C. § 1362(12). A "point source" is "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, [or] conduit * * * from which pollutants are or may be discharged." CWA § 502(14), 33 U.S.C. § 1362(14); *accord* 40 C.F.R. § 122.2.

A. The Region Has Authority Under the Clean Water Act and EPA's Regulations to Include the Towns as Co-Permittees to the Permit

Because the Towns are part of a POTW and are contributing to the discharge from the Charles River WWTP, the Towns are "discharging pollutants from a point source" as defined in the Clean Water Act. Accordingly, the Towns are subject to federal NPDES permitting requirements, and the Region has legal authority to include the Towns as co-permittees to the permit.

1. *The Towns Discharge Pollutants From a Point Source*

a. *The POTW Is the Point Source and the Towns' Collection Systems Are Part of the POTW*

The parties do not dispute that the Charles River WWTP is a point source discharging pollutants into waters of the United States. In designating the Towns as co-permittees, the Region concluded, consistent with the Clean Water Act and EPA's implementing regulations, that the municipal satellite sewer collection systems *together with* the treatment plant comprise the POTW. *E.g.*, RTC at 59-60 (“[The towns] operate portions of the POTW * * * .”), 61-62 (same); *see also, e.g.*, Oral Arg. Tr. at 62 (“We are viewing the POTW as a single entity, [with] multiple contributing dischargers.”), 67 (“[Charles River] is a single integrated POTW made up both of a treatment plant and the collection facilities”).

Clean Water Act subchapter III sets forth the effluent limitations and other regulatory programs of the Act, and subchapter IV sets forth the permit requirements pursuant to the Act. Nevertheless, the definition of “publicly owned treatment works” as applied to the NPDES permit program is found elsewhere in the Act, in subchapter II. As described in more detail below, the definition of POTW in the relevant NPDES permit regulations cross-references the definition of POTW in the general pretreatment regulations. These general pretreatment regulations then cross-reference subchapter II, which implemented the original construction grants program and now implements the State revolving loan fund program. *See* CWA § 603, 33 U.S.C. § 1383 (water pollution control revolving loan funds).

Under the NPDES permit regulations at 40 C.F.R. § 122.2, a “POTW is defined at § 403.3 of this chapter.” 40 C.F.R. § 122.2. Section 403.3(q) in turn provides:

The term Publicly Owned Treatment Works or POTW means a treatment works as defined by section 212 of

the Act, which is owned by a State or municipality (as defined by section 502(4) of the Act). This definition of [POTW] includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant.

Id. § 403.3(q). CWA section 212 states that the term “treatment works” includes “sewage collection systems, pumping, power and other equipment, and their appurtenances” and “sanitary sewer systems.” CWA § 212(2)(A)-(B), 33 U.S.C. § 1292(2)(A)-(B).

There seems to be no dispute that the satellite collection systems owned by the Towns fall within the language of the section 212 definition of “treatment works.”⁴ Petitioners contend, however, that the

⁴ In describing the extent or scope of a POTW, the Region relies on the definition of “sewage collection system” found in the construction grants regulations. Using this definition of “sewage collection system” is reasonable because the definition appears in the provisions pertaining to grants specifically for POTWs, 40 C.F.R. part 35, subpart E. Additionally, the term “sewage collection system” expressly appears in the definition of POTW in CWA section 212.

The Region reasoned that a POTW, and thus NPDES jurisdiction

extends beyond the treatment plant to the outer boundary of the municipally-owned sewage collection systems, that is, to the outer bound of those sewers whose purpose is to transport wastewater for others to a POTW treatment plant for treatment * * * .

* * * *

Put otherwise, a municipal satellite collection system is subject to NPDES jurisdiction under the Region’s approach insofar as it transports wastewater for others to a POTW treatment plant for treatment.

(continued...)

definition in CWA section 212 is limited to subchapter II because section 212 states that its definitions are “as used in this subchapter.” CWA § 212, 33 U.S.C. § 1292, *quoted in* Petition at 9. Petitioners acknowledge that section 212 defines “treatment works” broadly; however, according to Petitioners, the definition of “treatment works” in section 212 does not extend to the meaning of the term in section 301 pertaining to the prohibition of discharge of pollutants into waters of the United States. Petition at 10 (quoting *Montgomery Env’tl Coal. v. Costle*, 646 F.2d 568, 591 (D.C. Cir. 1980)). By extension, therefore, the definition of POTW in section 212 does not apply to the NPDES permit requirements in section 402.

Petitioners’ reliance on the *Costle* case is misplaced. That case involved discharges from overflow points in a combined sewer system upstream of a POTW treatment plant. *E.g.*, 646 F.2d at 589. The D.C. Circuit addressed whether the secondary treatment requirements of CWA section 301(b)(1)(B), 33 U.S.C. § 1311(b)(1)(B), which apply to discharges from POTWs, also apply to the overflow discharges. 646 F.2d. at 589-92. The court only held that the discharges from the combined system did not constitute discharges from the POTW and therefore were not subject to secondary treatment requirements. *Id.* at 592. The court never addressed the issues in this case; i.e., whether the portions of the sewer system upstream of the treatment plant are part of

⁴(...continued)

Analysis at 11 (citing 40 C.F.R. § 35.905).

Petitioners argue that the Board rejected this same argument in the *Upper Blackstone* decision, and therefore, the Board should once again reject the argument. Petition at 13. The Board disagrees. The Board remanded the permit challenged in *Upper Blackstone* because the Region failed to “apply a reasonably precise distinction, other than property boundaries, identifying where the collection system ends and a user begins, [and] that distinction is not expressed in the administrative record of this proceeding.” 14 E.A.D. 577, 588 (EAB 2010). For the reasons discussed in Part IV.A of this decision, the Board finds that the administrative record in this permitting decision addresses its concerns in *Upper Blackstone* regarding the scope of a POTW.

the “POTW,” and if so, whether the operator of the upstream portion is therefore responsible for the discharge from the treatment plant.

Petitioners further point out that EPA did not add the reference in 40 C.F.R. § 122.2 to § 403.3(q) – and by extension to the definition in CWA section 212 – to its NPDES regulations until 2000. Reply at 6. Petitioners further note that the preamble to the regulations states that the addition of “references to definitions that are found elsewhere in [40 C.F.R.] parts 122, 123, and 403 * * * was intended to assist readers in finding specific provisions in the NPDES regulations and was not intended to expand the application of those definitions if they are restricted to a particular section.” Amendments to Streamline the National Pollutant Discharge Elimination System Program Regulations: Round Two, 65 Fed. Reg. 30,886, 30,888 (May 15, 2000), *quoted in part in* Reply at 7. From this, they argue that EPA did not intend to expand the definition of POTW to include the collection system portions in the NPDES regulations and that the Region cannot rely on that definition. Reply at 7.

Even prior to the 2000 regulation, EPA clearly intended the definition of POTW to encompass the CWA section 212 definition for purposes of both the NPDES and the pretreatment programs. When EPA promulgated the pretreatment regulations in 1981, the definition of POTW was intended to reference the CWA section 212 definition. *See* General Pretreatment Regulations for Existing and New Sources, 46 Fed. Reg. 9404, 9416, 9440 (Jan. 28, 1981) (redirecting 40 C.F.R. pt. 403 definition of POTW to CWA § 212). In turn, EPA made clear that it intended the definition of POTW in 40 C.F.R. part 403 to be the same as in part 122. *Id.* (“The definition of POTWs in the general pretreatment regulations conforms to the definition of the term found in 122.3 of the Consolidated Permit regulations.”).⁵ The scope of the definition of

⁵ EPA renumbered 40 C.F.R. § 122.3 to § 122.2 in 1983. Environmental Permit Regulations, 48 Fed. Reg. 14,146, 14,149 (Apr. 1, 1983).

“POTW” upon which the Region relies is the same as it was since at least 1981.

In sum, Petitioners have not persuaded the Board that using the CWA section 212 definition of POTW is unreasonable, particularly when the NPDES permitting regulations now specifically cross-reference section 212 and previously cross-referenced the section 212 definition implicitly. Accordingly, the Region reasonably construed the Act and its implementing regulations to broadly define POTW to include not only wastewater treatment plants but also the sewer systems and associated equipment that collect wastewater and convey it to those treatment plants. POTW treatment plants, like the satellite sewage collection systems that convey wastewater to the plants, are components of a POTW. Therefore, in this case, the Towns’ satellite sewage collection systems and the permitted facility comprise the POTW, which discharges from a point source.

b. *The Towns Are Discharging Through the Point Source Outfall From the POTW*

In this case, more than one legal person is discharging pollutants from the same point source, i.e., the outfall at the Charles River wastewater treatment plant, which is a portion of the POTW. As discussed in the previous section, the POTW includes not only the Charles River WWTP but also several municipal satellite sewage collection systems. The Towns own and operate approximately 95 percent of the sewer lines comprising the “sewer collection system that transports sewer flow to a wastewater treatment plant for treatment and discharge to U.S. waters.” Petition at 2. While it is true that the Towns do not own or operate the Charles River WWTP and the discharging outfall,⁶ they are nonetheless responsible for pollutants that

⁶ Pursuant to Massachusetts law, the Charles River Pollution Control District Commission (“Commission”) governs Charles River. Mass. Gen. Laws ch. 21, § 29; Letter from Robert D. Cox, Jr., Bowditch & Dewey, to Eurika Durr, Env’tl. Appeals Bd., (continued...)

are conveyed to waters of the United States from the WWTP outfall. Construing those portions of the POTW that are upstream of treatment facility as also “discharg[ing] a pollutant” is consistent with the line of cases that provide that persons who discharge pollutants through conveyances owned by another entity may be subject to NPDES permit requirements. *E.g.*, *United States v. Ortiz*, 427 F.3d 1278, 1284 (10th Cir. 2005) (holding facility owner liable for discharging pollutants through sanitary sewer system that connected to storm drain owned and operated by another entity and flowed to waters of the United States); *San Francisco Baykeeper v. W. Bay Sanitary Dist.*, 791 F. Supp.2d 719, 771 (N.D. Cal. 2011) (NPDES permit required for owner of collection system discharging sanitary sewer overflow into waters of the United States via municipal separate storm sewer owned by another entity); *United States v. Velsicol Chem. Corp.*, 438 F. Supp. 945, 947 (D.C. Tenn. 1976) (holding defendant liable for discharges exceeding NPDES permit limits into city wastewater collection system that subsequently flowed into navigable waters); *see also* 40 C.F.R. §§ 122.26(a)(4), (a)(5) (industrial stormwater discharges through municipal storm sewer system), 122.44(m) (discharges through privately owned treatment works); *Dague v. Burlington*, 935 F. 2d 1343, 1354-55 (2d Cir.1991) (affirming district court holding that city discharged pollutants without a permit when pollutants from city’s landfill entered pond and flowed through culvert into navigable waters), *rev’d in part on*

⁶(...continued)

U.S. EPA, at 1-2 (Dec. 22, 2014). Two of the Towns, Franklin and Medway, constitute “member” towns of Charles River and together have five representatives on the Commission who are appointed by the Franklin Town Council and the Medway Board of Selectmen. Letter from Janice Kelley Rowan, Warner & Stackpole, to Anthony V. DePalma, Region 1, U.S. EPA, at 1 (Oct. 18, 1993) (A.R. K.4). The remaining towns, Bellingham and Millis, are “customer” towns of the Charles River and are not represented on the Commission. *Id.* at 2.

other grounds, 505 U.S. 557 (1992); Response to Comments at 62 (discussing cases).⁷

c. *The Towns Are Not Indirect Dischargers*

Finally, the Towns are not “indirect dischargers” excluded from NPDES permitting. *See* 40 C.F.R. § 122.3(c). An “indirect discharger” is “any non-domestic” source regulated under the Clean Water Act pretreatment standards that introduces pollutants into a POTW. *Id.* § 403.3(i); *see also id.* § 122.2 (defining indirect discharger as “a non-domestic discharger introducing ‘pollutants’ to a ‘publicly owned treatment works’”). Sources of indirect discharges are “industrial users.” *Id.* § 403.3(j). In this case, the satellite sewer collection systems collect and convey wastewater from *domestic* sources to the POTW treatment facility, and there is no indication that the satellite sewer collection systems are industrial users. Therefore, they are not indirect dischargers as defined in the regulations.⁸

⁷ This conclusion holds whether or not the satellite collection systems comprise part of the POTW. This is because the point source is the discharge outfall from the Charles River WWTP, and the Towns are responsible in part for the pollutants discharged from that point source given they operate conveyances that carry wastewater to that point source. Accordingly, the Towns are engaged in the “discharge of a pollutant” even if only the WWTP is the “POTW.” As the Region explained at oral argument, the Region expressly concluded in the administrative record that the satellite collection systems are part of the POTW to address the Board’s concern in the *Upper Blackstone* decision that lack of such a clear delineation could be read as requiring household contributors of domestic sewage to the POTW to obtain an NPDES permit because they also “discharge” pollutants through the POTW to navigable waters. Oral Arg. Tr. at 56-58; *see also* Analysis at 11. The Region thus stated in the administrative record that the domestic users of the POTW are excluded from the requirement to obtain a permit. Analysis at 11. The Region does not read NPDES jurisdiction as extending to domestic households, nor does the Board.

⁸ Petitioners also assert that the Agency’s NPDES Permit Writers’ Manual supports their position because “NPDES permits are issued only to direct dischargers.” Petition at 19 (quoting Office of Wastewater Management, U.S. EPA, EPA-933-K-10-001, *NPDES Permit Writers’ Manual* at 1-7 (Sept. 2010)). This argument presupposes (continued...)

2. *The Region Has Authority and Discretion to Regulate Excessive Inflow and Infiltration Notwithstanding Applicable State Regulations*

The existence (and revision) of Massachusetts regulations addressing inflow and infiltration control does not diminish the Region’s authority to permit the Towns under the Clean Water Act. Petitioners allege that the Region failed to consider revisions to Massachusetts regulations that address operation and maintenance requirements for sewer systems. Petition at 27 (citing 314 Mass. Code Regs. 12.04(2)). According to Petitioners, these regulations replace a Massachusetts Department of Environmental Protection (“MassDEP”) policy document referenced in the Region’s Permitting Approach and Analysis. *Id.* Petitioners argue that “[t]hese regulations are better tailored to manage municipal sewer collection systems connected to regional wastewater treatment facilities” than the Region, and “MassDEP has clear legal authority to regulate I/I in collection systems* * *.” *Id.* at 28.

Here, the Region evaluated flow data from the Charles River WWTP to conclude that it was “receiving high levels of inflow and wet weather infiltration.” Analysis Ex. B at 19. Because of the excessive inflow and infiltration at the WWTP, the Region decided to include the Towns as co-permittees. Analysis at 6 (citing *id.* Ex. B). The Towns commented that the Region failed to adequately and properly support the analysis in the Permitting Approach upon which the Region relied to include the Towns as co-permittees. RTC at 80-81 (Comment 48). Specifically, the Towns stated that “nothing in the [F]act Sheet or [Permitting Approach] indicates that [sanitary sewer overflows] or I/I is not being addressed by some or all of the towns or is a problem that requires or calls for one or more of the Towns to be identified as a co-

⁸(...continued)

that the Towns are indirect dischargers. The Towns, as discussed above, are discharging pollutants from the POTW treatment plant. Therefore, they are legally “direct dischargers” (not “indirect dischargers”), and the Permit Writers’ Manual is not contradictory.

permittee in this permit, or that co-permittee status may advance any I/I or SSO problem.” *Id.* The Region responded that it “need not show that the specific Towns * * * failed to adequately reduce I/I” because the Agency sought a comprehensive POTW-wide approach for POTWs owned by multiple parties. *Id.* at 81. Such an approach did “not necessarily turn on the performance of any particular Town.” *Id.* The Region then stated that “State regulations, while welcome, are not subject to EPA enforcement and are not a substitute for permit requirements.” *Id.* at 82.

Although Petitioners are dissatisfied with the Region’s statement that the Permitting Approach “does not depend on the sufficiency or insufficiency of state regulations,” Petitioners do not demonstrate the contrary, that the state regulations supersede the Region’s authority to regulate the Towns, or that the Region’s response to comments was otherwise inadequate. Rather, the crux of Petitioners’ contention is that because Massachusetts regulations address excessive inflow and infiltration, the Region need not include the Towns as co-permittees to address these concerns. *E.g.*, Petition at 28 (“These regulations are better tailored to manage municipal sewer collection systems connected to regional wastewater treatment facilities.”). According to Petitioners, the Region should rely on the Massachusetts regulations to resolve I/I issues at the POTW, rather than directly regulating the Towns whose collection systems comprise the POTW. *E.g.* Oral Arg. Tr. at 45 (noting “other approaches” to addressing I/I “such as the State regulation”).

Petitioners fail to address why the Region’s approach to control excessive inflow and infiltration by regulating the Towns is clearly erroneous. In their petition, Petitioners do not dispute the explanation the Region provided in the Response to Comments. The Agency’s authority to regulate the Towns’ satellite sewer systems arises from their status as contributors to the discharge from the outfall listed in the Permit, and Petitioners have failed to explain how the existence of state regulations regarding sewer systems diminishes this authority or why the Region’s

conclusion that permit controls on the satellite systems are necessary to control excessive I/I is clearly erroneous.

3. *The Towns Are Responsible Only for Portions of the Collection System That They Own or Operate*

Petitioners also claim that the Towns' responsibility to comply with the provisions of the permit other than Parts I.B. and I.C. is unclear, and that each of the Towns risks liability from EPA or citizen enforcement if the Charles River Pollution Control District or other Towns fail to comply with the permit. Oral Arg. Tr. at 43, 108; Petition at 29. The Region responds that the Permit conditions that are applicable to the Towns, Parts I.B. and I.C., limit each co-permittee's responsibility to "the collection system *which it owns*." Response at 48 (quoting EPA Region 1, Authorization to Discharge Under the National Pollutant Discharge Elimination System, NPDES Permit No. MA0102598, at 7, pt. I.C. (July 23, 2014) ("Permit") (A.R. A.1)) (quotations omitted). As the Region further elaborates,

the Permit holds the [Charles River Pollution Control] District and Towns responsible *only* for portions of the collection system that they own or operate. * * * * The Region reaffirms its consistent reading of the Permit, which reflects Petitioners' desired interpretation: each permittee is *only* responsible for actions with respect to the portions of the collection system that it owns and operates, and is *not* liable for violations relative to portions of the collection system operated by others.

Id. at 48-49 (citing Fact Sheet at 6; Analysis at 7) (citations omitted) (emphases in original).

The language of the permit is clear on its face that the Towns are subject only to Parts I.B. and I.C., and then only with respect to the portions of the collection system that each Town owns. *See* Permit at 1,

7 (“The permittee and each co-permittee are required to complete the following activities for the collection system which it owns.”). In addition, the Region’s statements in the record confirm that reading. The Board adopts the Region’s interpretation as “an authoritative reading of the permit that is binding on the Agency.” *In re Austin Powder Co.*, 6 E.A.D. 713, 717 (EAB 1997); *see In re Amoco Oil Co.*, 4 E.A.D. 954, 981 (EAB 1993); *see also In re Great Lakes Chem. Corp.*, 5 E.A.D. 395, 397 (EAB 1994) (construing Agency agreement with permit applicant’s construction of permit terms binding on Agency). Accordingly, the Board rejects the Towns’ claim that their responsibility under the terms of the permit is unclear, subjecting them to liability for any noncompliance with the permit in areas of the POTW for which the Towns lack ownership and control.

B. The Region Did Not Circumvent the NPDES Permit Application Requirements

Petitioners argue that the Clean Water Act requires those persons who discharge pollutants to have an NPDES permit, and it is this person who also must apply for a permit. Petition at 14. Moreover, it is the permit applicant who then is subject to the NPDES permitting requirements. *Id.* Here, the Towns did not apply for permits to authorize their discharge of pollutants or jointly file an application with Charles River, yet the Region included the Towns as co-permittees to the permit. For the reasons that follow, the Board concludes that the Region reasonably read the permit application requirements to authorize including the Towns as co-permittees without separate permit applications.

The NPDES regulations provide that a person who discharges or proposes to discharge pollutants has an obligation to apply for an NPDES permit to lawfully discharge into waters of the United States. 40 C.F.R. § 122.21(a). Applications for EPA-issued permits to existing POTWs must include the information listed in 40 C.F.R. section 122.21(j); however, EPA may “waive any requirement of [section 122.21(j)] if [the

Agency] has access to substantially identical information.” *Id.* § 122.21(j).

1. *The “Duty to Apply” Has Been Met by the Charles River WWTP Permit Application*

As discussed in the previous section, the Board has determined that the Towns are persons engaged in the “discharge of a pollutant” because their satellite sewer systems contribute to the discharge of pollutants from the outfall identified in the Permit. Although the Towns did not apply for permits to authorize their contribution to the discharge, the Towns receive the benefits of the NPDES permit that they are challenging.

EPA regulations are silent as to how satellite collection system owners and operators are to obtain permit coverage for their contributions to the discharge of pollutants. Here, the Charles River wastewater treatment plant operator applied to renew the NPDES permit for the POTW, and discharges from the POTW, including those from the Towns’ satellite collection systems, are covered in the permit issued to the treatment plant. Thus, the Region determined the application from Charles River satisfies the “duty to apply” for a permit for the discharge from the treatment plant in 40 C.F.R. § 122.21(a). The Towns do not dispute that Charles River applied for a permit. They argue, however, that the Towns cannot be included as co-permittees unless they separately apply for a permit. The language of section 122.21(a) does not resolve the question either way, but does specify that “[a]ny person who discharges or proposes to discharge pollutants * * * and who does not have an effective permit * * * must submit a complete application to [EPA] in accordance with this section and part 124 of this chapter.” *Id.* § 122.21(a). That language is susceptible of a reading that, if there are multiple dischargers responsible for the same discharge, as here, then an application from one of the dischargers constitutes an application from all.

Petitioners quote extensively from the NPDES Permit Writers' Manual and point out that it says nothing about satellite collection systems or suggests that such systems must apply for a permit and that the Region is therefore acting inconsistently with past Agency statements. *See* Petition at 20 (quoting *NPDES Permit Writers' Manual* at 4-1). Petitioners fail to demonstrate the Region's interpretation of the application regulations is inconsistent with the Manual. At most, Petitioners show that the Manual, like the regulations themselves, is silent as to the permitting scheme for regionally integrated POTWs. Accordingly, the Board upholds the Region's interpretation as a reasonable reading of the language of section 122.21(a). *See In re Lazarus, Inc.*, 7 E.A.D. 318, 351-54 (EAB 1997) (discussing deference to Agency interpretations of, *inter alia*, its own regulations).

2. *The Region Appropriately Determined That It Could Waive the Requirement for Separate Applications From the Towns*

As the Region explained, in this case, the information Charles River provided in its application for a permit renewal included sufficient information to determine whether to include the Towns as co-permittees and the permit terms applicable to the Towns. Region's Resp. at 35 ("The Region has determined that requiring a single permit application executed by the regional POTW treatment plant owner/operator will deliver 'substantially identical information' to any application submitted by the Towns." (quoting RTC at 70) (internal quotations omitted)); *see also, e.g.*, Letter from H. Curtis Spalding, Reg'l Adm'r, Region 1, U.S. EPA, to Denis Fraine, Town Adm'r, Town of Bellingham, *Waiver of Permit Application and Signatory Requirements for Municipal Satellite Sewage Collection System 1* (July 23, 2014) ("Waiver Letter to Bellingham"). The Region also informed the Towns that "[i]n the event that EPA requires additional information, it may use its information collection authority" under CWA section 308, 33 U.S.C. § 1318. Waiver Letter to Bellingham 2; *see also* Oral Arg. Tr. at 73 ("In the event there is not [sufficient information for a permit writer, the Region] would request separate applications from the [T]owns.").

This approach – using the information provided in the wastewater treatment plant’s permit application that is “substantially identical” to the information the Towns would provide in their applications – not only conserves Agency and applicant resources but also is consistent with the language and purpose behind the waiver provisions in the permit application regulations. *See* 40 C.F.R. § 122.21(j); *see also* National Pollutant Discharge Elimination System Permit Application Requirements for Publicly Owned Treatment Works and Other Treatment Works Treating Domestic Sewage, 64 Fed. Reg. 42,434, 42,440 (Aug. 4, 1999) (“In the proposal for today’s rule, EPA acknowledged concerns relating to redundant reporting * * *.”).⁹ Accordingly, the Region has reasonably construed the permit application requirements to allow the Towns to waive requirements to submit separate permit applications.

Finally, the permit application requirements also specify that a certifying official must sign the permit application. 40 C.F.R. § 122.21(j)(10). Specifically, the signatory must certify that the information provided in the application is, to the best of the signatory’s knowledge, complete and accurate. *Id.* § 122.22(d). Because the Towns are not providing the information, their signatures are not required.

The Towns still argue, however, that the Region lacks the authority under these regulations to force them to be included as co-permittees since they did not apply for a permit. Petition at 16. In some

⁹ Waiving duplicative recordkeeping obligations (which includes filing an NPDES permit application) also is consistent with the Paperwork Reduction Act (“PRA”), 44 U.S.C. §§ 3501-3521. One of Congress’ stated purposes in enacting the PRA was to “minimize the paperwork burden for * * * persons resulting from the collection of information by or for the Federal Government[.]” 44 U.S.C. § 3501(1). As part of their obligations under the PRA, federal agencies are required to certify to the Office of Personnel Management that collections of information are “not unnecessarily duplicative of information otherwise reasonably accessible to the agency.” *Id.* § 3506(c)(3)(B). The Region’s determination that it not need obtain separate permit applications from the Towns when the Region has the required information from the WWTP’s permit application furthers EPA’s efforts under the PRA.

ways, the Towns' argument proves too much. If, as the Towns argue, they cannot be included as co-permittees because they did not apply for an NPDES permit, then but for the Charles River WWTP's permit, the Towns would be discharging pollutants without a permit in violation of the Clean Water Act. This is a case of the Towns wanting to accept the benefit of the permit to authorize their wastewater discharges into the waters of the United States without accepting the burden of the permit. Moreover, such an approach would allow dischargers – including municipalities that currently own both their sewer system and a treatment plant that are subject to an NPDES permit – to eliminate permit requirements for their sewer systems by transferring ownership of the POTW to another entity.

Furthermore, the Towns' interpretation could lead to the Region being unable to address the I/I problems that appear to be preventing the discharge from the WWTP from consistently meeting the effluent limitations in its permit. As stated earlier, the Towns collectively own and manage approximately 95 percent – roughly 227 of 238 miles – of the sewer lines conveying wastewater to the POTW. If the permit application regulations cannot be read as the Region suggests, then the Region would have two basic alternatives to address the I/I concern: (1) deny the permit to the WWTP due to its inability to meet the requirements of the Clean Water Act, *see* 40 C.F.R. § 122.4(d), or (2) take appropriate enforcement action under CWA section 309, 33 U.S.C. § 1319. As the Region said in oral argument, both of these options would appear to be less palatable to the Towns and would be less effective for achieving the goals of the Clean Water Act than making the Towns co-permittees and relieving them of the obligation to submit a separate permit application. The Board does not read the permit application regulations as requiring the Region to adopt these alternatives.¹⁰

¹⁰ Petitioners and amicus curiae note that EPA developed a proposed regulation, which the EPA Administrator signed in January 2001, that would have explicitly created
(continued...)

The Towns further argue that, under the Region's approach, satellite system owners will have no way of knowing whether they need to apply for a permit because the Region is requiring some, but not all, satellite collection system owners to be co-permittees. At oral argument, the Region responded that it notified the Towns by "including the member[] communities as a matter of practice" when the Region issued the draft permits. Oral Arg. Tr. at 101. The Board agrees with the Towns that more advance notice would be preferable but finds no legal error in the Region's approach. A better practice would be for the Region to notify potential co-permittees individually of their status, in advance of the permit proceeding, rather than announcing it by issuance of a draft permit because the public comment period may be as short as thirty days, a very limited time in which to learn of the co-permittee status and to comment on a draft permit, including the authority and basis for being included as a co-permittee. *See* 40 C.F.R. § 124.10(b) (providing minimum length of public comment period).

¹⁰(...continued)

authority to make satellite collection system owners co-permittees on POTW permits and would have established permit application requirements for such co-permittees. Petition at 26-27; NACWA Br. at 10-11. EPA withdrew the proposed rule prior to its publication in the *Federal Register*. *See* Memorandum for the Heads and Acting Heads of Executive Departments and Agencies, 66 Fed. Reg. 7702 (Jan. 24, 2001) (requesting withdrawal from the Office of the Federal Register's review and approval "regulations that have been sent to the [Office of the Federal Register] but not published in the Federal Register"). Petitioners and amicus curie argue, by negative implication, that the existing regulations do not provide such authority. As the preamble to that unpublished proposal makes clear, however, EPA viewed that proposal as a "clarification" of the existing requirements for satellite systems to ensure that authorized State NPDES programs addressed satellite collection systems, including by making them co-permittees, when issuing permits to POTWs. U.S. EPA, National Pollutant Discharge Elimination System (NPDES) Permit Requirements for Municipal Sanitary Sewer Collection Systems, Municipal Satellite Collection Systems, and Sanitary Sewer Overflows 172 (Jan. 4, 2001) (signed proposed rule submitted to the Office of the Federal Register but withdrawn prior to publication), available at http://www.cmom.net/CMOM_nprm_part2.pdf. The fact that EPA withdrew the proposed rule, which sought to establish uniform requirements for satellite systems, does not preclude EPA from determining on a case-by-case basis whether to include satellite systems in a particular NPDES permit. For the reasons discussed in the text, the existing permit application regulations can reasonably be read to authorize the Region's approach here.

C. *The “Permitting Approach” Is Not a Legislative Rule*

Legislative – or substantive rules – are those that implement existing laws and impose a new duty on the regulated community. They are subject to the notice and comment requirements of the Administrative Procedure Act. 5 U.S.C. § 553(b). In contrast, “[i]nterpretive rules are statements as to what the administrative officer thinks the statute or regulation means. * * * Such rules only provide a clarification of statutory language[;] * * * the interpreting agency only reminds affected parties of existing duties.” *Chamber of Commerce of the United States v. OSHA*, 636 F.2d 464, 469 (D.C. Cir. 1980) (internal quotations omitted); *see also* 5 U.S.C. § 553(b)(3)(A) (exempting from notice and comment requirements “interpretative rules, general statements of policy, or rules of agency organization, procedure, or practice”).

An agency’s characterization of its own rule is not determinative of its interpretive or legislative nature. Rather, “it is the substance of what the [agency] has purported to do and has done which is decisive.” *Columbia Broad. Sys., Inc. v. United States*, 316 U.S. 407, 416 (1942). The D.C. Circuit has looked to the effect of the challenged language to evaluate whether an agency intended to clarify or explain existing statutory language and duties or to impose new responsibilities. *Chamber of Commerce*, 636 F.2d at 468-69.

The Region relies on the Permitting Approach, which was attached to the fact sheet for the draft revised permit, as describing the legal and programmatic bases for including the Towns as co-permittees to the Charles River WWTP permit. Petitioners challenge the Permitting Approach as being a legislative rule that did not undergo notice and comment.

The document refers to itself as the Region’s interpretive statement of the Clean Water Act, regulations, and Agency policy regarding NPDES permitting for regionally integrated POTWs. The document states that “it is Region 1’s permitting practice to subject all

portions of the POTW to NPDES requirements.” Permitting Approach at *i*; see also Analysis at 6 (noting 2001 permit issued to the Massachusetts Water Resources Authority that included co-permittees),¹¹ 7 (“[S]ince 2005, Region 1 has generally included municipal satellite collection systems as co-permittees for limited purposes * * * .”). Twenty-five permits issued by Region 1 include fifty-five satellite collection systems as co-permittees. Analysis at 7.

The document states that efforts between POTW treatment plants and municipal satellite sewer collections systems “fail[ed] to comprehensively address the problem of extraneous flow entering the POTW” and that “[t]he ability and/or willingness of regional sewer districts to attain meaningful I/I efforts in their member communities varied widely.” *Id.* at 6. The Region concluded “that a POTW’s ability to comply with CWA requirements depended on successful operation and maintenance of not only the treatment plant but also the collection system.” *Id.* “Region 1’s general practice will be to impose permitting requirements applicable to the POTW treatment plant along with a more limited set of conditions applicable to the connected municipal satellite collection systems.” Permitting Approach at *i*; see also Analysis at 7 (“Region 1 decided that it was necessary to refashion permits issued to regionally integrated POTWs to include all owners/operators of the treatment works.”).

¹¹ The Region states that in 2001, it included the owners and operators of contributing systems as co-permittees to the Massachusetts Water Resource Authority’s WWTP NPDES permit because the relationship between the Authority and the communities that owned the contributing systems did not allow for an effective inflow and infiltration reduction program. Analysis at 6. The Region further states that it “put municipal satellite collection systems on notice that they would be directly regulated through legally enforceable permit requirements if I/I reductions were not pursued or achieved.” *Id.* It is unclear whether the Region provided the municipal satellite co-permittees with notice of their proposed status prior to receiving public notice of the draft permit. Letter from Samir Bukhari & Michael Curley, Office of Reg’l Counsel, Region 1, U.S. EPA, to Env’tl. Appeals Bd., U.S. EPA, *Additional Information Regarding Municipal Satellite Systems* Attach. A., at 1 (Dec. 22, 2014).

In spite of this “general practice” of co-permitting, the Region’s position is that the approach of designating owners of satellite collection systems as co-permittees is nonbinding and discretionary. Analysis at 7 n.5 (suggesting that Region may also opt to directly regulate satellite collection systems). The Region also solicited comment on the document as part of the administrative record for the revised draft permit.

The Region’s document explains existing authority to regulate the owners and/or operators of collection systems under the NPDES permitting program. The Board agrees that the Region is not imposing a new duty on the satellite collection systems because that duty has always existed. The document merely is “reminding” the systems of their duties under the statute. The timing of the Permitting Approach – over a decade after the Region began classifying owners of municipal satellite sewer collection systems as co-permittees – and its attachment to the Fact Sheet supports a finding that the document is explaining the basis for including the Towns as co-permittees and that the Region has not interpreted the Permitting Approach to create new legal requirements. Since 2001, the Region’s practice has been to include the majority of, but not all, operators of satellite collection systems as co-permittees in permits issued to POTW WWTPs that included municipal satellite sewer collection systems. *See generally* Letter from Samir Bukhari & Michael Curley, Office of Reg’l Counsel, Region 1, U.S. EPA, to Env’tl. Appeals Bd., U.S. EPA, *Additional Information Regarding Municipal Satellite Systems* Attach. A. (Dec. 22, 2014). Nothing in the document suggests that the Region intended it to be a rule nor intended it to amend any existing rules.

Finally, the “ultimate focus” of the inquiry into whether a rule is interpretive or legislative “is whether the agency action partakes of the fundamental characteristic of a regulation, i.e., that it has the force of law.” *Gen. Motors Corp. v. EPA*, 363 F.3d 442, 448 (D.C. Cir. 2004) (quoting *Molycorp, Inc. v. U.S. EPA*, 197 F.3d 543, 545 (D.C. Cir. 1999)); accord *Cement Kiln Recycling Coal. v. EPA*, 493 F.3d 207, 227 (D.C. Cir. 2007). A rule has the ‘force of law’ “(1) when, in the

absence of the rule, there would not be an adequate legislative basis for enforcement action; (2) when the agency has explicitly invoked its general legislative authority; or (3) when the rule effectively amends a prior legislative rule.” *Hemp Indus. Ass’n v. DEA*, 333 F.3d 1082, 1087 (9th Cir. 2003); *see also Shalala v. Guernsey Mem’l Hosp.*, 514 U.S. 87, 112 (1995); *Syncor Int’l Corp. v. Shalala*, 127 F.3d 90, 96 (D.C. Cir. 1997). The Board is not persuaded that the Permitting Approach bears the force of law because there is an adequate basis under EPA’s current legislative rules in the document’s absence for the Region’s practice, and the document does not amend a prior rule. The Region’s decision to regulate satellite systems as co-permittees must rise or fall on the statute and the existing regulations themselves, and not on the Permitting Approach. Accordingly, it is not a legislative rule.

V. CONCLUSION

The Board upholds the Region’s determinations that the Towns are dischargers under the Clean Water Act and implementing regulations, and that the Region properly read the existing permit application regulations to authorize including the Towns as co-permittees without separate permit applications from them. In so holding, the Board does not rely on the Permitting Approach as providing any additional legal authority beyond the statutory and regulatory regulations it cites. The document does not meet the test for a legislative rule. Finally, “each permittee is *only* responsible for actions with respect to the portions of the collection system that it owns and operates, and is *not* liable for violations relative to portions of the collection system operated by others.” Response at 48-49.

VI. ORDER

The Board denies the petition of Upper Blackstone Water Pollution Abatement District and the Towns of Bellingham, Franklin, Millis, and Medway for review of the Region’s final permit decision for

CHARLES RIVER POLLUTION CONTROL DISTRICT

33

NPDES Permit No. MA0102598 issued to the Charles River Pollution Control District.

So ordered.

Exhibit A

Clinton Treatment Plant effluent flow, Nashua River flow as measured by USGS gauge,
and calculated dilution factor.

	PROCESS_DATE	Official Plant Flow, Eff, MGD	Nashua River Flow, MGD	Dilution
► Type:	Date/Time	Real	Real	Real
► Source:	User Entered	User Entered	User Entered	Dynamic Formula
► Class:	Continuous	Continuous	Continuous	Continuous
► Format:	12/31/99	Free Format Fixed	Free Format Fixed	Free Format Fixed
► Dec. Places:	•	2	2	2
Mean:	3315600000.000	3.20	71.20	18.92
Std. Deviation:	29169118.574	1.37	123.64	18.56
Std. Error:	853131.643	.04	3.62	.54
Variance:	8.508E14	1.88	15286.87	344.33
Coeff. of Variation:	8.798E-3	.43	1.74	.98
Minimum:	6/20/07	1.68	2.38	1.75
Maximum:	8/31/10	12.86	1793.97	141.66
Range:	100915200.000	11.18	1791.59	139.91
Count:	1169	1169	1169	1169
Missing Cells:	0	0	0	0
Sum:	3.876E12	3744.23	83232.11	22113.26
Sum of Squares:	1.285E22	14187.25	23781140.86	820480.28

	Input Column
► Type:	Real
► Source:	User Entered
► Class:	Continuous
► Format:	Free Format Fixed
► Dec. Places:	3
Mean:	•
Std. Deviation:	•
Std. Error:	•
Variance:	•
Coeff. of Variation:	•
Minimum:	•
Maximum:	•
Range:	•
Count:	•
Missing Cells:	•
Sum:	•
Sum of Squares:	•

	PROCESS_DATE	Official Plant Flow, Eff, MGD	Nashua River Flow, MGD	Dilution
1	6/20/07	2.82	3.34	2.18
2	6/21/07	2.71	3.34	2.23
3	6/22/07	2.82	3.73	2.32
4	6/23/07	2.75	3.54	2.29
5	6/24/07	2.73	3.41	2.25
6	6/25/07	2.73	3.41	2.25
7	6/26/07	2.91	3.47	2.19
8	6/27/07	2.49	3.54	2.42
9	6/28/07	2.35	3.60	2.53
10	6/29/07	2.38	3.67	2.54
11	6/30/07	2.31	3.79	2.64
12	7/ 1/07	2.25	3.92	2.74
13	7/ 2/07	2.27	3.99	2.76
14	7/ 3/07	2.19	4.05	2.85
15	7/ 4/07	2.35	4.24	2.81
16	7/ 5/07	2.71	5.59	3.07
17	7/ 6/07	2.27	4.82	3.13
18	7/ 7/07	2.26	4.69	3.08
19	7/ 8/07	2.47	5.02	3.03
20	7/ 9/07	2.51	23.15	10.22
21	7/10/07	2.66	75.23	29.25
22	7/11/07	2.85	100.31	36.21
23	7/12/07	2.88	106.10	37.83
24	7/13/07	2.88	105.45	37.59
25	7/14/07	2.78	105.45	38.88
26	7/15/07	2.92	107.38	37.71
27	7/16/07	2.90	106.74	37.86
28	7/17/07	2.85	106.74	38.48
29	7/18/07	2.80	92.59	34.03
30	7/19/07	2.76	42.44	16.36
31	7/20/07	2.36	6.43	3.73
32	7/21/07	2.31	5.59	3.42
33	7/22/07	2.27	5.53	3.43
34	7/23/07	2.29	5.40	3.36
35	7/24/07	2.39	26.36	12.04
36	7/25/07	2.61	87.45	34.47
37	7/26/07	2.73	105.45	39.61
38	7/27/07	2.75	108.67	40.46
39	7/28/07	2.89	110.60	39.22
40	7/29/07	2.82	109.95	39.99
41	7/30/07	2.83	110.60	40.02
42	7/31/07	2.81	111.24	40.63
43	8/ 1/07	2.73	111.24	41.78
44	8/ 2/07	2.85	111.24	39.98
45	8/ 3/07	2.75	111.88	41.67
46	8/ 4/07	2.74	111.88	41.80
47	8/ 5/07	2.75	111.88	41.63
48	8/ 6/07	2.84	112.53	40.66
49	8/ 7/07	2.74	113.17	42.27
50	8/ 8/07	2.76	114.45	42.53
51	8/ 9/07	2.57	113.17	45.03
52	8/10/07	2.59	114.45	45.14
53	8/11/07	2.43	100.95	42.59
54	8/12/07	2.26	47.58	22.07
55	8/13/07	2.26	10.29	5.56
56	8/14/07	2.27	9.00	4.97
57	8/15/07	1.97	7.72	4.91
58	8/16/07	2.24	7.72	4.44
59	8/17/07	2.17	7.72	4.56
60	8/18/07	2.11	8.36	4.95
61	8/19/07	2.11	7.72	4.66
62	8/20/07	2.12	28.93	14.66
63	8/21/07	2.36	95.16	41.32
64	8/22/07	2.52	110.60	44.80
65	8/23/07	2.33	88.73	39.05
66	8/24/07	2.33	55.94	25.02

	PROCESS_DATE	Official Plant Flow, Eff, MGD	Nashua River Flow, MGD	Dilution
67	8/25/07	2.23	39.87	18.84
68	8/26/07	2.23	40.51	19.15
69	8/27/07	2.32	59.16	26.54
70	8/28/07	2.41	91.31	38.95
71	8/29/07	2.49	104.81	43.02
72	8/30/07	2.34	90.02	39.40
73	8/31/07	2.25	77.80	35.64
74	9/ 1/07	2.24	77.80	35.70
75	9/ 2/07	2.18	77.80	36.64
76	9/ 3/07	2.34	78.45	34.52
77	9/ 4/07	2.13	48.23	23.63
78	9/ 5/07	2.02	7.72	4.82
79	9/ 6/07	1.98	6.17	4.11
80	9/ 7/07	1.99	5.34	3.68
81	9/ 8/07	2.02	4.76	3.36
82	9/ 9/07	2.08	4.44	3.14
83	9/10/07	2.03	3.86	2.90
84	9/11/07	2.31	6.30	3.72
85	9/12/07	2.08	4.12	2.98
86	9/13/07	2.02	3.60	2.78
87	9/14/07	2.12	3.47	2.64
88	9/15/07	2.04	3.79	2.86
89	9/16/07	2.09	3.47	2.66
90	9/17/07	2.04	3.28	2.60
91	9/18/07	2.03	3.34	2.64
92	9/19/07	2.07	3.28	2.58
93	9/20/07	1.99	3.28	2.65
94	9/21/07	2.04	3.28	2.61
95	9/22/07	2.03	3.28	2.61
96	9/23/07	2.10	3.21	2.53
97	9/24/07	2.04	3.21	2.58
98	9/25/07	2.04	3.21	2.58
99	9/26/07	2.04	3.28	2.60
100	9/27/07	2.06	3.21	2.56
101	9/28/07	1.99	3.15	2.58
102	9/29/07	1.97	2.96	2.50
103	9/30/07	2.05	3.02	2.47
104	10/ 1/07	2.00	3.02	2.51
105	10/ 2/07	2.04	3.02	2.48
106	10/ 3/07	2.04	3.02	2.49
107	10/ 4/07	2.03	2.96	2.45
108	10/ 5/07	2.09	2.89	2.39
109	10/ 6/07	2.03	2.83	2.39
110	10/ 7/07	2.01	2.83	2.40
111	10/ 8/07	2.19	3.21	2.46
112	10/ 9/07	1.90	2.96	2.56
113	10/10/07	1.85	2.89	2.56
114	10/11/07	2.06	2.83	2.37
115	10/12/07	2.00	4.44	3.22
116	10/13/07	1.98	2.96	2.49
117	10/14/07	1.97	2.70	2.37
118	10/15/07	1.94	2.70	2.39
119	10/16/07	1.88	2.70	2.44
120	10/17/07	1.91	2.70	2.42
121	10/18/07	1.91	2.70	2.41
122	10/19/07	2.12	2.76	2.30
123	10/20/07	2.01	3.41	2.70
124	10/21/07	1.98	2.70	2.37
125	10/22/07	1.99	2.70	2.36
126	10/23/07	1.99	2.83	2.42
127	10/24/07	1.96	2.89	2.48
128	10/25/07	1.90	2.89	2.52
129	10/26/07	1.97	2.89	2.47
130	10/27/07	2.11	3.54	2.67
131	10/28/07	2.05	3.09	2.50
132	10/29/07	2.00	3.02	2.51

	PROCESS_DATE	Official Plant Flow, Eff, MGD	Nashua River Flow, MGD	Dilution
133	10/30/07	1.98	3.09	2.56
134	10/31/07	1.97	3.02	2.54
135	11/ 1/07	2.00	2.96	2.48
136	11/ 2/07	2.07	20.58	10.96
137	11/ 3/07	2.62	92.59	36.31
138	11/ 4/07	2.66	115.10	44.32
139	11/ 5/07	2.07	6.11	3.95
140	11/ 6/07	2.35	7.72	4.29
141	11/ 7/07	2.09	5.14	3.46
142	11/ 8/07	2.06	4.76	3.31
143	11/ 9/07	2.19	4.63	3.11
144	11/10/07	2.02	4.37	3.17
145	11/11/07	2.06	4.24	3.06
146	11/12/07	2.10	4.18	2.99
147	11/13/07	2.07	4.37	3.11
148	11/14/07	2.06	4.12	2.99
149	11/15/07	2.23	4.63	3.08
150	11/16/07	2.11	4.63	3.20
151	11/17/07	2.07	4.18	3.02
152	11/18/07	2.11	4.12	2.95
153	11/19/07	2.03	4.05	2.99
154	11/20/07	2.10	3.99	2.90
155	11/21/07	2.09	3.99	2.91
156	11/22/07	2.09	3.99	2.91
157	11/23/07	2.02	3.99	2.97
158	11/24/07	2.01	3.92	2.95
159	11/25/07	2.06	3.92	2.90
160	11/26/07	2.22	4.12	2.85
161	11/27/07	2.15	4.50	3.10
162	11/28/07	2.10	3.99	2.90
163	11/29/07	2.04	3.92	2.93
164	11/30/07	1.86	3.86	3.08
165	12/ 1/07	2.04	3.86	2.89
166	12/ 2/07	2.18	3.86	2.77
167	12/ 3/07	2.07	4.18	3.02
168	12/ 4/07	2.09	3.92	2.88
169	12/ 5/07	2.07	3.79	2.84
170	12/ 6/07	2.01	3.73	2.85
171	12/ 7/07	2.02	3.67	2.81
172	12/ 8/07	2.00	3.73	2.86
173	12/ 9/07	2.03	3.73	2.84
174	12/10/07	2.05	3.79	2.85
175	12/11/07	2.10	3.73	2.77
176	12/12/07	2.08	3.92	2.88
177	12/13/07	2.06	3.99	2.93
178	12/14/07	2.03	4.05	3.00
179	12/15/07	2.06	3.73	2.81
180	12/16/07	2.17	8.36	4.85
181	12/17/07	2.10	4.69	3.23
182	12/18/07	2.00	4.57	3.29
183	12/19/07	2.07	4.57	3.20
184	12/20/07	2.07	4.24	3.05
185	12/21/07	2.06	3.73	2.81
186	12/22/07	2.04	3.60	2.76
187	12/23/07	2.52	3.67	2.46
188	12/24/07	2.60	5.53	3.12
189	12/25/07	2.38	3.86	2.62
190	12/26/07	2.47	3.73	2.51
191	12/27/07	2.51	4.12	2.64
192	12/28/07	2.42	3.86	2.59
193	12/29/07	2.61	3.99	2.53
194	12/30/07	2.53	3.86	2.52
195	12/31/07	2.58	4.05	2.57
196	1/ 1/08	2.53	3.79	2.50
197	1/ 2/08	2.42	3.73	2.54
198	1/ 3/08	2.38	3.73	2.57

	PROCESS_DATE	Official Plant Flow, Eff, MGD	Nashua River Flow, MGD	Dilution
199	1/ 4/08	2.37	3.92	2.66
200	1/ 5/08	2.38	3.67	2.54
201	1/ 6/08	2.43	3.54	2.45
202	1/ 7/08	2.42	3.60	2.49
203	1/ 8/08	2.57	3.73	2.45
204	1/ 9/08	3.04	4.12	2.35
205	1/10/08	3.02	3.99	2.32
206	1/11/08	3.60	14.79	5.11
207	1/12/08	3.90	60.44	16.50
208	1/13/08	3.91	112.53	29.81
209	1/14/08	3.80	113.81	30.93
210	1/15/08	3.55	95.16	27.80
211	1/16/08	3.22	38.58	12.99
212	1/17/08	2.96	4.69	2.58
213	1/18/08	3.01	4.69	2.56
214	1/19/08	3.03	4.12	2.36
215	1/20/08	2.87	3.92	2.36
216	1/21/08	2.76	3.79	2.38
217	1/22/08	2.66	3.86	2.45
218	1/23/08	2.62	3.73	2.42
219	1/24/08	2.49	3.54	2.42
220	1/25/08	2.37	3.54	2.49
221	1/26/08	2.42	3.47	2.43
222	1/27/08	2.49	3.47	2.39
223	1/28/08	2.33	3.41	2.46
224	1/29/08	2.31	3.54	2.53
225	1/30/08	2.39	3.67	2.53
226	1/31/08	2.35	3.54	2.51
227	2/ 1/08	3.05	4.57	2.50
228	2/ 2/08	3.33	5.47	2.64
229	2/ 3/08	3.28	3.99	2.22
230	2/ 4/08	3.06	3.92	2.28
231	2/ 5/08	3.63	22.50	7.19
232	2/ 6/08	5.16	93.88	19.19
233	2/ 7/08	6.06	116.38	20.21
234	2/ 8/08	6.09	111.88	19.38
235	2/ 9/08	5.20	110.60	22.28
236	2/10/08	4.85	109.95	23.67
237	2/11/08	4.42	108.67	25.61
238	2/12/08	4.23	108.67	26.67
239	2/13/08	6.11	122.17	20.99
240	2/14/08	5.96	113.17	19.98
241	2/15/08	6.23	111.24	18.86
242	2/16/08	5.11	109.95	22.52
243	2/17/08	4.93	109.31	23.16
244	2/18/08	7.17	117.67	17.42
245	2/19/08	6.52	112.53	18.26
246	2/20/08	5.63	110.60	20.63
247	2/21/08	5.05	109.95	22.77
248	2/22/08	4.84	109.95	23.70
249	2/23/08	4.38	109.31	25.96
250	2/24/08	4.31	109.31	26.36
251	2/25/08	4.13	108.67	27.34
252	2/26/08	4.25	109.95	26.87
253	2/27/08	4.46	110.60	25.80
254	2/28/08	4.16	108.02	27.00
255	2/29/08	4.04	108.02	27.71
256	3/ 1/08	4.02	108.67	28.01
257	3/ 2/08	3.80	107.38	29.29
258	3/ 3/08	3.83	107.38	29.03
259	3/ 4/08	4.99	111.88	23.40
260	3/ 5/08	6.82	117.67	18.25
261	3/ 6/08	6.24	111.24	18.84
262	3/ 7/08	6.05	110.60	19.29
263	3/ 8/08	8.32	124.74	15.98
264	3/ 9/08	8.14	117.67	15.45

	PROCESS_DATE	Official Plant Flow, Eff, MGD	Nashua River Flow, MGD	Dilution
265	3/10/08	7.08	199.97	29.24
266	3/11/08	7.09	270.70	39.19
267	3/12/08	5.99	283.56	48.31
268	3/13/08	5.69	261.70	46.99
269	3/14/08	5.21	219.91	43.21
270	3/15/08	5.50	190.33	35.61
271	3/16/08	5.01	171.04	35.14
272	3/17/08	5.20	143.39	28.57
273	3/18/08	4.13	120.24	30.10
274	3/19/08	4.81	108.02	23.44
275	3/20/08	5.16	131.82	26.54
276	3/21/08	5.25	176.18	34.58
277	3/22/08	4.82	154.96	33.17
278	3/23/08	4.46	122.81	28.57
279	3/24/08	4.31	103.52	25.04
280	3/25/08	4.10	101.59	25.79
281	3/26/08	4.04	115.10	29.50
282	3/27/08	3.93	100.95	26.66
283	3/28/08	4.15	101.59	25.47
284	3/29/08	3.90	99.67	26.56
285	3/30/08	3.93	99.67	26.37
286	3/31/08	3.97	100.31	26.29
287	4/ 1/08	3.99	102.24	26.61
288	4/ 2/08	3.88	84.88	22.85
289	4/ 3/08	3.63	19.29	6.31
290	4/ 4/08	4.06	79.09	20.48
291	4/ 5/08	4.30	100.31	24.34
292	4/ 6/08	4.18	99.67	24.83
293	4/ 7/08	4.07	99.67	25.51
294	4/ 8/08	4.00	99.67	25.94
295	4/ 9/08	4.28	99.02	24.13
296	4/10/08	3.79	99.02	27.09
297	4/11/08	3.75	99.02	27.38
298	4/12/08	4.00	100.95	26.21
299	4/13/08	3.93	99.02	26.22
300	4/14/08	3.69	98.38	27.64
301	4/15/08	3.62	97.74	28.02
302	4/16/08	3.59	97.74	28.25
303	4/17/08	3.50	97.09	28.75
304	4/18/08	3.42	97.09	29.38
305	4/19/08	3.42	97.09	29.42
306	4/20/08	3.32	96.45	30.08
307	4/21/08	3.29	96.45	30.32
308	4/22/08	3.28	95.81	30.19
309	4/23/08	3.13	76.52	25.41
310	4/24/08	2.91	16.72	6.75
311	4/25/08	3.02	76.52	26.31
312	4/26/08	3.05	94.52	32.00
313	4/27/08	3.08	94.52	31.66
314	4/28/08	3.68	99.02	27.89
315	4/29/08	4.25	102.24	25.05
316	4/30/08	4.16	97.74	24.49
317	5/ 1/08	4.28	96.45	23.55
318	5/ 2/08	3.49	95.81	28.44
319	5/ 3/08	3.83	95.81	26.05
320	5/ 4/08	4.10	97.09	24.66
321	5/ 5/08	3.74	95.81	26.61
322	5/ 6/08	3.80	88.73	24.38
323	5/ 7/08	3.47	56.58	17.32
324	5/ 8/08	3.13	6.04	2.93
325	5/ 9/08	3.04	4.12	2.36
326	5/10/08	2.75	3.99	2.45
327	5/11/08	2.80	3.86	2.38
328	5/12/08	2.68	3.79	2.41
329	5/13/08	2.65	3.73	2.41
330	5/14/08	2.64	3.67	2.39

	PROCESS_DATE	Official Plant Flow, Eff, MGD	Nashua River Flow, MGD	Dilution
331	5/15/08	2.59	3.67	2.42
332	5/16/08	2.81	3.73	2.33
333	5/17/08	2.70	4.18	2.55
334	5/18/08	2.66	3.67	2.38
335	5/19/08	2.56	3.67	2.43
336	5/20/08	2.54	3.60	2.42
337	5/21/08	2.63	3.67	2.39
338	5/22/08	2.45	3.60	2.47
339	5/23/08	2.94	3.60	2.23
340	5/24/08	2.44	3.60	2.48
341	5/25/08	2.35	3.67	2.56
342	5/26/08	2.44	3.79	2.55
343	5/27/08	2.50	3.79	2.52
344	5/28/08	2.40	3.60	2.50
345	5/29/08	2.40	3.54	2.47
346	5/30/08	2.26	3.47	2.53
347	5/31/08	2.28	3.60	2.58
348	6/ 1/08	2.41	3.67	2.52
349	6/ 2/08	2.34	3.60	2.54
350	6/ 3/08	2.27	3.60	2.58
351	6/ 4/08	2.44	4.05	2.66
352	6/ 5/08	2.40	3.79	2.58
353	6/ 6/08	2.46	3.86	2.57
354	6/ 7/08	2.45	3.54	2.44
355	6/ 8/08	2.40	3.47	2.45
356	6/ 9/08	2.39	3.47	2.45
357	6/10/08	2.36	3.41	2.44
358	6/11/08	2.29	3.67	2.60
359	6/12/08	2.26	3.34	2.48
360	6/13/08	2.29	3.41	2.49
361	6/14/08	2.29	3.47	2.51
362	6/15/08	2.46	4.50	2.83
363	6/16/08	2.45	3.79	2.55
364	6/17/08	2.38	4.12	2.73
365	6/18/08	2.39	3.60	2.50
366	6/19/08	2.38	3.67	2.54
367	6/20/08	2.27	3.67	2.61
368	6/21/08	2.31	3.67	2.58
369	6/22/08	2.33	3.67	2.58
370	6/23/08	2.87	8.36	3.91
371	6/24/08	2.40	4.76	2.98
372	6/25/08	2.30	3.99	2.73
373	6/26/08	2.56	3.60	2.41
374	6/27/08	2.57	3.60	2.40
375	6/28/08	2.44	3.54	2.45
376	6/29/08	2.56	3.86	2.51
377	6/30/08	2.31	4.05	2.76
378	7/ 1/08	2.48	3.54	2.43
379	7/ 2/08	2.50	3.60	2.44
380	7/ 3/08	2.45	3.73	2.52
381	7/ 4/08	2.42	3.92	2.62
382	7/ 5/08	2.38	3.73	2.57
383	7/ 6/08	2.49	3.60	2.45
384	7/ 7/08	2.51	3.60	2.44
385	7/ 8/08	2.57	3.60	2.40
386	7/ 9/08	2.50	14.15	6.65
387	7/10/08	2.22	4.63	3.09
388	7/11/08	2.13	3.99	2.87
389	7/12/08	2.15	3.86	2.80
390	7/13/08	2.10	3.92	2.87
391	7/14/08	2.17	20.58	10.47
392	7/15/08	2.36	86.16	37.46
393	7/16/08	2.36	105.45	45.72
394	7/17/08	2.56	105.45	42.19
395	7/18/08	2.49	105.45	43.30
396	7/19/08	2.62	106.10	41.48

	PROCESS_DATE	Official Plant Flow, Eff, MGD	Nashua River Flow, MGD	Dilution
397	7/20/08	2.79	105.45	38.81
398	7/21/08	2.76	108.67	40.37
399	7/22/08	2.80	107.38	39.32
400	7/23/08	3.19	109.95	35.45
401	7/24/08	3.55	115.10	33.44
402	7/25/08	3.38	108.67	33.18
403	7/26/08	3.18	108.02	34.97
404	7/27/08	3.36	109.95	33.77
405	7/28/08	3.33	108.02	33.46
406	7/29/08	3.20	107.38	34.53
407	7/30/08	3.21	107.38	34.42
408	7/31/08	3.26	108.02	34.18
409	8/ 1/08	3.19	107.38	34.64
410	8/ 2/08	3.34	108.67	33.50
411	8/ 3/08	3.34	107.38	33.18
412	8/ 4/08	3.10	107.38	35.62
413	8/ 5/08	3.00	108.02	36.95
414	8/ 6/08	3.32	111.24	34.48
415	8/ 7/08	3.61	111.24	31.81
416	8/ 8/08	3.77	108.67	29.85
417	8/ 9/08	3.54	108.02	31.54
418	8/10/08	3.52	109.95	32.25
419	8/11/08	3.48	108.67	32.27
420	8/12/08	3.59	110.60	31.83
421	8/13/08	3.56	109.31	31.75
422	8/14/08	3.46	108.02	32.26
423	8/15/08	3.64	111.24	31.54
424	8/16/08	3.73	109.31	30.34
425	8/17/08	3.57	108.02	31.26
426	8/18/08	3.48	107.38	31.85
427	8/19/08	3.34	90.66	28.17
428	8/20/08	3.18	75.23	24.66
429	8/21/08	3.25	102.24	32.42
430	8/22/08	3.16	107.38	34.94
431	8/23/08	3.14	107.38	35.18
432	8/24/08	3.09	107.38	35.73
433	8/25/08	3.08	102.24	34.20
434	8/26/08	2.92	79.73	28.35
435	8/27/08	2.71	49.51	19.25
436	8/28/08	2.50	19.93	8.96
437	8/29/08	2.57	28.93	12.26
438	8/30/08	2.60	66.87	26.75
439	8/31/08	2.53	67.52	27.66
440	9/ 1/08	2.65	67.52	26.47
441	9/ 2/08	2.47	68.16	28.61
442	9/ 3/08	2.63	68.80	27.14
443	9/ 4/08	2.67	84.88	32.73
444	9/ 5/08	2.14	106.74	50.85
445	9/ 6/08	4.63	120.24	26.98
446	9/ 7/08	4.92	142.75	30.03
447	9/ 8/08	4.46	113.17	26.37
448	9/ 9/08	4.27	107.38	26.15
449	9/10/08	3.81	78.45	21.60
450	9/11/08	3.38	22.50	7.66
451	9/12/08	3.18	7.72	3.43
452	9/13/08	2.98	7.07	3.37
453	9/14/08	3.33	7.72	3.31
454	9/15/08	2.94	7.07	3.41
455	9/16/08	2.80	6.30	3.25
456	9/17/08	2.73	6.17	3.26
457	9/18/08	2.64	5.92	3.24
458	9/19/08	2.62	5.66	3.16
459	9/20/08	2.51	5.47	3.18
460	9/21/08	2.56	5.34	3.08
461	9/22/08	2.42	5.27	3.18
462	9/23/08	2.42	5.08	3.10

	PROCESS_DATE	Official Plant Flow, Eff, MGD	Nashua River Flow, MGD	Dilution
463	9/24/08	2.38	5.02	3.11
464	9/25/08	2.38	4.82	3.03
465	9/26/08	2.69	7.07	3.63
466	9/27/08	3.03	6.43	3.12
467	9/28/08	3.13	6.24	2.99
468	9/29/08	3.03	5.59	2.85
469	9/30/08	2.99	5.40	2.80
470	10/ 1/08	3.07	5.85	2.90
471	10/ 2/08	2.87	5.47	2.90
472	10/ 3/08	2.81	5.14	2.83
473	10/ 4/08	2.68	4.95	2.85
474	10/ 5/08	2.66	4.82	2.81
475	10/ 6/08	2.63	4.76	2.81
476	10/ 7/08	2.56	4.76	2.86
477	10/ 8/08	2.60	4.57	2.76
478	10/ 9/08	2.88	4.50	2.56
479	10/10/08	2.60	4.18	2.61
480	10/11/08	2.46	4.05	2.64
481	10/12/08	2.40	3.99	2.66
482	10/13/08	2.46	3.99	2.62
483	10/14/08	2.42	3.99	2.64
484	10/15/08	2.44	3.99	2.64
485	10/16/08	2.36	3.86	2.63
486	10/17/08	2.36	3.92	2.66
487	10/18/08	2.32	3.99	2.72
488	10/19/08	2.31	3.86	2.67
489	10/20/08	2.87	3.92	2.37
490	10/21/08	2.30	2.64	2.15
491	10/22/08	2.27	2.96	2.30
492	10/23/08	2.21	3.47	2.57
493	10/24/08	2.25	3.67	2.63
494	10/25/08	2.50	3.79	2.52
495	10/26/08	2.52	8.36	4.31
496	10/27/08	2.40	3.09	2.28
497	10/28/08	2.51	4.24	2.69
498	10/29/08	2.46	4.44	2.80
499	10/30/08	2.36	3.86	2.64
500	10/31/08	2.37	3.79	2.60
501	11/ 1/08	2.45	4.24	2.73
502	11/ 2/08	2.38	4.05	2.71
503	11/ 3/08	2.33	4.57	2.96
504	11/ 4/08	2.31	4.50	2.95
505	11/ 5/08	2.30	4.31	2.88
506	11/ 6/08	2.42	6.11	3.52
507	11/ 7/08	2.36	7.07	4.00
508	11/ 8/08	2.38	5.21	3.18
509	11/ 9/08	2.42	5.02	3.07
510	11/10/08	2.28	4.82	3.12
511	11/11/08	2.32	4.69	3.02
512	11/12/08	2.27	4.50	2.98
513	11/13/08	2.30	4.50	2.96
514	11/14/08	2.32	5.08	3.19
515	11/15/08	2.48	5.14	3.07
516	11/16/08	2.42	6.24	3.57
517	11/17/08	2.34	4.44	2.90
518	11/18/08	2.33	4.50	2.94
519	11/19/08	2.31	4.82	3.09
520	11/20/08	2.27	4.69	3.07
521	11/21/08	2.27	4.63	3.04
522	11/22/08	2.28	4.44	2.95
523	11/23/08	2.28	4.18	2.83
524	11/24/08	2.45	21.86	9.92
525	11/25/08	3.46	82.30	24.75
526	11/26/08	3.22	54.66	17.95
527	11/27/08	2.86	5.27	2.84
528	11/28/08	2.73	3.79	2.39

	PROCESS_DATE	Official Plant Flow, Eff, MGD	Nashua River Flow, MGD	Dilution
529	11/29/08	2.66	3.67	2.38
530	11/30/08	3.05	3.79	2.24
531	12/ 1/08	3.17	5.98	2.89
532	12/ 2/08	3.02	4.12	2.36
533	12/ 3/08	2.99	3.73	2.25
534	12/ 4/08	2.91	3.60	2.24
535	12/ 5/08	2.81	3.86	2.37
536	12/ 6/08	2.74	3.86	2.41
537	12/ 7/08	2.76	3.73	2.35
538	12/ 8/08	2.61	3.41	2.31
539	12/ 9/08	2.66	3.60	2.35
540	12/10/08	2.71	4.37	2.62
541	12/11/08	3.37	4.82	2.43
542	12/12/08	6.76	18.00	3.66
543	12/13/08	5.43	7.07	2.30
544	12/14/08	4.72	5.79	2.23
545	12/15/08	4.42	5.21	2.18
546	12/16/08	4.23	14.15	4.34
547	12/17/08	4.24	49.51	12.67
548	12/18/08	4.22	95.16	23.56
549	12/19/08	4.31	96.45	23.39
550	12/20/08	4.05	95.81	24.65
551	12/21/08	4.24	96.45	23.77
552	12/22/08	3.88	95.16	25.52
553	12/23/08	3.77	94.52	26.10
554	12/24/08	4.69	95.81	21.42
555	12/25/08	5.25	96.45	19.36
556	12/26/08	5.22	95.16	19.23
557	12/27/08	5.42	96.45	18.81
558	12/28/08	6.12	97.09	16.87
559	12/29/08	6.06	95.16	16.69
560	12/30/08	5.49	94.52	18.20
561	12/31/08	5.04	94.52	19.77
562	1/ 1/09	4.56	93.88	21.58
563	1/ 2/09	4.53	93.23	21.59
564	1/ 3/09	4.31	91.95	22.33
565	1/ 4/09	4.22	91.95	22.77
566	1/ 5/09	4.03	91.95	23.84
567	1/ 6/09	3.89	91.31	24.46
568	1/ 7/09	4.31	94.52	22.92
569	1/ 8/09	4.27	94.52	23.15
570	1/ 9/09	3.99	91.31	23.86
571	1/10/09	3.99	90.66	23.73
572	1/11/09	3.90	91.31	24.42
573	1/12/09	3.73	90.66	25.34
574	1/13/09	3.71	90.02	25.27
575	1/14/09	3.60	90.02	26.01
576	1/15/09	3.60	89.38	25.81
577	1/16/09	3.54	89.38	26.27
578	1/17/09	3.54	89.38	26.28
579	1/18/09	3.54	90.02	26.43
580	1/19/09	3.55	89.38	26.17
581	1/20/09	3.46	88.73	26.65
582	1/21/09	3.44	88.73	26.83
583	1/22/09	3.37	88.09	27.13
584	1/23/09	3.30	88.09	27.73
585	1/24/09	3.25	87.45	27.87
586	1/25/09	3.26	87.45	27.80
587	1/26/09	3.20	87.45	28.33
588	1/27/09	3.10	86.81	29.04
589	1/28/09	3.34	88.73	27.57
590	1/29/09	3.26	87.45	27.85
591	1/30/09	3.19	86.81	28.19
592	1/31/09	3.17	86.81	28.42
593	2/ 1/09	3.16	86.16	28.23
594	2/ 2/09	3.15	86.16	28.33

	PROCESS_DATE	Official Plant Flow, Eff, MGD	Nashua River Flow, MGD	Dilution
595	2/ 3/09	3.15	86.16	28.39
596	2/ 4/09	3.11	85.52	28.52
597	2/ 5/09	3.10	84.88	28.37
598	2/ 6/09	3.07	84.88	28.62
599	2/ 7/09	3.10	84.88	28.38
600	2/ 8/09	3.50	84.88	25.22
601	2/ 9/09	3.29	84.23	26.63
602	2/10/09	3.07	83.59	28.24
603	2/11/09	3.41	84.23	25.70
604	2/12/09	3.88	85.52	23.02
605	2/13/09	3.95	84.23	22.32
606	2/14/09	3.86	84.23	22.84
607	2/15/09	3.76	83.59	23.25
608	2/16/09	3.63	82.95	23.86
609	2/17/09	3.53	82.95	24.47
610	2/18/09	3.50	82.95	24.68
611	2/19/09	3.67	84.23	23.93
612	2/20/09	3.60	82.95	24.07
613	2/21/09	3.51	82.30	24.46
614	2/22/09	3.94	84.23	22.39
615	2/23/09	3.92	82.95	22.19
616	2/24/09	3.71	76.52	21.63
617	2/25/09	3.48	54.01	16.50
618	2/26/09	3.18	17.36	6.46
619	2/27/09	3.47	5.92	2.70
620	2/28/09	3.79	6.43	2.70
621	3/ 1/09	3.75	5.14	2.37
622	3/ 2/09	3.62	5.47	2.51
623	3/ 3/09	3.39	4.63	2.36
624	3/ 4/09	3.20	4.44	2.39
625	3/ 5/09	3.10	4.24	2.37
626	3/ 6/09	3.14	4.31	2.37
627	3/ 7/09	3.19	4.50	2.41
628	3/ 8/09	3.60	4.50	2.25
629	3/ 9/09	4.04	5.27	2.31
630	3/10/09	4.07	4.69	2.15
631	3/11/09	4.44	5.14	2.16
632	3/12/09	4.47	4.82	2.08
633	3/13/09	4.08	4.44	2.09
634	3/14/09	3.84	4.31	2.12
635	3/15/09	3.60	4.18	2.16
636	3/16/09	3.53	4.50	2.27
637	3/17/09	3.25	4.24	2.31
638	3/18/09	3.25	4.24	2.31
639	3/19/09	3.10	4.12	2.33
640	3/20/09	3.04	4.24	2.39
641	3/21/09	3.01	4.05	2.35
642	3/22/09	3.00	4.05	2.35
643	3/23/09	3.04	3.92	2.29
644	3/24/09	3.16	3.92	2.24
645	3/25/09	2.77	3.86	2.39
646	3/26/09	2.79	3.86	2.38
647	3/27/09	2.76	4.50	2.63
648	3/28/09	2.72	3.92	2.44
649	3/29/09	2.95	4.69	2.59
650	3/30/09	2.99	4.69	2.57
651	3/31/09	2.89	4.05	2.40
652	4/ 1/09	2.96	3.86	2.30
653	4/ 2/09	2.95	4.05	2.37
654	4/ 3/09	3.10	4.69	2.51
655	4/ 4/09	3.04	4.82	2.58
656	4/ 5/09	2.98	3.92	2.32
657	4/ 6/09	3.61	5.59	2.55
658	4/ 7/09	3.89	5.27	2.35
659	4/ 8/09	3.36	4.18	2.24
660	4/ 9/09	3.25	3.92	2.21

	PROCESS_DATE	Official Plant Flow, Eff, MGD	Nashua River Flow, MGD	Dilution
661	4/10/09	3.20	3.86	2.20
662	4/11/09	3.28	4.95	2.51
663	4/12/09	3.21	4.57	2.42
664	4/13/09	3.19	4.31	2.35
665	4/14/09	3.10	4.31	2.39
666	4/15/09	3.02	4.44	2.47
667	4/16/09	2.91	4.57	2.57
668	4/17/09	2.92	4.31	2.48
669	4/18/09	2.82	3.86	2.37
670	4/19/09	2.72	3.92	2.44
671	4/20/09	2.88	4.05	2.40
672	4/21/09	3.26	7.72	3.37
673	4/22/09	3.32	5.79	2.74
674	4/23/09	3.19	4.82	2.51
675	4/24/09	3.06	4.31	2.41
676	4/25/09	3.04	4.44	2.46
677	4/26/09	2.93	4.37	2.49
678	4/27/09	2.89	4.31	2.49
679	4/28/09	2.88	4.24	2.47
680	4/29/09	2.77	3.79	2.37
681	4/30/09	2.79	3.86	2.39
682	5/ 1/09	2.69	3.92	2.46
683	5/ 2/09	2.59	3.79	2.47
684	5/ 3/09	2.61	4.12	2.57
685	5/ 4/09	2.56	4.05	2.58
686	5/ 5/09	2.62	4.44	2.69
687	5/ 6/09	2.72	5.14	2.89
688	5/ 7/09	3.07	7.72	3.51
689	5/ 8/09	3.09	16.07	6.20
690	5/ 9/09	3.17	28.29	9.94
691	5/10/09	3.13	28.29	10.04
692	5/11/09	3.18	50.15	16.77
693	5/12/09	3.23	81.02	26.09
694	5/13/09	3.56	84.88	24.83
695	5/14/09	3.38	85.52	26.28
696	5/15/09	3.35	86.16	26.69
697	5/16/09	3.75	86.81	24.15
698	5/17/09	4.10	87.45	22.35
699	5/18/09	3.53	87.45	25.76
700	5/19/09	3.28	88.09	27.89
701	5/20/09	3.17	88.09	28.78
702	5/21/09	3.17	88.73	28.97
703	5/22/09	3.16	88.73	29.08
704	5/23/09	3.13	89.38	29.58
705	5/24/09	3.04	90.02	30.59
706	5/25/09	3.05	90.02	30.49
707	5/26/09	3.03	90.66	30.89
708	5/27/09	3.07	91.31	30.75
709	5/28/09	3.05	91.95	31.16
710	5/29/09	3.08	91.95	30.87
711	5/30/09	3.03	91.95	31.36
712	5/31/09	3.07	91.95	30.99
713	6/ 1/09	3.02	91.95	31.43
714	6/ 2/09	3.06	92.59	31.31
715	6/ 3/09	3.04	92.59	31.47
716	6/ 4/09	2.94	93.23	32.77
717	6/ 5/09	2.91	93.88	33.26
718	6/ 6/09	2.94	94.52	33.19
719	6/ 7/09	2.91	94.52	33.49
720	6/ 8/09	2.79	81.66	30.29
721	6/ 9/09	2.89	97.09	34.61
722	6/10/09	2.90	97.74	34.64
723	6/11/09	3.19	98.38	31.79
724	6/12/09	3.44	105.45	31.70
725	6/13/09	3.27	99.67	31.44
726	6/14/09	3.42	101.59	30.73

	PROCESS_DATE	Official Plant Flow, Eff, MGD	Nashua River Flow, MGD	Dilution
727	6/15/09	3.31	100.95	31.52
728	6/16/09	3.20	102.24	32.91
729	6/17/09	3.15	102.88	33.69
730	6/18/09	3.42	102.24	30.94
731	6/19/09	3.43	103.52	31.20
732	6/20/09	3.40	102.88	31.24
733	6/21/09	3.35	103.52	31.91
734	6/22/09	3.40	104.81	31.81
735	6/23/09	3.51	120.24	35.30
736	6/24/09	3.68	149.82	41.74
737	6/25/09	3.72	156.89	43.22
738	6/26/09	3.78	164.61	44.58
739	6/27/09	3.64	160.75	45.21
740	6/28/09	3.57	146.60	42.08
741	6/29/09	3.49	128.60	37.86
742	6/30/09	3.38	109.95	33.52
743	7/ 1/09	3.46	112.53	33.54
744	7/ 2/09	4.72	118.96	26.22
745	7/ 3/09	4.64	113.81	25.53
746	7/ 4/09	4.19	113.81	28.18
747	7/ 5/09	3.89	113.17	30.11
748	7/ 6/09	3.80	128.60	34.87
749	7/ 7/09	4.22	157.54	38.34
750	7/ 8/09	4.57	171.04	38.41
751	7/ 9/09	4.60	222.48	49.41
752	7/10/09	4.46	223.12	50.99
753	7/11/09	4.41	190.33	44.21
754	7/12/09	4.38	205.12	47.79
755	7/13/09	4.31	199.97	47.43
756	7/14/09	4.05	189.04	47.72
757	7/15/09	4.00	193.54	49.41
758	7/16/09	3.94	195.47	50.68
759	7/17/09	4.15	182.61	44.99
760	7/18/09	4.44	201.26	46.35
761	7/19/09	4.19	193.54	47.19
762	7/20/09	4.03	179.40	45.53
763	7/21/09	4.23	174.90	42.37
764	7/22/09	4.25	180.68	43.48
765	7/23/09	4.73	178.11	38.68
766	7/24/09	8.67	265.56	31.63
767	7/25/09	7.81	419.24	54.69
768	7/26/09	7.09	447.53	64.15
769	7/27/09	6.64	432.10	66.06
770	7/28/09	6.01	398.02	67.20
771	7/29/09	5.31	247.56	47.65
772	7/30/09	5.01	259.77	52.87
773	7/31/09	6.46	346.58	54.62
774	8/ 1/09	6.45	387.73	61.16
775	8/ 2/09	6.21	394.16	64.46
776	8/ 3/09	5.61	331.79	60.14
777	8/ 4/09	5.06	246.27	49.66
778	8/ 5/09	4.73	230.19	49.66
779	8/ 6/09	4.41	210.26	48.68
780	8/ 7/09	4.14	193.54	47.75
781	8/ 8/09	3.95	179.40	46.38
782	8/ 9/09	3.77	160.11	43.53
783	8/10/09	3.67	144.68	40.43
784	8/11/09	3.67	144.68	40.37
785	8/12/09	3.60	145.32	41.40
786	8/13/09	3.30	115.10	35.91
787	8/14/09	3.06	39.87	14.05
788	8/15/09	2.92	66.87	23.87
789	8/16/09	2.88	64.94	23.57
790	8/17/09	2.90	71.37	25.62
791	8/18/09	3.40	131.17	39.53
792	8/19/09	2.99	130.53	44.60

	PROCESS_DATE	Official Plant Flow, Eff, MGD	Nashua River Flow, MGD	Dilution
793	8/20/09	3.04	129.89	43.73
794	8/21/09	3.08	129.89	43.17
795	8/22/09	3.26	132.46	41.68
796	8/23/09	3.27	131.82	41.30
797	8/24/09	3.18	131.82	42.46
798	8/25/09	3.15	131.17	42.63
799	8/26/09	3.06	130.53	43.59
800	8/27/09	2.99	131.17	44.84
801	8/28/09	3.17	131.82	42.54
802	8/29/09	3.87	140.17	37.19
803	8/30/09	3.57	133.74	38.49
804	8/31/09	3.41	133.74	40.22
805	9/ 1/09	3.28	133.74	41.78
806	9/ 2/09	3.29	145.96	45.35
807	9/ 3/09	3.24	149.82	47.28
808	9/ 4/09	3.11	143.39	47.15
809	9/ 5/09	2.98	141.46	48.53
810	9/ 6/09	2.87	139.53	49.62
811	9/ 7/09	2.99	138.89	47.40
812	9/ 8/09	2.93	137.60	48.03
813	9/ 9/09	2.83	135.67	48.89
814	9/10/09	2.80	135.67	49.39
815	9/11/09	2.87	135.67	48.21
816	9/12/09	2.99	137.60	46.97
817	9/13/09	2.91	137.60	48.30
818	9/14/09	2.86	138.25	49.32
819	9/15/09	2.82	138.25	49.95
820	9/16/09	2.76	137.60	50.87
821	9/17/09	3.00	137.60	46.84
822	9/18/09	3.39	139.53	42.17
823	9/19/09	2.82	137.60	49.78
824	9/20/09	2.79	138.25	50.59
825	9/21/09	2.64	137.60	53.06
826	9/22/09	2.78	138.25	50.67
827	9/23/09	2.75	138.25	51.18
828	9/24/09	2.71	137.60	51.87
829	9/25/09	2.69	138.25	52.47
830	9/26/09	2.67	138.89	53.08
831	9/27/09	2.90	140.17	49.34
832	9/28/09	2.73	143.39	53.52
833	9/29/09	2.81	146.60	53.19
834	9/30/09	2.73	143.39	53.56
835	10/ 1/09	2.65	106.74	41.23
836	10/ 2/09	2.73	107.38	40.29
837	10/ 3/09	2.98	109.95	37.92
838	10/ 4/09	2.88	109.31	38.93
839	10/ 5/09	2.60	70.09	27.92
840	10/ 6/09	2.46	33.44	14.62
841	10/ 7/09	2.79	55.94	21.07
842	10/ 8/09	2.67	108.02	41.43
843	10/ 9/09	2.81	108.02	39.48
844	10/10/09	2.82	109.31	39.79
845	10/11/09	2.75	108.67	40.56
846	10/12/09	2.81	108.67	39.64
847	10/13/09	2.85	109.31	39.35
848	10/14/09	2.81	109.31	39.83
849	10/15/09	2.79	109.31	40.18
850	10/16/09	2.84	109.31	39.44
851	10/17/09	2.78	109.31	40.32
852	10/18/09	3.09	111.88	37.21
853	10/19/09	3.04	109.31	36.90
854	10/20/09	2.92	96.45	33.99
855	10/21/09	2.88	108.67	38.74
856	10/22/09	2.86	108.67	39.04
857	10/23/09	2.76	108.02	40.17
858	10/24/09	3.25	111.88	35.48

	PROCESS_DATE	Official Plant Flow, Eff, MGD	Nashua River Flow, MGD	Dilution
859	10/25/09	3.36	111.24	34.07
860	10/26/09	3.23	109.31	34.80
861	10/27/09	3.22	108.67	34.71
862	10/28/09	3.61	112.53	32.15
863	10/29/09	3.56	109.95	31.93
864	10/30/09	3.44	109.31	32.73
865	10/31/09	3.48	109.31	32.43
866	11/ 1/09	3.36	109.31	33.51
867	11/ 2/09	3.33	109.31	33.79
868	11/ 3/09	3.26	109.31	34.52
869	11/ 4/09	3.16	109.31	35.62
870	11/ 5/09	3.12	109.31	36.06
871	11/ 6/09	3.00	109.31	37.46
872	11/ 7/09	3.00	108.67	37.20
873	11/ 8/09	3.00	108.67	37.21
874	11/ 9/09	2.88	84.88	30.44
875	11/10/09	2.55	44.37	18.40
876	11/11/09	2.37	5.66	3.39
877	11/12/09	2.26	4.57	3.02
878	11/13/09	2.18	4.18	2.91
879	11/14/09	2.98	9.64	4.24
880	11/15/09	3.28	6.30	2.92
881	11/16/09	3.04	4.76	2.57
882	11/17/09	2.92	4.37	2.49
883	11/18/09	2.86	4.05	2.41
884	11/19/09	2.86	3.92	2.37
885	11/20/09	3.15	5.59	2.78
886	11/21/09	2.88	3.99	2.38
887	11/22/09	2.84	3.73	2.31
888	11/23/09	2.78	3.60	2.29
889	11/24/09	2.77	9.64	4.48
890	11/25/09	2.77	54.01	20.48
891	11/26/09	3.01	97.09	33.27
892	11/27/09	3.26	106.10	33.53
893	11/28/09	3.23	105.45	33.63
894	11/29/09	3.25	105.45	33.41
895	11/30/09	3.17	90.66	29.63
896	12/ 1/09	2.82	34.72	13.30
897	12/ 2/09	2.77	4.82	2.74
898	12/ 3/09	3.07	7.07	3.30
899	12/ 4/09	2.87	4.44	2.54
900	12/ 5/09	2.92	4.37	2.50
901	12/ 6/09	2.93	4.37	2.49
902	12/ 7/09	2.85	3.73	2.31
903	12/ 8/09	2.74	3.21	2.17
904	12/ 9/09	3.16	4.24	2.34
905	12/10/09	3.16	3.92	2.24
906	12/11/09	3.11	3.34	2.07
907	12/12/09	2.95	3.21	2.09
908	12/13/09	3.27	3.67	2.12
909	12/14/09	3.29	4.05	2.23
910	12/15/09	3.43	3.54	2.03
911	12/16/09	3.43	3.41	1.99
912	12/17/09	3.29	3.28	2.00
913	12/18/09	3.11	3.21	2.03
914	12/19/09	2.98	3.15	2.06
915	12/20/09	3.03	3.34	2.10
916	12/21/09	2.87	3.15	2.10
917	12/22/09	2.77	3.02	2.09
918	12/23/09	2.73	3.02	2.11
919	12/24/09	2.70	3.02	2.12
920	12/25/09	2.58	2.96	2.15
921	12/26/09	2.68	3.02	2.13
922	12/27/09	3.33	5.14	2.54
923	12/28/09	3.29	3.60	2.09
924	12/29/09	3.09	3.21	2.04

	PROCESS_DATE	Official Plant Flow, Eff, MGD	Nashua River Flow, MGD	Dilution
925	12/30/09	3.04	3.15	2.04
926	12/31/09	3.07	3.15	2.03
927	1/ 1/10	2.67	3.15	2.18
928	1/ 2/10	2.79	3.21	2.15
929	1/ 3/10	2.78	3.09	2.11
930	1/ 4/10	2.66	3.02	2.13
931	1/ 5/10	2.62	2.89	2.11
932	1/ 6/10	2.72	2.89	2.06
933	1/ 7/10	2.53	2.89	2.14
934	1/ 8/10	2.53	2.89	2.14
935	1/ 9/10	2.48	2.89	2.17
936	1/10/10	2.51	2.83	2.13
937	1/11/10	2.46	2.83	2.15
938	1/12/10	2.40	2.83	2.18
939	1/13/10	2.31	2.83	2.22
940	1/14/10	2.38	2.83	2.19
941	1/15/10	2.36	2.76	2.17
942	1/16/10	2.44	2.83	2.16
943	1/17/10	2.61	2.96	2.14
944	1/18/10	2.60	3.86	2.48
945	1/19/10	2.54	3.09	2.21
946	1/20/10	2.46	3.02	2.23
947	1/21/10	2.39	2.96	2.24
948	1/22/10	2.42	2.89	2.19
949	1/23/10	2.36	2.89	2.23
950	1/24/10	2.49	2.89	2.16
951	1/25/10	3.95	7.07	2.79
952	1/26/10	3.70	4.12	2.11
953	1/27/10	3.45	3.41	1.99
954	1/28/10	3.33	3.34	2.00
955	1/29/10	3.13	3.21	2.03
956	1/30/10	3.01	3.15	2.05
957	1/31/10	2.92	3.15	2.08
958	2/ 1/10	2.81	3.09	2.10
959	2/ 2/10	2.71	3.02	2.12
960	2/ 3/10	2.67	3.02	2.13
961	2/ 4/10	2.68	19.29	8.19
962	2/ 5/10	2.77	50.80	19.34
963	2/ 6/10	2.81	51.44	19.32
964	2/ 7/10	2.93	51.44	18.54
965	2/ 8/10	2.62	32.15	13.26
966	2/ 9/10	2.46	3.73	2.52
967	2/10/10	2.43	3.21	2.32
968	2/11/10	2.34	3.15	2.34
969	2/12/10	2.39	3.02	2.26
970	2/13/10	2.25	2.96	2.32
971	2/14/10	2.28	2.96	2.30
972	2/15/10	2.26	2.89	2.28
973	2/16/10	2.28	3.02	2.32
974	2/17/10	2.24	3.02	2.35
975	2/18/10	2.23	2.96	2.33
976	2/19/10	2.25	2.89	2.29
977	2/20/10	2.24	2.89	2.29
978	2/21/10	2.34	2.89	2.24
979	2/22/10	2.28	2.83	2.24
980	2/23/10	2.27	2.83	2.25
981	2/24/10	3.51	4.12	2.17
982	2/25/10	6.97	11.57	2.66
983	2/26/10	9.37	10.93	2.17
984	2/27/10	6.70	5.02	1.75
985	2/28/10	5.28	4.24	1.80
986	3/ 1/10	5.00	23.15	5.63
987	3/ 2/10	5.04	81.02	17.07
988	3/ 3/10	5.74	104.81	19.27
989	3/ 4/10	4.45	104.17	24.43
990	3/ 5/10	4.53	103.52	23.83

	PROCESS_DATE	Official Plant Flow, Eff, MGD	Nashua River Flow, MGD	Dilution
991	3/ 6/10	4.45	103.52	24.28
992	3/ 7/10	4.44	103.52	24.33
993	3/ 8/10	4.44	102.88	24.17
994	3/ 9/10	4.00	102.24	26.57
995	3/10/10	3.78	102.24	28.02
996	3/11/10	4.00	102.24	26.54
997	3/12/10	4.05	101.59	26.09
998	3/13/10	4.92	104.17	22.17
999	3/14/10	12.44	137.60	12.06
1000	3/15/10	11.42	1003.08	88.87
1001	3/16/10	12.75	1793.97	141.66
1002	3/17/10	11.87	1343.87	114.24
1003	3/18/10	11.17	887.34	80.41
1004	3/19/10	9.61	643.00	67.90
1005	3/20/10	8.40	488.04	59.11
1006	3/21/10	7.36	366.51	50.80
1007	3/22/10	6.60	237.91	37.07
1008	3/23/10	9.30	344.65	38.04
1009	3/24/10	9.32	611.49	66.60
1010	3/25/10	8.53	589.63	70.11
1011	3/26/10	7.67	465.53	61.69
1012	3/27/10	6.79	356.22	53.43
1013	3/28/10	6.43	296.42	47.11
1014	3/29/10	7.53	255.27	34.89
1015	3/30/10	12.06	586.42	49.61
1016	3/31/10	12.86	1446.75	113.51
1017	4/ 1/10	11.66	1292.43	111.82
1018	4/ 2/10	9.90	861.62	88.07
1019	4/ 3/10	8.99	599.28	67.68
1020	4/ 4/10	8.02	444.96	56.46
1021	4/ 5/10	7.60	355.58	47.80
1022	4/ 6/10	6.78	304.78	45.95
1023	4/ 7/10	5.83	259.77	45.53
1024	4/ 8/10	5.44	250.13	46.98
1025	4/ 9/10	5.71	265.56	47.47
1026	4/10/10	5.44	275.85	51.69
1027	4/11/10	5.29	230.19	44.49
1028	4/12/10	5.76	268.77	47.62
1029	4/13/10	5.11	271.35	54.09
1030	4/14/10	5.07	274.56	55.14
1031	4/15/10	4.80	259.77	55.14
1032	4/16/10	4.76	230.84	49.53
1033	4/17/10	4.64	212.83	46.89
1034	4/18/10	4.72	253.99	54.78
1035	4/19/10	4.63	256.56	56.35
1036	4/20/10	4.49	239.20	54.33
1037	4/21/10	4.18	144.03	35.42
1038	4/22/10	4.25	215.41	51.70
1039	4/23/10	4.21	216.05	52.37
1040	4/24/10	4.17	216.69	52.93
1041	4/25/10	4.17	224.41	54.76
1042	4/26/10	3.98	197.40	50.56
1043	4/27/10	4.01	190.97	48.64
1044	4/28/10	3.95	194.19	50.17
1045	4/29/10	3.85	165.25	43.94
1046	4/30/10	3.71	129.89	36.06
1047	5/ 1/10	3.50	101.59	30.04
1048	5/ 2/10	3.19	30.86	10.68
1049	5/ 3/10	2.90	9.00	4.10
1050	5/ 4/10	2.81	7.72	3.74
1051	5/ 5/10	3.31	7.07	3.14
1052	5/ 6/10	2.78	7.07	3.54
1053	5/ 7/10	2.69	6.43	3.39
1054	5/ 8/10	3.02	7.72	3.56
1055	5/ 9/10	2.72	7.07	3.60
1056	5/10/10	2.78	23.15	9.32

	PROCESS_DATE	Official Plant Flow, Eff, MGD	Nashua River Flow, MGD	Dilution
1057	5/11/10	2.82	52.73	19.68
1058	5/12/10	2.77	30.22	11.89
1059	5/13/10	2.67	6.37	3.39
1060	5/14/10	2.73	4.50	2.65
1061	5/15/10	2.67	4.57	2.71
1062	5/16/10	2.65	4.18	2.58
1063	5/17/10	2.62	4.12	2.57
1064	5/18/10	2.79	4.12	2.48
1065	5/19/10	2.94	5.47	2.86
1066	5/20/10	2.56	4.50	2.75
1067	5/21/10	2.70	4.18	2.55
1068	5/22/10	2.66	3.99	2.50
1069	5/23/10	2.68	3.79	2.42
1070	5/24/10	2.68	3.86	2.44
1071	5/25/10	2.65	3.79	2.43
1072	5/26/10	2.76	15.43	6.60
1073	5/27/10	2.71	41.15	16.21
1074	5/28/10	2.74	40.51	15.76
1075	5/29/10	2.71	41.80	16.40
1076	5/30/10	2.61	42.44	17.27
1077	5/31/10	2.72	43.08	16.84
1078	6/ 1/10	2.79	44.37	16.93
1079	6/ 2/10	2.77	44.37	17.00
1080	6/ 3/10	2.75	52.73	20.18
1081	6/ 4/10	2.85	81.66	29.68
1082	6/ 5/10	2.85	90.66	32.87
1083	6/ 6/10	2.90	91.95	32.74
1084	6/ 7/10	2.79	92.59	34.16
1085	6/ 8/10	2.75	93.23	34.88
1086	6/ 9/10	2.82	94.52	34.49
1087	6/10/10	2.84	95.81	34.75
1088	6/11/10	2.84	96.45	34.99
1089	6/12/10	2.90	97.74	34.67
1090	6/13/10	2.89	98.38	35.06
1091	6/14/10	2.87	99.02	35.47
1092	6/15/10	2.84	99.02	35.85
1093	6/16/10	2.84	99.67	36.12
1094	6/17/10	2.80	100.31	36.79
1095	6/18/10	2.76	100.95	37.59
1096	6/19/10	2.71	100.95	38.22
1097	6/20/10	2.69	90.66	34.69
1098	6/21/10	2.61	65.59	26.10
1099	6/22/10	2.66	66.23	25.88
1100	6/23/10	2.68	84.88	32.63
1101	6/24/10	2.49	104.81	43.07
1102	6/25/10	2.44	104.17	43.71
1103	6/26/10	2.43	104.81	44.19
1104	6/27/10	2.44	105.45	44.25
1105	6/28/10	2.39	91.95	39.51
1106	6/29/10	2.00	32.79	17.36
1107	6/30/10	2.24	8.36	4.73
1108	7/ 1/10	2.21	7.07	4.20
1109	7/ 2/10	2.20	7.07	4.21
1110	7/ 3/10	2.12	7.07	4.34
1111	7/ 4/10	2.04	7.07	4.48
1112	7/ 5/10	2.19	7.07	4.22
1113	7/ 6/10	2.08	7.07	4.40
1114	7/ 7/10	2.05	7.07	4.46
1115	7/ 8/10	2.08	7.07	4.41
1116	7/ 9/10	2.79	7.07	3.54
1117	7/10/10	4.14	9.64	3.33
1118	7/11/10	2.07	7.72	4.72
1119	7/12/10	2.05	19.29	10.41
1120	7/13/10	2.04	56.58	28.74
1121	7/14/10	2.17	70.73	33.59
1122	7/15/10	1.99	70.73	36.58

	PROCESS_DATE	Official Plant Flow, Eff, MGD	Nashua River Flow, MGD	Dilution
1123	7/16/10	2.24	73.30	33.68
1124	7/17/10	2.12	70.09	34.11
1125	7/18/10	2.06	69.44	34.78
1126	7/19/10	2.05	68.16	34.30
1127	7/20/10	2.13	67.52	32.68
1128	7/21/10	2.06	67.52	33.77
1129	7/22/10	2.01	67.52	34.59
1130	7/23/10	2.17	68.80	32.66
1131	7/24/10	2.12	67.52	32.83
1132	7/25/10	2.08	67.52	33.52
1133	7/26/10	2.00	66.87	34.45
1134	7/27/10	2.00	48.87	25.45
1135	7/28/10	1.87	18.65	11.00
1136	7/29/10	1.81	4.76	3.62
1137	7/30/10	1.83	3.79	3.07
1138	7/31/10	1.72	3.41	2.98
1139	8/ 1/10	1.79	3.21	2.79
1140	8/ 2/10	1.78	3.02	2.70
1141	8/ 3/10	1.79	3.02	2.69
1142	8/ 4/10	1.88	2.96	2.58
1143	8/ 5/10	1.88	2.96	2.57
1144	8/ 6/10	1.75	3.02	2.72
1145	8/ 7/10	1.72	2.83	2.64
1146	8/ 8/10	1.78	2.83	2.59
1147	8/ 9/10	1.71	2.76	2.61
1148	8/10/10	1.80	2.83	2.57
1149	8/11/10	1.73	2.76	2.60
1150	8/12/10	1.77	2.70	2.52
1151	8/13/10	1.82	2.70	2.49
1152	8/14/10	1.71	2.64	2.54
1153	8/15/10	1.76	2.57	2.46
1154	8/16/10	1.80	2.57	2.43
1155	8/17/10	1.73	2.57	2.49
1156	8/18/10	1.71	2.57	2.51
1157	8/19/10	1.75	2.51	2.43
1158	8/20/10	1.68	2.44	2.46
1159	8/21/10	1.69	2.38	2.41
1160	8/22/10	1.89	14.79	8.82
1161	8/23/10	1.94	77.80	41.21
1162	8/24/10	2.19	98.38	46.00
1163	8/25/10	2.30	100.31	44.59
1164	8/26/10	2.15	97.74	46.48
1165	8/27/10	2.13	97.74	46.86
1166	8/28/10	2.11	97.09	47.06
1167	8/29/10	2.10	97.09	47.28
1168	8/30/10	2.13	93.23	44.73
1169	8/31/10	2.00	60.44	31.21

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),

Massachusetts Water Resources Authority

is authorized to discharge from the facility located at:

**Clinton Wastewater Treatment Plant
677 High Street
Clinton, MA 01510**

to receiving water named:

South Branch Nashua River (Class B Warm Water Fishery)

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

The Town Clinton and the Lancaster Sewer District are co-permittees for Part D., Operation and Maintenance, which include conditions regarding the operation and maintenance of the collection systems owned and operated by the Towns; and Part E., Unauthorized Discharges. The responsible Town Departments are:

**Town of Clinton
Department of Public Works
242 Church Street
Clinton, MA 01510**

**Lancaster Sewer District
P.O. Box 773
226 Main Street
South Lancaster, MA 01561**

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 last day of the month preceding the effective date.

This permit supersedes the permit issued on September 27, 2000.

This permit consists of Part I including effluent limitations and monitoring requirements, Part II including General Conditions and Definitions, Attachment A. USEPA Region 1 Freshwater Acute Toxicity Test Procedure and Protocol, February 2011; Attachment B. USEPA Region 1 Freshwater Chronic Toxicity Test Procedure and Protocol, March 2013; Attachment C. Reassessment of Technically Based Industrial Discharge Limits; Attachment D. Industrial Pretreatment Program Annual Report; and Attachment E. Summary of Required Report Submittals.

Signed this day of

Ken Moraff, Acting Director
Office of Ecosystem Protection
Environmental Protection Agency
Boston, MA

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

* 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. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge treated effluent to the South Branch of the Nashua River from outfall serial number 001. Such discharge shall be limited and monitored by the permittee as specified below.

<u>EFFLUENT CHARACTERISTIC</u>	<u>EFFLUENT LIMITS</u>						<u>MONITORING REQUIREMENTS</u>	
	Mass Limits			Concentration Limits				
PARAMETER	AVERAGE MONTHLY	AVERAGE WEEKLY	MAXIMUM DAILY	AVERAGE MONTHLY	AVERAGE WEEKLY	MAXIMUM DAILY	MEASUREMENT FREQUENCY	SAMPLE TYPE ³
FLOW ¹	***	***	***	Report MGD	***	Report MGD	CONTINUOUS	RECORDER
FLOW – Rolling Average ²	***	***	***	3.01 MGD	***	***	CONTINUOUS	RECORDER
BOD ₅ ⁴	500 lbs/Day	500 lbs/Day	Report	20 mg/l	20 mg/l	Report mg/l	3/WEEK	24-HOUR COMPOSITE ⁵
TSS ⁴	500 lbs/Day	500 lbs/Day	Report	20 mg/l	20 mg/l	Report mg/l	3/WEEK	24-HOUR COMPOSITE ⁵
pH RANGE ⁶	6.5 – 8.3 SU SEE PERMIT PAGE 6 OF 15, PARAGRAPH I.A.3.						1/DAY	GRAB
DISSOLVED OXYGEN	***	***	***	6.0 mg/l minimum			2/DAY	GRAB
E. COLI ⁷	***	***	***	126 cfu/100 ml	***	409 cfu/100 ml	1/DAY	GRAB
TOTAL RESIDUAL CHLORINE ^{7, 8, 9}	***	***	***	17.6 µg/l	***	30.4 µg/l	2/DAY	GRAB
TOTAL PHOSPHORUS ^{10, 11, 12, 13, 14}								
(April 1- October 31)	3.8 lbs/Day	***	***	150 µg/l	***	Report µg/l	3/WEEK	24-HOUR COMPOSITE ⁵
(November 1 – March 31)	25.1 lbs/Day	***	***	1000 µg/l		Report µg/l	1/WEEK	24-HOUR COMPOSITE ⁵

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<u>EFFLUENT CHARACTERISTIC</u>	<u>EFFLUENT LIMITS</u>		<u>MONITORING REQUIREMENT</u>	
	<u>AVERAGE MONTHLY</u>	<u>MAXIMUM DAILY</u>	<u>MEASUREMENT FREQUENCY</u>	<u>SAMPLE TYPE</u> ³
ORTHOPHOSPHORUS, DISSOLVED ^{13, 14} (November 1 – March 31)	Report µg/l	Report µg/l	2/WEEK	24-HOUR COMPOSITE ⁵
<u>TOTAL AMMONIA, as N</u> (April 1 – April 30) (May 1 – May 31) (June 1 – October 31) (November 1 – March 31)	10 mg/l 5 mg/l 2 mg/l 10 mg/l	Report mg/l Report mg/l 3.0 mg/l 35.2 mg/l	1/WEEK 1/WEEK 3/WEEK 1/WEEK	24-HOUR COMPOSITE ⁵
TOTAL ALUMINUM ¹⁴	Report µg/l	Report µg/l	2/WEEK	24-HOUR COMPOSITE ⁵
TOTAL COPPER	9.5 µg/l	14.0 µg/l	1/WEEK	24-HOUR COMPOSITE ⁵
<u>WHOLE EFFLUENT TOXICITY</u> ^{15, 16, 17, 18, 19, 20} LC50 CHRONIC NOEC Hardness pH Ammonia Total Cadmium Total Chromium Total Lead Total Copper Total Zinc Total Nickel Total Aluminum	*** *** Report mg/l Report S.U. Report mg/l Report µg/l Report µg/l Report µg/l Report µg/l Report µg/l Report µg/l Report µg/l Report µg/l	>100% 62.5 *** *** *** *** *** *** *** *** *** *** ***	4/YEAR	24-HOUR COMPOSITE

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Footnotes:

1. The monthly average and maximum daily flows for each month shall be reported. An attachment reporting total flow and precipitation for each date shall be included with the DMRs.
2. This is an annual average limit, 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 samples shall be taken after appropriate treatment and prior to discharge to Outfall 001. All sampling shall be representative of the effluent that is discharged through Outfall 001 to the South Branch of the Nashua River. A routine sampling program shall be developed in which samples are taken at the same location, same time and same day(s) of every month. Any deviations from the routine sampling program shall be documented in correspondence appended to the applicable discharge monitoring report that is submitted to EPA. In addition, all samples shall be analyzed using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136.
4. Sampling required for influent and effluent.
5. A 24-hour composite sample will consist of at least twenty four (24) grab samples, flow proportional, taken for a consecutive 24 hour period (e.g. 0700 Monday - 0700 Tuesday).
6. Required for State Certification.
7. *E. coli* and total residual chlorine limits and monitoring requirements are in effect year round. The average monthly limit for *E. coli* is expressed as the geometric mean. The samples for *E. coli* shall be taken at the same time as a sample for chlorine.
8. Chlorination and dechlorination systems shall include an alarm system for indicating system interruptions or malfunctions. Any interruption or malfunction of the chlorine or dechlorination 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, the estimated amount of time that the reduced levels of chlorine or dechlorination chemicals occurred, and measures taken to prevent future occurrences.
9. For every day that more than two chlorine grab samples are analyzed on the final effluent, the monthly DMR shall include an attachment documenting the individual final effluent grab sample results for that day, the date and time of each sample, the analytical method, and a summary of any operational modifications implemented in response to the sample results. This requirement applies to all samples taken on the final effluent, including screening level and process control samples. All final effluent test results utilizing an EPA approved analytical method shall be used in the calculation and reporting of the monthly average and maximum daily discharge values submitted on the DMR.
10. For the first four years that this permit is in effect, the permittee shall achieve the following total phosphorus limitations from April 1st - October 31st while working towards achieving compliance with the new 150 µg/L seasonal total phosphorus limitation (see Part I.B. of this permit, Schedule of

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Compliance): 1,000 µg/l average monthly, report maximum daily µg/l, and report average monthly loading in pounds per day.

11. The 150 µg/l total phosphorus limit is a monthly average limit and applies for the period of April 1st - October 31st. In addition, the maximum daily value must be reported for each month.
12. The 1,000 µg/l limit is a monthly average limit and applies for the period of November 1st-March 31st. The monthly average and maximum daily values shall be reported on each month's discharge monitoring report. These permit limits may be modified, subject to public notice and comment, based upon revisions to the water quality standards, compliance with the requirements of a Total Maximum Daily Load (TMDL), or upon a demonstration that an alternative permit limit will achieve water quality standards and the goals of the Clean Water Act.
13. The maximum daily concentration reports for dissolved orthophosphate shall be values from the same day that the maximum daily total phosphorus concentration was measured.
14. The aluminum samples shall be collected concurrently with the phosphorus and orthophosphate samples.
15. The permittee shall conduct acute and chronic toxicity tests four (4) times per year using a single species, the daphnid, *Ceriodaphnia dubia*. Toxicity test samples shall be collected during the months of March, June, September and December. The test results shall be submitted by the last day of the month following the completion of the test. The results are due by April 30, July 31, October 31 and January 31, respectively. The tests must be performed in accordance with test procedures and protocols specified in Attachment A of this permit.
16. Each toxicity test report shall include a map or GPS coordinates of discharge location and receiving water sample location.
17. The LC50 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.
18. C-NOEC (chronic-no observed effect concentration) is defined as the highest concentration of toxicant or effluent to which organisms are exposed in a life cycle or partial life cycle test which causes no adverse effect on growth, survival, or reproduction at a specific time of observation as determined from hypothesis testing where the test results exhibit a linear-dose relationship. However, where the test results do not exhibit a linear dose-response relationship, the permittee must report the lowest concentration where there is no observable effect. The "62.5 or greater" limit is defined as a sample which is composed of 62.5% (or greater) effluent, the remainder being dilution water. This is a maximum daily limit.
19. 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 Attachments A and B (Chronic and Acute Toxicity Test Procedures and Protocols) 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.

20. For each whole effluent toxicity test the permittee shall report on the appropriate discharge monitoring report, (DMR), the concentrations of the hardness, pH, ammonia nitrogen as nitrogen, total recoverable aluminum, cadmium, copper, lead, nickel, and zinc found in the 100 percent effluent sample. All these aforementioned chemical parameters shall be determined to at least the minimum quantification level shown in Attachment A. Also the permittee should note that all chemical parameter results must still be reported in the appropriate toxicity report.

Part I. A. (continued)

2. The discharge shall not cause a violation of the water quality standards of the receiving waters.
3. The pH of the effluent shall neither be less than 6.5 nor greater than 8.3 and not more than 0.5 units outside of the natural background range. There shall be no change from natural background conditions that would impair any use assigned to this water as a Class B Water.
4. The discharge shall not cause objectionable discoloration of the receiving waters.
5. The effluent shall not contain a visible oil sheen, foam, or floating solids at any time.
6. 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.
7. The results of sampling for any parameter above its required frequency must also be reported.
8. All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Director of the following:
 - a. Any new introduction of pollutants into that POTW from an indirect discharger in a primary industry category discharging process water; and
 - b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
 - c. For purposes of this paragraph, adequate notice shall include information on:
 - i. The quantity and quality of effluent introduced into the POTW; and
 - ii. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.
9. Prohibitions Concerning Interference and Pass Through:
 - a. Pollutants introduced into POTWs by a non-domestic source (user) shall not pass through the POTW or interfere with the operation or performance of the works.

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- b. If, within 30 days after notice of an interference or pass through violation has been sent by EPA to the POTW and to persons or groups who have requested such notice, the POTW fails to commence appropriate enforcement action to correct the violation, EPA may take appropriate enforcement action.

10. 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.

11. 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. COMPLIANCE SCHEDULE

1. 150 µg/l Total Phosphorus Limitation (April 1st - October 31st)

This limit shall be achieved in accordance with the following schedule:

- a. Complete plans and specifications for necessary upgrades no later than twelve months from the effective date of the permit.
- b. Start construction of necessary upgrades and submit a status report to EPA no later than twenty-four months from the effective date of the permit.
- c. Complete construction of necessary upgrades and attain compliance with the April 1st - October 31st final effluent limit for total phosphorus no later than forty-eight months from the effective date of the permit.
- d. During this four-year period, the following total phosphorus limitations shall be met from April 1st – October 31st: 1.0 mg/l average monthly. The permittee shall monitor the total phosphorus concentration in the discharge at the frequency specified in A.1.a. of this permit.

2. 1,000 µg/l Total Phosphorus Limitation (November 1st - March 31st)

The 1,000 µg/l total phosphorus limit for the winter period (November 1st - March 31st) shall become effective one year from the effective date of the permit. Specifically, the permittee shall report the average monthly and maximum daily total phosphorus concentrations in the discharge for the first winter period following the effective date of the permit while working towards meeting this new limitation.

C. INDUSTRIAL PRETREATMENT PROGRAM

1. Pollutants introduced into POTWs by a non-domestic source (user) shall not pass through the POTW or interfere with the operation or performance of the works.
2. 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.
3. **Within 180 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.
4. In preparing this evaluation, the permittee shall complete and submit the attached form (Attachment C) 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).
5. 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.
6. The permittee shall provide the EPA (and State) with an annual report describing the permittee's pretreatment program activities for the previous pretreatment program reporting year in accordance

DRAFT

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 October 31 of each year**.

7. 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.
8. 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.
9. 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.C.3.

D. 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

DRAFT

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 submitted and implemented to EPA and MassDEP within twenty four (24) months from the effective date of this permit. The Plan shall include:
 - (1) The required submittal from paragraph 5.a. above, updated to reflect current information;
 - (2) A preventive maintenance and monitoring program for the collection system;
 - (3) Description of sufficient staffing necessary to properly operate and maintain the sanitary sewer collection system and how the operation and maintenance program is staffed;
 - (4) Description of funding, the source(s) of funding and provisions for funding sufficient for implementing the plan;
 - (5) Identification of known and suspected overflows and back-ups, including manholes. A description of the cause of the identified overflows and back-ups, corrective actions

- taken, and a plan for addressing the overflows and back-ups consistent with the requirements of this permit;
- (6) A description of the permittee's programs for preventing I/I related effluent violations and all unauthorized discharges of wastewater, including overflows and by-passes and the ongoing program to identify and remove sources of I/I. The program shall include an inflow identification and control program that focuses on the disconnection and redirection of illegal sump pumps and roof down spouts; and
 - (7) An educational public outreach program for all aspects of I/I control, particularly private inflow.
 - (8) An Overflow Emergency Response Plan to protect public health from overflows and unanticipated bypasses or upsets that exceed any effluent limitation in the permit.

6. Annual Reporting Requirement

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

- a. A description of the staffing levels maintained during the year;
- b. A map and a description of inspection and maintenance activities conducted and corrective actions taken during the previous year;
- c. Expenditures for any collection system maintenance activities and corrective actions taken during the previous year;
- d. A map with areas identified for investigation/action in the coming year;
- e. If treatment plant flow has reached 80% of the design flow (2.4 MGD) or there have been capacity related overflows, submit a calculation of the maximum daily, weekly, and monthly infiltration and the maximum daily, weekly, and monthly inflow for the reporting year; and
- f. A summary of unauthorized discharges during the past year and their causes and a report of any corrective actions taken as a result of the unauthorized discharges reported pursuant to the Unauthorized Discharges section of this permit.

7. Alternate Power Source

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

E. UNAUTHORIZED DISCHARGES

The permittee and co-permittees are authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfall 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 in accordance with Section D.1.e. (1) of the General Requirements of this permit (Twenty-four hour reporting).

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

F. SLUDGE

The permittee shall comply with all existing federal and state laws and regulations that apply to sewage sludge use and disposal practices and with the CWA Section 405 (d) technical standards.

The permittee shall comply with the more stringent of either the state or federal (40 CFR Part 503) requirements.

1. The requirements and technical standards of 40 CFR Part 503 apply to facilities which perform one or more of the following use or disposal practices.
 - a. Land application - the use of sewage sludge to condition or fertilize the soil
 - b. Surface disposal - the placement of sewage sludge in a sludge-only landfill
 - c. Sewage sludge incineration in a sludge-only incinerator
2. The 40 CFR Part 503 conditions do not apply to facilities which place sludge within a municipal solid waste landfill. These conditions also do not apply to facilities which do not dispose of sewage sludge during the life of the permit but rather treat the sludge (e.g. lagoons- reed beds), or are otherwise excluded under 40 CFR 503.6.
3. The permittee shall use and comply with the sludge compliance guidance document² to determine appropriate conditions. Appropriate conditions contain the following elements.
 - a. General requirements
 - b. Pollutant limitations
 - c. Operational Standards (pathogen reduction requirements and vector attraction reduction requirements)
 - d. Management practices
 - e. Record keeping
 - f. Monitoring
 - g. Reporting

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

4. The permittee shall monitor the pollutant concentrations, pathogen reduction and vector attraction reduction at the following frequency. This frequency is based upon the volume of sewage sludge generated at the facility in dry metric tons per year
 - a. less than 290 1/year

² <http://epa.gov/region1/npdes/permits/generic/sludgeguidance.pdf>

- b. 290 to less than 1500 1/quarter
- c. 1500 to less than 15000 6/year
- d. 15000 + 1/month

The permittee shall sample the sewage sludge using the procedures detailed in 40 CFR 503.8.

5. The permittee shall submit an annual report containing the information specified in the guidance by **February 19 of each year**. Reports shall be submitted to the address contained in the reporting section of the permit. Sludge monitoring is not required by the permittee when the permittee is not responsible for the ultimate sludge disposal. The permittee must be assured that any third party contractor is in compliance with appropriate regulatory requirements. In such case, the permittee is required only to submit an annual report by February 19 containing the following information:
 - a. Name and address of contractor responsible for sludge disposal
 - b. Quantity of sludge in dry metric tons removed from the facility by the sludge contractor.

G. MONITORING AND REPORTING

1. For a period of one year from the effective date of the permit, the permittee may either submit monitoring data and other reports to EPA in hard copy form or report electronically using NetDMR, a web-based tool that allows permittees to electronically submit discharge monitoring reports (DMRs) and other required reports via a secure internet connection. Beginning no later than one year after the effective date of the permit, the permittee shall begin reporting using NetDMR, unless the facility is able to demonstrate a reasonable basis that precludes the use of NetDMR for submitting DMRs and reports. Specific requirements regarding submittal of data and reports in hard copy form and for submittal using NetDMR are described below.
2. Submittal of Reports Using NetDMR
 - a. 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”).
 - b. 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.
3. 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

DRAFT

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 is approved by EPA. All opt-out requests should be sent to the following addresses:

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

And

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

4. 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 – Central Region
Bureau of Resource Protection
627 Main Street
Worcester, MA 01608

And

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.

DRAFT

G. 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 CMR 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.

USEPA REGION 1 FRESHWATER ACUTE TOXICITY TEST PROCEDURE AND PROTOCOL

I. GENERAL REQUIREMENTS

The permittee shall conduct acceptable acute toxicity tests in accordance with the appropriate test protocols described below:

- Daphnid (Ceriodaphnia dubia) definitive 48 hour test.
- Fathead Minnow (Pimephales promelas) definitive 48 hour test.

Acute toxicity test data shall be reported as outlined in Section VIII.

II. METHODS

The permittee shall use 40 CFR Part 136 methods. Methods and guidance may be found at:

http://water.epa.gov/scitech/methods/cwa/wet/disk2_index.cfm

The permittee shall also meet the sampling, analysis and reporting requirements included in this protocol. This protocol defines more specific requirements while still being consistent with the Part 136 methods. If, due to modifications of Part 136, there are conflicting requirements between the Part 136 method and this protocol, the permittee shall comply with the requirements of the Part 136 method.

III. SAMPLE COLLECTION

A discharge sample shall be collected. Aliquots shall be split from the sample, containerized and preserved (as per 40 CFR Part 136) for chemical and physical analyses required. The remaining sample shall be measured for total residual chlorine and dechlorinated (if detected) in the laboratory using sodium thiosulfate for subsequent toxicity testing. (Note that EPA approved test methods require that samples collected for metals analyses be preserved immediately after collection.) Grab samples must be used for pH, temperature, and total residual chlorine (as per 40 CFR Part 122.21).

Standard Methods for the Examination of Water and Wastewater describes dechlorination of samples (APHA, 1992). Dechlorination can be achieved using a ratio of 6.7 mg/L anhydrous sodium thiosulfate to reduce 1.0 mg/L chlorine. If dechlorination is necessary, a thiosulfate control (maximum amount of thiosulfate in lab control or receiving water) must also be run in the WET test.

All samples held overnight shall be refrigerated at 1- 6°C.

IV. DILUTION WATER

A grab sample of dilution water used for acute toxicity testing shall be collected from the receiving water at a point immediately upstream of the permitted discharge's zone of influence at a reasonably accessible location. Avoid collection near areas of obvious road or agricultural runoff, storm sewers or other point source discharges and areas where stagnant conditions exist. In the case where an alternate dilution water has been agreed upon an additional receiving water control (0% effluent) must also be tested.

If the receiving water diluent is found to be, or suspected to be toxic or unreliable, an alternate standard dilution water of known quality with a hardness, pH, conductivity, alkalinity, organic carbon, and total suspended solids similar to that of the receiving water may be substituted **AFTER RECEIVING WRITTEN APPROVAL FROM THE PERMIT ISSUING AGENCY(S)**. Written requests for use of an alternate dilution water should be mailed with supporting documentation to the following address:

Director
Office of Ecosystem Protection (CAA)
U.S. Environmental Protection Agency-New England
5 Post Office Sq., Suite 100 (OEP06-5)
Boston, MA 02109-3912

and

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

Note: USEPA Region 1 retains the right to modify any part of the alternate dilution water policy stated in this protocol at any time. Any changes to this policy will be documented in the annual DMR posting.

See the most current annual DMR instructions which can be found on the EPA Region 1 website at <http://www.epa.gov/region1/enforcement/water/dmr.html> for further important details on alternate dilution water substitution requests.

It may prove beneficial to have the proposed dilution water source screened for suitability prior to toxicity testing. EPA strongly urges that screening be done prior to set up of a full definitive toxicity test any time there is question about the dilution water's ability to support acceptable performance as outlined in the 'test acceptability' section of the protocol.

V. TEST CONDITIONS

The following tables summarize the accepted daphnid and fathead minnow toxicity test conditions and test acceptability criteria:

EPA NEW ENGLAND EFFLUENT TOXICITY TEST CONDITIONS FOR THE DAPHNID, CERIODAPHNIA DUBIA 48 HOUR ACUTE TESTS¹

1.	Test type	Static, non-renewal
2.	Temperature (°C)	20 ± 1°C or 25 ± 1°C
3.	Light quality	Ambient laboratory illumination
4.	Photoperiod	16 hour light, 8 hour dark
5.	Test chamber size	Minimum 30 ml
6.	Test solution volume	Minimum 15 ml
7.	Age of test organisms	1-24 hours (neonates)
8.	No. of daphnids per test chamber	5
9.	No. of replicate test chambers per treatment	4
10.	Total no. daphnids per test concentration	20
11.	Feeding regime	As per manual, lightly feed YCT and <u>Selenastrum</u> to newly released organisms while holding prior to initiating test
12.	Aeration	None
13.	Dilution water ²	Receiving water, other surface water, synthetic water adjusted to the hardness and alkalinity of the receiving water (prepared using either Millipore Milli-Q ^R or equivalent deionized water and reagent grade chemicals according to EPA acute toxicity test manual) or deionized water combined with mineral water to appropriate hardness.
14.	Dilution series	≥ 0.5, must bracket the permitted RWC
15.	Number of dilutions	5 plus receiving water and laboratory water control and thiosulfate control, as necessary. An additional dilution at the permitted effluent concentration (% effluent) is required if it is not included in the dilution

series.

- | | |
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| 16. Effect measured | Mortality-no movement of body or appendages on gentle prodding |
| 17. Test acceptability | 90% or greater survival of test organisms in dilution water control solution |
| 18. Sampling requirements | For on-site tests, samples must be used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples must first be used within 36 hours of collection. |
| 19. Sample volume required | Minimum 1 liter |

Footnotes:

1. Adapted from EPA-821-R-02-012.
2. Standard prepared dilution water must have hardness requirements to generally reflect the characteristics of the receiving water.

**EPA NEW ENGLAND TEST CONDITIONS FOR THE FATHEAD MINNOW
(PIMEPHALES PROMELAS) 48 HOUR ACUTE TEST¹**

1. Test Type	Static, non-renewal
2. Temperature (°C)	$20 \pm 1^{\circ}\text{C}$ or $25 \pm 1^{\circ}\text{C}$
3. Light quality	Ambient laboratory illumination
4. Photoperiod	16 hr light, 8 hr dark
5. Size of test vessels	250 mL minimum
6. Volume of test solution	Minimum 200 mL/replicate
7. Age of fish	1-14 days old and age within 24 hrs of each other
8. No. of fish per chamber	10
9. No. of replicate test vessels per treatment	4
10. Total no. organisms per concentration	40
11. Feeding regime	As per manual, lightly feed test age larvae using concentrated brine shrimp nauplii while holding prior to initiating test
12. Aeration	None, unless dissolved oxygen (D.O.) concentration falls below 4.0 mg/L, at which time gentle single bubble aeration should be started at a rate of less than 100 bubbles/min. (Routine D.O. check is recommended.)
13. dilution water ²	Receiving water, other surface water, synthetic water adjusted to the hardness and alkalinity of the receiving water (prepared using either Millipore Milli-Q ^R or equivalent deionized and reagent grade chemicals according to EPA acute toxicity test manual) or deionized water combined with mineral water to appropriate hardness.
14. Dilution series	≥ 0.5 , must bracket the permitted RWC

15. Number of dilutions	5 plus receiving water and laboratory water control and thiosulfate control, as necessary. An additional dilution at the permitted effluent concentration (% effluent) is required if it is not included in the dilution series.
16. Effect measured	Mortality-no movement on gentle prodding
17. Test acceptability	90% or greater survival of test organisms in dilution water control solution
18. Sampling requirements	For on-site tests, samples must be used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples are used within 36 hours of collection.
19. Sample volume required	Minimum 2 liters

Footnotes:

1. Adapted from EPA-821-R-02-012
2. Standard dilution water must have hardness requirements to generally reflect characteristics of the receiving water.

VI. CHEMICAL ANALYSIS

At the beginning of a static acute toxicity test, pH, conductivity, total residual chlorine, oxygen, hardness, alkalinity and temperature must be measured in the highest effluent concentration and the dilution water. Dissolved oxygen, pH and temperature are also measured at 24 and 48 hour intervals in all dilutions. The following chemical analyses shall be performed on the 100 percent effluent sample and the upstream water sample for each sampling event.

<u>Parameter</u>	Effluent	Receiving Water	ML (mg/l)
Hardness ¹	x	x	0.5
Total Residual Chlorine (TRC) ^{2, 3}	x		0.02
Alkalinity	x	x	2.0
pH	x	x	--
Specific Conductance	x	x	--
Total Solids	x		--
Total Dissolved Solids	x		--
Ammonia	x	x	0.1
Total Organic Carbon	x	x	0.5
Total Metals			
Cd	x	x	0.0005
Pb	x	x	0.0005
Cu	x	x	0.003
Zn	x	x	0.005
Ni	x	x	0.005
Al	x	x	0.02
Other as permit requires			

Notes:

- Hardness may be determined by:
 - APHA Standard Methods for the Examination of Water and Wastewater , 21st Edition
 - Method 2340B (hardness by calculation)
 - Method 2340C (titration)
- Total Residual Chlorine may be performed using any of the following methods provided the required minimum limit (ML) is met.
 - APHA Standard Methods for the Examination of Water and Wastewater , 21st Edition
 - Method 4500-CL E Low Level Amperometric Titration
 - Method 4500-CL G DPD Colorimetric Method
- Required to be performed on the sample used for WET testing prior to its use for toxicity testing.

VII. TOXICITY TEST DATA ANALYSIS

LC50 Median Lethal Concentration (Determined at 48 Hours)

Methods of Estimation:

- Probit Method
- Spearman-Kärber
- Trimmed Spearman-Kärber
- Graphical

See the flow chart in Figure 6 on p. 73 of EPA-821-R-02-012 for appropriate method to use on a given data set.

No Observed Acute Effect Level (NOAEL)

See the flow chart in Figure 13 on p. 87 of EPA-821-R-02-012.

VIII. TOXICITY TEST REPORTING

A report of the results will include the following:

- Description of sample collection procedures, site description
- Names of individuals collecting and transporting samples, times and dates of sample collection and analysis on chain-of-custody
- General description of tests: age of test organisms, origin, dates and results of standard toxicant tests; light and temperature regime; other information on test conditions if different than procedures recommended. Reference toxicant test data should be included.
- All chemical/physical data generated. (Include minimum detection levels and minimum quantification levels.)
- Raw data and bench sheets.
- Provide a description of dechlorination procedures (as applicable).
- Any other observations or test conditions affecting test outcome.

FRESHWATER CHRONIC TOXICITY TEST PROCEDURE AND PROTOCOL

USEPA Region 1

I. GENERAL REQUIREMENTS

The permittee shall be responsible for the conduct of acceptable chronic toxicity tests using three fresh samples collected during each test period. The following tests shall be performed as prescribed in Part 1 of the NPDES discharge permit in accordance with the appropriate test protocols described below. (Note: the permittee and testing laboratory should review the applicable permit to determine whether testing of one or both species is required).

- **Daphnid (Ceriodaphnia dubia) Survival and Reproduction Test.**
- **Fathead Minnow (Pimephales promelas) Larval Growth and Survival Test.**

Chronic toxicity data shall be reported as outlined in Section VIII.

II. METHODS

Methods to follow are those recommended by EPA in: Short Term Methods For Estimating The Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms, Fourth Edition, October 2002. United States Environmental Protection Agency. Office of Water, Washington, D.C., EPA 821-R-02-013. The methods are available on-line at <http://www.epa.gov/waterscience/WET/> . Exceptions and clarification are stated herein.

III. SAMPLE COLLECTION AND USE

A total of three fresh samples of effluent and receiving water are required for initiation and subsequent renewals of a freshwater, chronic, toxicity test. The receiving water control sample must be collected immediately upstream of the permitted discharge's zone of influence. Fresh samples are recommended for use on test days 1, 3, and 5. However, provided a total of three samples are used for testing over the test period, an alternate sampling schedule is acceptable. The acceptable holding times until initial use of a sample are 24 and 36 hours for on-site and off-site testing, respectively. A written waiver is required from the regulating authority for any hold time extension. All test samples collected may be used for 24, 48 and 72 hour renewals after initial use. All samples held for use beyond the day of sampling shall be refrigerated and maintained at a temperature range of 0-6° C.

All samples submitted for chemical and physical analyses will be analyzed according to Section VI of this protocol.

Sampling guidance dictates that, where appropriate, aliquots for the analysis required in this protocol shall be split from the samples, containerized and immediately preserved, or analyzed as per 40 CFR Part 136. EPA approved test methods require that samples collected for metals analyses be preserved immediately after collection. Testing for the presence of total residual chlorine (TRC) must be analyzed immediately or as soon as possible, for all effluent samples, prior to WET testing. TRC analysis may be performed on-site or by the toxicity testing laboratory and the samples must be dechlorinated, as necessary, using sodium thiosulfate prior to sample use for toxicity testing.

If any of the renewal samples are of sufficient potency to cause lethality to 50 percent or more of the test organisms in any of the test treatments for either species or, if the test fails to meet its permit limits, then chemical analysis for total metals (originally required for the initial sample only in Section VI) will be required on the renewal sample(s) as well.

IV. DILUTION WATER

Samples of receiving water must be collected from a location in the receiving water body immediately upstream of the permitted discharge's zone of influence at a reasonably accessible location. Avoid collection near areas of obvious road or agricultural runoff, storm sewers or other point source discharges and areas where stagnant conditions exist. EPA strongly urges that screening for toxicity be performed prior to the set up of a full, definitive toxicity test any time there is a question about the test dilution water's ability to achieve test acceptability criteria (TAC) as indicated in Section V of this protocol. The test dilution water control response will be used in the statistical analysis of the toxicity test data. All other control(s) required to be run in the test will be reported as specified in the Discharge Monitoring Report (DMR) Instructions, Attachment F, page 2, Test Results & Permit Limits.

The test dilution water must be used to determine whether the test met the applicable TAC. When receiving water is used for test dilution, an additional control made up of standard laboratory water (0% effluent) is required. This control will be used to verify the health of the test organisms and evaluate to what extent, if any, the receiving water itself is responsible for any toxic response observed.

If dechlorination of a sample by the toxicity testing laboratory is necessary a "sodium thiosulfate" control, representing the concentration of sodium thiosulfate used to adequately dechlorinate the sample prior to toxicity testing, must be included in the test.

If the use of an alternate dilution water (ADW) is authorized, in addition to the ADW test control, the testing laboratory must, for the purpose of monitoring the receiving water, also run a receiving water control.

If the receiving water diluent is found to be, or suspected to be toxic or unreliable an ADW of known quality with hardness similar to that of the receiving water may be substituted. Substitution is species specific meaning that the decision to use ADW is made for each species and is based on the toxic response of that particular species. Substitution to an ADW is authorized in two cases. The first is the case where repeating a test due to toxicity in the site dilution water requires an **immediate decision** for ADW use be made by the permittee and toxicity testing laboratory. The second is in the case where two of the most recent documented incidents of unacceptable site dilution water toxicity requires ADW use in future WET testing.

For the second case, written notification from the permittee requesting ADW use **and** written authorization from the permit issuing agency(s) is required **prior to** switching to a long-term use of ADW for the duration of the permit.

Written requests for use of ADW must be mailed with supporting documentation to the following addresses:

Director
Office of Ecosystem Protection (CAA)
U.S. Environmental Protection Agency, Region 1
Five Post Office Square, Suite 100
Mail Code OEP06-5
Boston, MA 02109-3912

and

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

Note: USEPA Region 1 retains the right to modify any part of the alternate dilution water policy stated in this protocol at any time. Any changes to this policy will be documented in the annual DMR posting.

See the most current annual DMR instructions which can be found on the EPA Region 1 website at <http://www.epa.gov/region1/enforcementandassistance/dmr.html> for further important details on alternate dilution water substitution requests.

V. TEST CONDITIONS AND TEST ACCEPTABILITY CRITERIA

Method specific test conditions and TAC are to be followed and adhered to as specified in the method guidance document, EPA 821-R-02-013. If a test does not meet TAC the test must be repeated with fresh samples within 30 days of the initial test completion date.

V.1. Use of Reference Toxicity Testing

Reference toxicity test results and applicable control charts must be included in the toxicity testing report.

If reference toxicity test results fall outside the control limits established by the laboratory for a specific test endpoint, a reason or reasons for this excursion must be evaluated, correction made and reference toxicity tests rerun as necessary.

If a test endpoint value exceeds the control limits at a frequency of more than one out of twenty then causes for the reference toxicity test failure must be examined and if problems are identified corrective action taken. The reference toxicity test must be repeated during the same month in which the exceedance occurred.

If two consecutive reference toxicity tests fall outside control limits, the possible cause(s) for the exceedance must be examined, corrective actions taken and a repeat of the reference toxicity test must take place immediately. Actions taken to resolve the problem must be reported.

V.1.a. Use of Concurrent Reference Toxicity Testing

In the case where concurrent reference toxicity testing is required due to a low frequency of testing with a particular method, if the reference toxicity test results fall slightly outside of laboratory established control limits, but the primary test met the TAC, the results of the primary test will be considered acceptable. However, if the results of the concurrent test fall well outside the established **upper** control limits i.e. ≥ 3 standard deviations for IC25 values and \geq two concentration intervals for NOECs, and even though the primary test meets TAC, the primary test will be considered unacceptable and must be repeated.

V.2. For the *C. dubia* test, the determination of TAC and formal statistical analyses must be performed using only the first three broods produced.

V.3. Test treatments must include 5 effluent concentrations and a dilution water control. An additional test treatment, at the permitted effluent concentration (% effluent), is required if it is not included in the dilution series.

VI. CHEMICAL ANALYSIS

As part of each toxicity test's daily renewal procedure, pH, specific conductance, dissolved oxygen (DO) and temperature must be measured at the beginning and end of each 24-hour period in each test treatment and the control(s).

The additional analysis that must be performed under this protocol is as specified and noted in the table below.

<u>Parameter</u>	Effluent	Receiving Water	ML (mg/l)
Hardness ^{1, 4}	x	x	0.5
Total Residual Chlorine (TRC) ^{2, 3, 4}	x		0.02
Alkalinity ⁴	x	x	2.0
pH ⁴	x	x	--
Specific Conductance ⁴	x	x	--
Total Solids ⁶	x		--
Total Dissolved Solids ⁶	x		--
Ammonia ⁴	x	x	0.1
Total Organic Carbon ⁶	x	x	0.5
Total Metals ⁵			
Cd	x	x	0.0005
Pb	x	x	0.0005
Cu	x	x	0.003
Zn	x	x	0.005
Ni	x	x	0.005
Al	x	x	0.02

Other as permit requires

Notes:

1. Hardness may be determined by:

- APHA Standard Methods for the Examination of Water and Wastewater , 21st Edition
 - Method 2340B (hardness by calculation)
 - Method 2340C (titration)
2. Total Residual Chlorine may be performed using any of the following methods provided the required minimum limit (ML) is met.
- APHA Standard Methods for the Examination of Water and Wastewater , 21st Edition
 - Method 4500-CL E Low Level Amperometric Titration
 - Method 4500-CL G DPD Colorimetric Method
 - USEPA 1983. Manual of Methods Analysis of Water and Wastes
 - Method 330.5
3. Required to be performed on the sample used for WET testing prior to its use for toxicity testing
4. Analysis is to be performed on samples and/or receiving water, as designated in the table above, from all three sampling events.
5. Analysis is to be performed on the initial sample(s) only unless the situation arises as stated in Section III, paragraph 4
6. Analysis to be performed on initial samples only

VII. TOXICITY TEST DATA ANALYSIS AND REVIEW

A. Test Review

1. Concentration / Response Relationship

A concentration/response relationship evaluation is required for test endpoint determinations from both Hypothesis Testing and Point Estimate techniques. The test report is to include documentation of this evaluation in support of the endpoint values reported. The dose-response review must be performed as required in Section 10.2.6 of EPA-821-R-02-013. Guidance for this review can be found at <http://water.epa.gov/scitech/methods/cwa/> . In most cases, the review will result in one of the following three conclusions: (1) Results are reliable and reportable; (2) Results are anomalous and require explanation; or (3) Results are inconclusive and a retest with fresh samples is required.

2. Test Variability (Test Sensitivity)

This review step is separate from the determination of whether a test meets or does not meet TAC. Within test variability is to be examined for the purpose of evaluating test sensitivity. This evaluation is to be performed for the sub-lethal hypothesis testing endpoints reproduction and growth as required by the permit. The test report is to include documentation of this evaluation to support that the endpoint values reported resulted from a toxicity test of adequate sensitivity. This evaluation must be performed as required in Section 10.2.8 of EPA-821-R-02-013.

To determine the adequacy of test sensitivity, USEPA requires the calculation of test percent minimum significant difference (PMSD) values. In cases where NOEC determinations are made based on a non-parametric technique, calculation of a test PMSD value, for the sole purpose of assessing test sensitivity, shall be calculated using a comparable parametric statistical analysis technique. The calculated test PMSD is then compared to the upper and lower PMSD bounds shown for freshwater tests in Section 10.2.8.3, p. 52, Table 6 of EPA-821-R-02-013. The comparison will yield one of the following determinations.

- The test PMSD exceeds the PMSD upper bound test variability criterion in Table 6, the test results are considered highly variable and the test may not be sensitive enough to determine the presence of toxicity at the permit limit concentration (PLC). If the test results indicate that the discharge is not toxic at the PLC, then the test is considered insufficiently sensitive and must be repeated within 30 days of the initial test completion using fresh samples. If the test results indicate that the discharge is toxic at the PLC, the test is considered acceptable and does not have to be repeated.
- The test PMSD falls below the PMSD lower bound test variability criterion in Table 6, the test is determined to be very sensitive. In order to determine which treatment(s) are statistically significant and which are not, for the purpose of reporting a NOEC, the relative percent difference (RPD) between the control and each treatment must be calculated and compared to the lower PMSD boundary. See *Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the NPDES Program*, EPA 833-R-00-003, June 2002, Section 6.4.2. The following link: [Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the NPDES Program](#) can be used to locate the USEPA website containing this document. If the RPD for a treatment falls below the PMSD lower bound, the difference is considered statistically insignificant. If the RPD for a treatment is greater than the PMSD lower bound, then the treatment is considered statistically significant.
- The test PMSD falls within the PMSD upper and lower bounds in Table 6, the sub-lethal test endpoint values shall be reported as is.

B. Statistical Analysis

1. General - Recommended Statistical Analysis Method

Refer to general data analysis flowchart, EPA 821-R-02-013, page 43

For discussion on Hypothesis Testing, refer to EPA 821-R-02-013, Section 9.6

For discussion on Point Estimation Techniques, refer to EPA 821-R-02-013, Section 9.7

2. *Pimephales promelas*

Refer to survival hypothesis testing analysis flowchart, EPA 821-R-02-013, page 79

Refer to survival point estimate techniques flowchart, EPA 821-R-02-013, page 80

Refer to growth data statistical analysis flowchart, EPA 821-R-02-013, page 92

3. *Ceriodaphnia dubia*

Refer to survival data testing flowchart, EPA 821-R-02-013, page 168

Refer to reproduction data testing flowchart, EPA 821-R-02-013, page 173

VIII. TOXICITY TEST REPORTING

A report of results must include the following:

- Test summary sheets (2007 DMR Attachment F) which includes:
 - Facility name
 - NPDES permit number
 - Outfall number
 - Sample type
 - Sampling method
 - Effluent TRC concentration
 - Dilution water used
 - Receiving water name and sampling location
 - Test type and species
 - Test start date
 - Effluent concentrations tested (%) and permit limit concentration
 - Applicable reference toxicity test date and whether acceptable or not
 - Age, age range and source of test organisms used for testing
 - Results of TAC review for all applicable controls
 - Test sensitivity evaluation results (test PMSD for growth and reproduction)
 - Permit limit and toxicity test results
 - Summary of test sensitivity and concentration response evaluation

In addition to the summary sheets the report must include:

- A brief description of sample collection procedures
- Chain of custody documentation including names of individuals collecting samples, times and dates of sample collection, sample locations, requested analysis and lab receipt with time and date received, lab receipt personnel and condition of samples upon receipt at the lab(s)
- Reference toxicity test control charts
- All sample chemical/physical data generated, including minimum limits (MLs) and analytical methods used
- All toxicity test raw data including daily ambient test conditions, toxicity test chemistry, sample dechlorination details as necessary, bench sheets and statistical analysis
- A discussion of any deviations from test conditions
- Any further discussion of reported test results, statistical analysis and concentration-response relationship and test sensitivity review per species per endpoint

Attachment C

EPA - New England

Reassessment of Technically Based Industrial Discharge Limits

Under 40 CFR '122.21(j)(4), all Publicly Owned Treatment Works (POTWs) with approved Industrial Pretreatment Programs (IPPs) shall provide the following information to the Director: a written evaluation of the need to revise local industrial discharge limits under 40 CFR '403.5(c)(1).

Below is a form designed by the U.S. Environmental Protection Agency (EPA - New England) to assist POTWs with approved IPPs in evaluating whether their existing Technically Based Local Limits (TBLLs) need to be recalculated. The form allows the permittee and EPA to evaluate and compare pertinent information used in previous TBLLs calculations against present conditions at the POTW.

Please read direction below before filling out form.

ITEM I.

- * In Column (1), list what your POTW's influent flow rate was when your existing TBLLs were calculated. In Column (2), list your POTW's present influent flow rate. Your current flow rate should be calculated using the POTW's average daily flow rate from the previous 12 months.
- * In Column (1) list what your POTW's SIU flow rate was when your existing TBLLs were calculated. In Column (2), list your POTW's present SIU flow rate.
- * In Column (1), list what dilution ratio and/or 7Q10 value was used in your old/expired NPDES permit. In Column (2), list what dilution ratio and/or 7Q10 value is presently being used in your new/reissued NPDES permit.

The 7Q10 value is the lowest seven day average flow rate, in the river, over a ten year period. The 7Q10 value and/or dilution ratio used by EPA in your new NPDES permit can be found in your NPDES permit "Fact Sheet."

- * In Column (1), list the safety factor, if any, that was used when your existing TBLLs were calculated.
- * In Column (1), note how your bio-solids were managed when your existing TBLLs were calculated. In Column (2), note how your POTW is presently disposing of its biosolids and how your POTW will be disposing of its biosolids in the future.

ITEM II.

- * List what your existing TBLLs are - as they appear in your current Sewer Use Ordinance (SUO).

ITEM III.

- * Identify how your existing TBLLs are allocated out to your industrial community. Some pollutants may be allocated differently than others, if so please explain.

ITEM IV.

- * Since your existing TBLLs were calculated, identify the following in detail:
 - (1) if your POTW has experienced any upsets, inhibition, interference or pass-through as a result of an industrial discharge.
 - (2) if your POTW is presently violating any of its current NPDES permit limitations - include toxicity.

ITEM V.

- * Using current sampling data, list in Column (1) the average and maximum amount of pollutants (in pounds per day) received in the POTW's influent. Current sampling data is defined as data obtained over the last 24 month period.

All influent data collected and analyzed must be in accordance with 40 CFR '136. Sampling data collected should be analyzed using the lowest possible detection method(s), e.g. graphite furnace.

- * Based on your existing TBLLs, as presented in Item II., list in Column (2), for each pollutant the Maximum Allowable Headwork Loading (MAHL) values derived from an applicable environmental criteria or standard, e.g. water quality, sludge, NPDES, inhibition, etc. For more information, please see EPA's Local Limit Guidance Document (July 2004).

Item VI.

- * Using current sampling data, list in Column (1) the average and maximum amount of pollutants (in micrograms per liter) present your POTW's effluent. Current sampling data is defined as data obtained during the last 24 month period.

(Item VI. continued)

All effluent data collected and analyzed must be in accordance with 40 CFR '136. Sampling data collected should be analyzed using the lowest possible detection method(s), e.g. graphite furnace.

- * List in Column (2A) what the Water Quality Standards (WQS) were (in micrograms per liter) when your TBLLs were calculated, please note what hardness value was used at that time. Hardness should be expressed in milligram per liter of Calcium Carbonate.

List in Column (2B) the current WQSs or "Chronic Gold Book" values for each pollutant multiplied by the dilution ratio used in your new/reissued NPDES permit. For example, with a dilution ratio of 25:1 at a hardness of 25 mg/l - Calcium Carbonate (copper's chronic WQS equals 6.54 ug/l) the chronic NPDES permit limit for copper would equal 156.25 ug/l.

ITEM VII.

- * In Column (1), list all pollutants (in micrograms per liter) limited in your new/reissued NPDES permit. In Column (2), list all pollutants limited in your old/expired NPDES permit.

ITEM VIII.

- * Using current sampling data, list in Column (1) the average and maximum amount of pollutants in your POTW's biosolids. Current data is defined as data obtained during the last 24 month period. Results are to be expressed as total dry weight.

All biosolids data collected and analyzed must be in accordance with 40 CFR '136.

In Column (2A), list current State and/or Federal sludge standards that your facility's biosolids must comply with. Also note how your POTW currently manages the disposal of its biosolids. If your POTW is planing on managing its biosolids differently, list in Column (2B) what your new biosolids criteria will be and method of disposal.

In general, please be sure the units reported are correct and all pertinent information is included in your evaluation. If you have any questions, please contact your pretreatment representative at EPA - New England.

ITEM II.

EXISTING TBLLs			
POLLUTANT	NUMERICAL LIMIT (mg/l) or (lb/day)	POLLUTANT	NUMERICAL LIMIT (mg/l) or (lb/day)

ITEM III.

Note how your existing TBLLs, listed in Item II., are allocated to your Significant Industrial Users (SIUs), i.e. uniform concentration, contributory flow, mass proportioning, other. Please specify by circling.

ITEM IV.

Has your POTW experienced any upsets, inhibition, interference or pass-through from industrial sources since your existing TBLLs were calculated?

If yes, explain.

Has your POTW violated any of its NPDES permit limits and/or toxicity test requirements?

If yes, explain.

ITEM V.

Using current POTW influent sampling data fill in Column (1). In Column (2), list your Maximum Allowable Headwork Loading (MAHL) values used to derive your TBLLs listed in Item II. In addition, please note the Environmental Criteria for which each MAHL value was established, i.e. water quality, sludge, NPDES etc.

Pollutant	Column (1) Influent Data Analyses		Column (2)	Criteria
	Maximum (lb/day)	Average (lb/day)	MAHL Values (lb/day)	
Arsenic				
Cadmium				
Chromium				
Copper				
Cyanide				
Lead				
Mercury				
Nickel				
Silver				
Zinc				
Other (List)				

ITEM VI.

Using current POTW effluent sampling data, fill in Column (1). In Column (2A) list what the Water Quality Standards (Gold Book Criteria) were at the time your existing TBLLs were developed. List in Column (2B) current Gold Book values multiplied by the dilution ratio used in your new/reissued NPDES permit.

Pollutant	Column (1)		Columns (2A) (2B)	
	Effluent Data Analyses Maximum (ug/l)	Average (ug/l)	Water Quality Criteria (Gold Book) From TBLLs Today (ug/l) (ug/l)	
Arsenic				
*Cadmium				
*Chromium				
*Copper				
Cyanide				
*Lead				
Mercury				
*Nickel				
Silver				
*Zinc				
Other (List)				

*Hardness Dependent (mg/l - CaCO₃)

ITEM VII.

In Column (1), identify all pollutants limited in your new/reissued NPDES permit. In Column (2), identify all pollutants that were limited in your old/expired NPDES permit.

[illegible]

ITEM VIII.

Using current POTW biosolids data, fill in Column (1). In Column (2A), list the biosolids criteria that was used at the time your existing TBLLs were calculated. If your POTW is planing on managing its biosolids differently, list in Column (2B) what your new biosolids criteria would be and method of disposal.

Column (1) Pollutant Biosolids Data Analyses Average (mg/kg)		Columns (2A) (2B) Biosolids Criteria From TBLLs New (mg/kg) (mg/kg)	
Arsenic			
Cadmium			
Chromium			
Copper			
Cyanide			
Lead			
Mercury			
Nickel			
Silver			
Zinc			
Molybdenum			
Selenium			
Other (List)			

ATTACHMENT D

NPDES PERMIT REQUIREMENT FOR INDUSTRIAL PRETREATMENT ANNUAL REPORT

The information described below shall be included in the pretreatment program annual reports:

1. An updated list of all industrial users by category, as set forth in 40 C.F.R. 403.8(f)(2)(i), indicating compliance or noncompliance with the following:
 - baseline monitoring reporting requirements for newly promulgated industries
 - compliance status reporting requirements for newly promulgated industries
 - periodic (semi-annual) monitoring reporting requirements,
 - categorical standards, and
 - local limits;
2. A summary of compliance and enforcement activities during the preceding year, including the number of:
 - significant industrial users inspected by POTW (include inspection dates for each industrial user),
 - significant industrial users sampled by POTW (include sampling dates for each industrial user),
 - compliance schedules issued (include list of subject users),
 - written notices of violations issued (include list of subject users),
 - administrative orders issued (include list of subject users),
 - criminal or civil suits filed (include list of subject users) and,
 - penalties obtained (include list of subject users and penalty amounts);
3. A list of significantly violating industries required to be published in a local newspaper in accordance with 40 C.F.R. 403.8(f)(2)(vii);
4. A narrative description of program effectiveness including present and proposed changes to the program, such as funding, staffing, ordinances, regulations, rules and/or statutory authority;
5. A summary of all pollutant analytical results for influent, effluent, sludge and any toxicity or bioassay data from the wastewater treatment facility. The summary shall include a comparison of influent sampling results versus threshold inhibitory concentrations for the Wastewater Treatment System and effluent sampling results versus water quality standards. Such a comparison shall be based on the sampling program described in the paragraph below or any similar sampling program described in this Permit.

At a minimum, annual sampling and analysis of the influent and effluent of the Wastewater Treatment Plant shall be conducted for the following pollutants:

- | | |
|--------------------|-------------------|
| a.) Total Cadmium | f.) Total Nickel |
| b.) Total Chromium | g.) Total Silver |
| c.) Total Copper | h.) Total Zinc |
| d.) Total Lead | i.) Total Cyanide |
| e.) Total Mercury | j.) Total Arsenic |

The sampling program shall consist of one 24-hour flow-proportioned composite and at least one grab sample that is representative of the flows received by the POTW. The composite shall consist of hourly flow-proportioned grab samples taken over a 24-hour period if the sample is collected manually or shall consist of a minimum of 48 samples collected at 30 minute intervals if an automated sampler is used. Cyanide shall be taken as a grab sample during the same period as the composite sample. Sampling and preservation shall be consistent with 40 CFR Part 136.

6. A detailed description of all interference and pass-through that occurred during the past year;
7. A thorough description of all investigations into interference and pass-through during the past year;
8. A description of monitoring, sewer inspections and evaluations which were done during the past year to detect interference and pass-through, specifying parameters and frequencies;
9. A description of actions being taken to reduce the incidence of significant violations by significant industrial users; and,
10. The date of the latest adoption of local limits and an indication as to whether or not the permittee is under a State or Federal compliance schedule that includes steps to be taken to revise local limits.

Summary of Required Report Submittals*

Required Report	Date Due	Submitted by:	Submitted to:
Whole Effluent Toxicity Test Report (Part I.A.1)	April 30, July 31, October 31, and January 31 of each year	a	1,2,3
Initial Collection System Operation and Maintenance Plan (Part I.C.5.a.)	Within 6 months of effective date	a, b, c	1,2
Full Collection System Operations and Maintenance Plan (Part I.C.5.b.)	Two years from the effective date of the permit	a, b, c	1,2
Collection System Annual Report (Part I.C.6.)	Annually by March 31	a, b, c	1,2
Notification of Sanitary Sewer Overflows (Part I.B.)	Oral Report -Within 24 hours of discovery of event (contact: George Harding 617.918.1870) Written Report – Within 5 calendar days of discovery of event	a, b, c	1,2
Annual Sludge Report (Part I.D.8)	Annually by February 19	a	1,2
Local Limits Technical Evaluation (Part I.E.1.)	Within 120 days of effective date of permit	a	1,2
Pretreatment Annual Report (Part I.E.3.)	By October 31 of each year	a	1,2
Revisions to Pretreatment Program (if needed) (Part I.E.6.)	Within 180 days of effective date of permit	a	1,2

* 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.

- a. Massachusetts Water Resources Authority
- b. Town of Clinton
- c. Lancaster Sewerage District

- 1. EPA New England - Via NetDMR
- 2. MassDEP
Bureau of Resource Protection
Northeast Regional Office
205B Lowell Street
Wilmington, MA 01887

- 3. MassDEP
Division of Watershed Management
Surface Water Discharge Permit Program
627 Main Street, 2nd Floor
Worcester, MA 01608

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION I
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MASSACHUSETTS 02109**

PARTIALLY REVISED FACT SHEET

**PARTIALLY REVISED 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 NO: **MA0100404**

NAME AND ADDRESS OF PERMITTEE:

**Massachusetts Water Resources Authority
Charlestown Navy Yard
100 First Avenue
Boston, MA 02129**

The Towns of Clinton and Lancaster are co-permittees for specific activities required by the permit. See Sections II a., b., and c. of this fact sheet and Sections I.D. and I.E. of the draft permit. The responsible municipal departments are:

**Town of Clinton
Department of Public Works
242 Church Street
Clinton, MA 01510**

**Lancaster Sewer District
P.O. Box 773
226 Main Street
South Lancaster, MA 01561**

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

**Massachusetts Water Resources Authority
Clinton Wastewater Treatment Facility
677 High Street
Clinton, MA 01510**

RECEIVING WATERS: **South Branch Nashua River (MA81-09)**

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

I. PROPOSED ACTION

a. Decision to Partially Reopen Permit for Public Comment

On September 29, 2010, the Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) released a Draft Permit for the Massachusetts Water Resources Authority-Clinton (MWRA-Clinton) wastewater treatment plant for public review and comment. The public comment period closed on October 28, 2010. Numerous comments were received, including comments from MWRA and the MWRA-Clinton satellite communities. Among the issues raised in the comments was the legal basis for including the satellite communities as limited co-permittees to the permit for sewer system operation and maintenance requirements.

Since the close of the public comment period, events have occurred that have influenced EPA's determinations regarding the Draft Permit. In a May 28, 2010 decision related to the appeal of the Upper Blackstone Water Pollution Abatement District permit, the Environmental Appeals Board (EAB) remanded to EPA conditions related to co-permittees, finding that EPA had failed to adequately articulate in the record of proceeding a rule-of-decision, or interpretation, identifying the statutory and regulatory basis for expanding the scope of NPDES authority beyond the treatment plant owner and operator to separately owned and operated collections systems. EPA Region 1 has conducted an evaluation of its legal authority and has developed a Regional permitting approach for satellite collection systems that supports the inclusion of the owners of satellite collection systems as co-permittees. The permitting strategy, titled "***EPA REGION 1 NPDES PERMITTING APPROACH FOR PUBLICLY OWNED TREATMENT WORKS THAT INCLUDE MUNICIPAL SATELLITE SEWAGE COLLECTION SYSTEMS***" has been included as Appendix A to this fact sheet.

Additionally, during the extended period since the Draft Permit was released for public comment, EPA has updated several standard permit conditions pertaining to collection system operation and maintenance and whole effluent toxicity testing. These updated conditions are also included in the Partially Revised Draft Permit, and are also described in a later section of this fact sheet.

EPA also became aware of deficiencies in the reasonable potential analysis for aluminum conducted in the fact sheet for the 2010 Draft Permit. A revised reasonable potential analysis, using recent data is included in this fact sheet.

Based on these issues, EPA has decided to revise portions of the 2010 Draft Permit and solicit public comment on those revisions. The specific changes are discussed in detail in the following sections of this fact sheet. The fact sheet for the 2010 Draft Permit is also attached (see Appendix B) so that the basis for the conditions in that version of the Draft Permit may be understood.

b. Scope of Opening

In accordance with 40 C.F.R. § 124.14(c), comments filed on this Draft Permit during the reopened comment period are limited to the "substantial new questions that caused its reopening." Substantial new questions that caused its reopening are

- the inclusion of the satellite sewer communities as limited co-permittees and the permittee and co-permittees responsibilities in Part I.C Operation and Maintenance of the Sewer System,
- the updated collection system maintenance requirements in Part I.C. Operation and Maintenance of the Sewer System,

- modification to the total phosphorus compliance schedule,
- the changes to the WET requirements, and
- the reasonable potential analysis for aluminum.

II. PERMIT BASIS AND EXPLANATION OF CHANGES

a. Co-Permittees

The Town of Clinton and the Lancaster Sewer District were listed as co-permittees on the 2010 Draft Permit and shall remain co-permittees on the revised Draft Permit. Each Town owns and operates a separate section of the sewer collection system that transports sewage to MWRA-Clinton's facility for treatment. The co-permittees are only subject to the requirements in and Part I.D, Operation and Maintenance of the Sewer System Part I.E, Unauthorized Discharges.

Comments received on the 2010 Draft Permit included comments from MWRA and its satellite sewer communities opposing the inclusion of the satellite sewer communities as limited co-permittees.

On May 28, 2010, the Environmental Appeals Board (EAB) remanded to EPA the co-permitting provisions in a permit issued to the Upper Blackstone Water Pollution Abatement District in Millbury, Massachusetts, a large publicly owned treatment plant. These conditions had been appealed to the EAB by the permittee and four of its satellite communities. In its order, the EAB found that EPA had not adequately articulated in the record of the proceeding a rule-of-decision, or interpretation, identifying the statutory and regulatory basis for expanding the scope of NPDES authority beyond the treatment plant owner and operator to separately owned and operated collection systems that discharge to the treatment plant, and gave EPA the options of providing the appropriate legal and technical basis for supporting the co-permitting provision, or withdrawing the provisions. In the interest of quickly placing other contested provisions into effect, EPA withdrew the co-permitting requirements in that permit. See <http://www.epa.gov/region1/npdes/permits/2010/finalma0102369DeterminationOnRemand.pdf>

However, since that time, EPA Region 1 has developed a more comprehensive factual and legal rationale for its decision to regulate satellite collection systems. Attachment A of this fact sheet is a copy of “*EPA REGION 1 NPDES PERMITTING APPROACH FOR PUBLICLY OWNED TREATMENT WORKS THAT INCLUDE MUNICIPAL SATELLITE SEWAGE COLLECTION SYSTEMS*”. EPA believes this document establishes its legal authority to include satellite communities as co-permittees, and has therefore retained the Town of Clinton and Lancaster Sewer District as co-permittees in the revised Draft Permit.

b. Operation and Maintenance of the Sewer System

Part I.D, Operation and Maintenance of the Sewer System (Part I.D.) has also been reopened for public comment. The standard language and requirements in Part I.D, have been updated from the requirements in the 2010 Draft Permit. The revised language and requirements reflect the standard requirements for all NPDES permits now being drafted for publicly owned treatment works in Massachusetts.

The revisions in Part I.D. require MWRA and the co-permittees to each develop a collection system operation and maintenance plan, and to map its sanitary sewer system. The schedule for completing the collection system operation and maintenance plan has two milestones.

The first milestone is that within six (6) months of the effective date of the permit, the permittee shall submit to EPA and MassDEP a description of the collection system management goals, staffing, information management, and legal authorities; a description of the overall condition of the collection system including a list of recent studies and construction activities; and a schedule for the development and implementation of the full Collection System O & M Plan.

The second milestone is that within twenty-four (24) months from the effective date of the permit, the full Collection System O & M Plan shall be implemented, and a copy submitted to EPA and MassDEP. The final plan is required to include: a preventative maintenance and monitoring program for the collection system; sufficient staffing to properly operate and maintain the sanitary sewer collection system; sufficient funding and the source(s) of funding for implementing the plan; identification of known and suspected overflows and back-ups, including manholes, a description of the cause of the identified overflows and back-ups, and a plan for addressing the overflows and back-ups consistent with the requirements of the permit; a description of the permittees and co-permittees programs for preventing infiltration/inflow(I/I)-related effluent violations and all unauthorized discharges of wastewater, including overflows and bypasses, and an ongoing program to identify and remove sources of I/I. The program is required to also include an inflow identification and control program that focuses on the disconnection and redirection of illegal sump pumps and roof down spouts; and an educational public outreach program for all aspects of I/I control, particularly private inflow.

The Partially Revised Draft Permit also requires that sanitary sewer mapping be completed within thirty (30) months of the effective date of the permit, and includes specific information to be recorded on the maps.

c. Unauthorized Discharges

The requirements in Part I. E, Unauthorized Discharges allows discharges from the facilities that are in accordance with the terms and conditions of the Draft Permit. The only discharge authorized from this facility is the treatment plant outfall, as listed in Part I.A.1. No other discharges are authorized by this permit, including sanitary sewer overflows (SSOs).

Part I.E. also requires that all unauthorized discharges, including sanitary sewer overflows be reported in accordance with general requirements of Part II, Standard Conditions of the Draft Permit. Therefore, the Towns that own and operate satellite collection systems are subject to this Part. Unauthorized discharge from these collection systems must be reported by the owner.

The Part I.E. requirements in the Partially Revised Draft Permit are the same as in the 2010 Draft Permit.

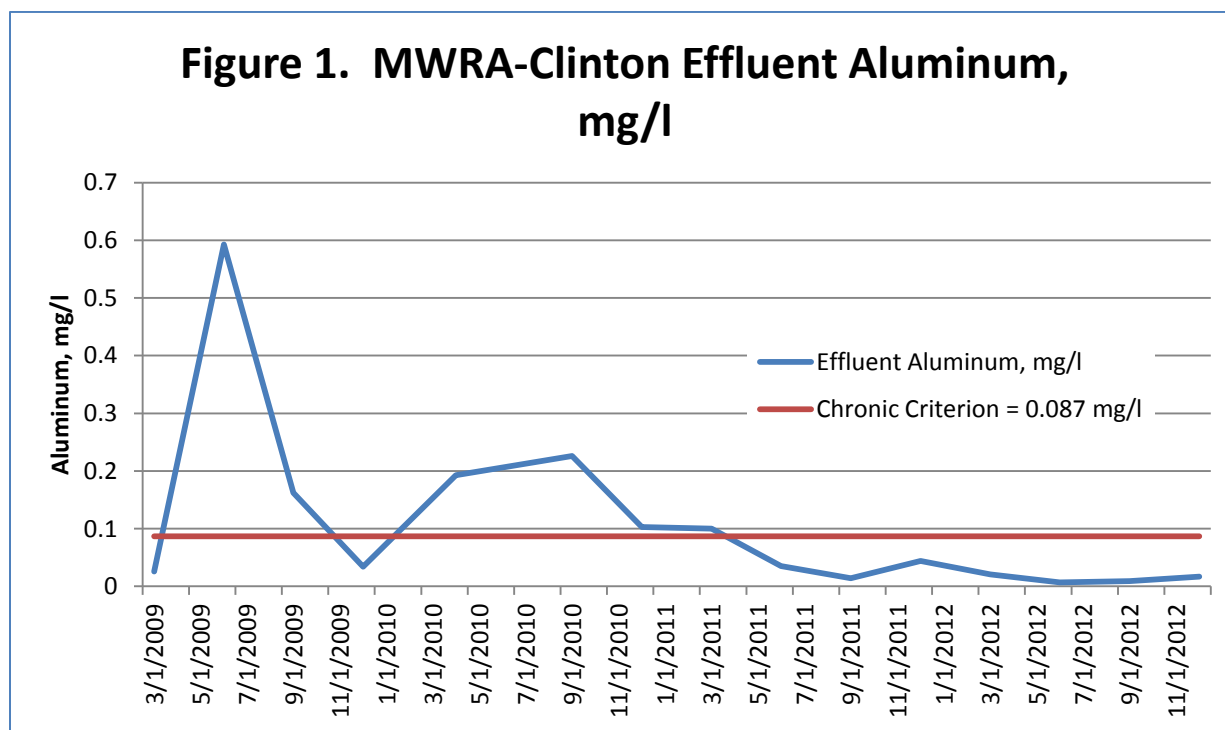
d. Compliance Schedule for Total Phosphorus

The 2010 Draft Permit included a 48-month compliance schedule for the permittee to install upgrades necessary to meet a seasonal total phosphorus limit of 150 µg/L. Since that time, the permittee has completed conceptual design of the POTW upgrades. Therefore, in the Partially Revised Draft Permit, the conceptual design portion of the compliance schedule has been removed. Additionally, based on feedback from the permittee, the time allowed for construction of the proposed upgrades was expanded to 24 months, instead of the 12-month time period in the 2010 Draft Permit.

e. Total Recoverable Aluminum

The original fact sheet released for public comment with the 2010 Draft Permit found that aluminum in the effluent had reasonable potential to cause a violation of water quality standards but included a monitoring requirement rather than a water quality-based limit. In retrospect, this was an incorrect interpretation of the applicable regulations regarding reasonable potential. Therefore, EPA decided to re-evaluate the need for an effluent aluminum limit using updated data as part of this re-notice.

The new evaluation found no reasonable potential for effluent aluminum to cause a violation of water quality standards. This finding is due to reduced aluminum discharges from the MWRA-Clinton facility. As Figure 1 shows below, levels of aluminum in the effluent for most of 2011 and all of 2012 were below the Gold Book chronic criterion of 0.087 mg/l, meaning that the discharge could not cause or contribute to an exceedance of the criteria. Because there is no reasonable potential, the Partially Revised Draft Permit does not include an effluent limit for aluminum, but does propose a monthly monitoring requirement for aluminum, the same frequency proposed in the previously publicly noticed permit.



f. Whole Effluent Toxicity Testing

EPA Region 1 has recently changed its policy regarding whole effluent toxicity testing protocols. The 2010 public noticed permit allowed use of a modified chronic test that allowed acute endpoints to be determined from the chronic test. This protocol is not consistent with 40 CFR Part 136 WET testing methods, so EPA has determined that where both chronic and acute endpoints are required, the permittee

shall conduct separate chronic and acute tests for permit compliance monitoring. The Revised Freshwater Acute Toxicity Test Procedure and Protocol and the revised Freshwater Chronic Toxicity Test Procedure and Protocol are now attached to the Partially Revised Draft Permit as Attachments B and C respectively.

III. STATE CERTIFICATION REQUIREMENTS

Staff of MassDEP have reviewed the partially revised Draft Permit. EPA has requested permit certification by the State pursuant to CWA § 401(a)(1) and 40 CFR § 124.53 and expects that the Draft Permit, as revised, will be certified.

IV. COMMENT PERIOD, HEARING REQUESTS, and PROCEDURES FOR FINAL DECISIONS

All persons, including applicants, who believe the revised conditions of the revised Draft Permit are 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 Robin Johnson, U.S. EPA, Office of Ecosystem Protection, Municipal Permits Branch, 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 revised conditions in the Draft Permit to EPA and the State Agency. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public meeting may be held if the criteria stated in 40 C.F.R. § 124.12 are satisfied. In reaching a final decision on the Draft Permit, the EPA will respond to all significant comments and make these responses available to the public at EPA's Boston office.

Following the close of the comment period, and after any public hearings, if such hearings are held, the EPA will issue a Final Permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Pursuant to 40 CFR 124.17, at the time the final permit decision is issued, EPA will also issue a response to comments, which will include responses to all significant comments submitted on the 2010 Draft permit and on the Partially Revised Draft Permit.

V. EPA AND MassDEP CONTACTS

Additional information concerning the permit may be obtained between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays, from:

Robin Johnson
US Environmental Protection Agency
5 Post Office Square
Suite 100 (OEP6-01)
Boston, Massachusetts 02109
Telephone: (617) 918-1045
Fax: (617) 918-0045
Email: johnson.robin@epamail.epa.gov

or

Claire Golden
MA Department of Environmental Protection
Division of Watershed Management
205B Lowell Street
Wilmington, MA 01887
Telephone: (978) 694-3244
Fax: (978) 694-3499
Email: claire.golden@state.ma.us

9/12/2013
Date

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

* Comments should be addressed to both Robin Johnson and Claire Golden, not Ken Moraff.

EPA REGION 1 NPDES PERMITTING APPROACH FOR PUBLICLY OWNED TREATMENT WORKS THAT INCLUDE MUNICIPAL SATELLITE SEWAGE COLLECTION SYSTEMS

This regional interpretative statement provides notice to the public of EPA Region 1's interpretation of the Clean Water Act ("CWA" or "Act") and implementing regulations, and advises the public of relevant policy considerations, regarding the applicability of the National Pollutant Discharge Elimination System ("NPDES") program to publicly owned treatment works ("POTWs") that include municipal satellite sewage collection systems ("regionally integrated POTWs"). When issuing NPDES permits to these types of sanitary sewer systems, it is EPA Region 1's practice to include and regulate the owners/operators of the municipal satellite collection systems through a co-permitting structure. This interpretative statement is intended to explain, generally, the basis for this practice. EPA Region 1's decision in any particular case will be made by applying the law and regulations on the basis of specific facts when permits are issued.

EPA has set out a national policy goal for the nation's sanitary sewer systems to adhere to strict design and operational standards:

"Proper [operation and maintenance] of the nation's sewers is integral to ensuring that wastewater is collected, transported, and treated at POTWs; and to reducing the volume and frequency of ...[sanitary sewer overflow] discharges. Municipal owners and operators of sewer systems and wastewater treatment facilities need to manage their assets effectively and implement new controls, where necessary, as this infrastructure continues to age. Innovative responses from all levels of government and consumers are needed to close the gap."¹

Because ownership/operation of a regionally integrated POTW is divided among multiple parties, the owner/operator of the treatment plant many times lacks the means to implement comprehensive, system-wide operation and maintenance ("O & M") procedures. Failure to properly implement O & M measures in a POTW can cause, among other things, excessive extraneous flow (*i.e.*, inflow and infiltration) to enter, strain and occasionally overload treatment system capacity. This failure not only impedes EPA's national policy goal concerning preservation of the nation's wastewater infrastructure assets, but also frustrates achievement of the water quality- and technology-based requirements of CWA § 301 to the extent it results in sanitary sewer overflows and degraded treatment plant performance, with adverse impacts on human health and the environment.

In light of these policy objectives and legal requirements, it is EPA Region 1's permitting practice to subject all portions of the POTW to NPDES requirements in order to ensure that the treatment system as a whole is properly operated and maintained and that human health and water quality impacts resulting from excessive extraneous flow are minimized. The approach of addressing O&M concerns in a regionally integrated treatment works by adding municipal

¹ See *Report to Congress: Impacts and Control of CSOs and SSOs* (EPA 833-R-04-001) (2004), at p. 10-2. See also "1989 National CSO Control Strategy," 54 Fed. Reg. 37371 (September 8, 1989).

satellite collection systems as co-permittees is consistent with the definition of “publicly owned treatment works,” which by definition includes sewage collection systems. Under this approach, the POTW in its entirety is subject to NPDES regulation as a point source discharger under the Act. This entails imposition of permitting requirements applicable to the POTW treatment plant along with a more limited set of conditions applicable to the connected municipal satellite collection systems.

The factual and legal basis for the Region’s position is set forth in greater detail in *Attachment A*.

Attachment A

ANALYSIS SUPPORTING EPA REGION 1 NPDES PERMITTING APPROACH FOR PUBLICLY OWNED TREATMENT WORKS THAT INCLUDE MUNICIPAL SATELLITE SEWAGE COLLECTION SYSTEMS

- | | |
|------------------|--|
| <i>Exhibit A</i> | List of regional centralized POTW treatment plants and municipal satellite collection systems subject to the co-permittee policy |
| <i>Exhibit B</i> | Analysis of extraneous flow trends for representative systems |
| <i>Exhibit C</i> | List of municipal satellite collection systems that have had SSOs |
| <i>Exhibit D</i> | Form of Regional Administrator's waiver of permit application requirements for municipal satellite collection systems |

Introduction

On May 28, 2010, the U.S. EPA Environmental Appeals Board (“Board”) issued a decision remanding to the Region certain NPDES permit provisions that included and regulated satellite collection systems as co-permittees. *See In re Upper Blackstone Water Pollution Abatement District*, NPDES Appeal Nos. 08-11 to 08-18 & 09-06, 14 E.A.D. __ (Order Denying Review in Part and Remanding in Part, EAB, May 28, 2010).² While the Board “did not pass judgment” on the Region’s position that its NPDES jurisdiction encompassed the entire POTW and not only the treatment plant, it held that “where the Region has abandoned its historical practice of limiting the permit only to the legal entity owning and operating the wastewater treatment plant, the Region had not sufficiently articulated in the record of this proceeding the statutory, regulatory, and factual bases for expanding the scope of NPDES authority beyond the treatment plant owner/operator to separately owned/operated collection systems that do not discharge directly to waters of the United States, but instead that discharge to the treatment plant.” *Id.*, slip op. at 2, 18. In the event the Region decided to include and regulate municipal satellite collection systems as co-permittees in a future permit, the Board posed several questions for the Region to address in the analysis supporting its decision:

- (1) Is the scope of NPDES authority limited to owners/operators of the treatment plant, or does the authority extend to owners/operators of the municipal satellite collection systems that comprise the wider POTW?

² The decision is available on the Board’s website via the following link:
http://yosemite.epa.gov/oa/EAB_Web_Docket.nsf/30b93f139d3788908525706c005185b4/34e841c87f346d94852577360068976f!OpenDocument.

- (2) If the latter, how far up the collection system does NPDES jurisdiction reach, *i.e.*, where does the “collection system” end and the “user” begin?
- (3) Do municipal satellite collection systems “discharge [] a pollutant” within the meaning of the statute and regulations?
- (4) Are municipal satellite collection systems “indirect dischargers” and thus excluded from NPDES permitting requirements?
- (5) Is the Region’s rationale for regulating municipal satellite collection systems as co-permittees consistent with the references to “municipality” in the regulatory definition of POTW, and the definition’s statement that “[t]he term also means the municipality...which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works”?
- (6) Is the Region’s rationale consistent with the permit application and signatory requirements under NPDES regulations?

See *Blackstone, slip op.* at 18, 20, n. 17.

This regional interpretative statement is, in part, a response to the Board’s decision. It details the legal and policy bases for regulating as co-permittees publicly owned treatment works (“POTWs”) that include municipal satellite collection systems. Region 1’s analysis is divided into five sections. First, the Region provides context for the co-permitting approach by briefly describing the health and environmental impacts associated with poorly maintained sanitary sewer systems. Second, the Region outlines its evolving permitting practice regarding regionally integrated POTWs, particularly its attempts to ensure that such entity’s municipal satellite collection systems are properly maintained and operated. Third, the Region explains the legal authority to include municipal satellite collection systems as co-permittees when permitting regionally integrated POTWs. In this section, the Region answers the questions posed by the Board in the order presented above. Fourth, the Region sets forth the basis for the specific conditions to which the municipal satellite collection systems are subject as co-permittees. Finally, the Region discusses other considerations informing its decision to employ a co-permittee structure when permitting regionally integrated POTWs.

I. Background

A sanitary sewer system (SSS) is a wastewater collection system owned by a state or municipality that is designed to collect and convey only sanitary wastewater (domestic sewage from homes as well as industrial and commercial wastewater).³ The purpose of these systems is

³ A combined sewer, on the other hand, is a type of sewer system that collects and conveys sanitary sewage and stormwater runoff in a single-pipe system to a POTW treatment plant. See *generally* Report to Congress: Impacts and Control of CSOs and SSOs (EPA 833-R-04-001) (2004), from which EPA Region 1 has drawn this background material.

to transport wastewater uninterrupted from its source to a treatment facility. Developed areas that are served by sanitary sewers often also have a separate storm sewer system (*e.g.*, storm drains) that collects and conveys runoff, street wash waters and drainage and discharges them directly to a receiving water (*i.e.*, without treatment at a POTW). While sanitary sewers are not designed to collect large amounts of runoff from precipitation events or provide widespread drainage, they typically are built with some allowance for higher flows that occur during periods of high groundwater and storm events. They are thus able to handle minor and controllable amounts of extraneous flow (*i.e.*, inflow and infiltration, or I/I) that enter the system. Inflow generally refers to water other than wastewater—typically precipitation like rain or snowmelt—that enters a sewer system through a direct connection to the sewer. Infiltration generally refers to other water that enters a sewer system from the ground, for example through defects in the sewer.

Municipal sanitary sewer collection systems can consist of a widespread network of pipes and associated components (*e.g.*, pump stations). These systems provide wastewater collection service to the community in which they are located. In some situations, the municipality that owns the collector sewers may not provide treatment of wastewater, but only conveys its wastewater to a collection system that is owned and operated by a different municipal entity (such as a regional sewer district). This is known as a satellite community. A “satellite” community is a sewage collection system owner/operator that does not have ownership of the treatment facility and a specific or identified point of discharge but rather the responsibility to collect and convey the community’s wastewater to a POTW treatment plant for treatment. *See* 75 Fed. Reg. 30395, 30400 (June 1, 2010).

Municipal sanitary sewer collection systems play a critical role in protecting human health and the environment. Proper operation and maintenance of sanitary sewer collection systems is integral to ensuring that wastewater is collected, transported, and treated at POTW treatment plants. Through effective operation and maintenance, collection system operators can maintain the capacity of the collection system; reduce the occurrence of temporary problem situations such as blockages; protect the structural integrity and capacity of the system; anticipate potential problems and take preventive measures; and indirectly improve treatment plant performance by minimizing deterioration due to I/I-related hydraulic overloading.

Despite their critical role in the nation’s infrastructure, many collection systems exhibit poor performance and are subjected to flows that exceed system capacity. Untreated or partially treated overflows from a sanitary sewer system are termed “sanitary sewer overflows” (SSOs). SSOs include releases from sanitary sewers that reach waters of the United States as well as those that back up into buildings and flow out of manholes into city streets.

There are many underlying reasons for the poor performance of collection systems. Much of the nation’s sanitary sewer infrastructure is old, and aging infrastructure has deteriorated with time. Communities also sometimes fail to provide capacity to accommodate increased sewage delivery and treatment demand from increasing populations. Furthermore, institutional arrangements relating to the operation of sewers can pose barriers to coordinated action, because many

municipal sanitary sewer collection systems are not entirely owned or operated by a single municipal entity.

The performance and efficiency of municipal collection systems influence the performance of sewage treatment plants. When the structural integrity of a sanitary sewer collection system deteriorates, large quantities of infiltration (including rainfall-induced infiltration) and inflow can enter the collection system, causing it to overflow. These extraneous flows are among the most serious and widespread operational challenges confronting treatment works.⁴

Infiltration can be long-term seepage of water into a sewer system from the water table. In some systems, however, the flow characteristics of infiltration can resemble those of inflow, *i.e.*, there is a rapid increase in flow during and immediately after a rainfall event, due, for example, to rapidly rising groundwater. This phenomenon is sometimes referred to as rainfall-induced infiltration.

Sanitary sewer systems can also overflow during periods of normal dry weather flows. Many sewer system failures are attributable to natural aging processes or poor operation and maintenance. Examples include years of wear and tear on system equipment such as pumps, lift stations, check valves, and other moveable parts that can lead to mechanical or electrical failure; freeze/thaw cycles, groundwater flow, and subsurface seismic activity that can result in pipe movement, warping, brittleness, misalignment, and breakage; and deterioration of pipes and joints due to root intrusion or other blockages.

Inflow and infiltration impacts are often regional in nature. Satellite collection systems in the communities farthest from the POTW treatment plant can cause sanitary sewer overflows (“SSOs”) in communities between them and the treatment plant by using up capacity in the interceptors. This can cause SSOs in the interceptors themselves or in the municipal sanitary sewers that lead to them. The implication of this is that corrective solutions often must also be regional in scope to be effective.

The health and environmental risks attributed to SSOs vary depending on a number of factors including location and season (potential for public exposure), frequency, volume, the amount and type of pollutants present in the discharge, and the uses, conditions, and characteristics of the receiving waters. The most immediate health risks associated with SSOs to waters and other areas with a potential for human contact are associated with exposure to bacteria, viruses, and other pathogens.

Human health impacts occur when people become ill due to contact with water or ingestion of water or shellfish that have been contaminated by SSO discharges. In addition, sanitary sewer systems can back up into buildings, including private residences. These discharges provide a

⁴ In a 1989 Water Pollution Control Federation survey, 1,003 POTWs identified facility performance problems. Infiltration and inflow was the most frequently cited problem, with 85 percent of the facilities reporting I/I as a problem. I/I was cited as a major problem by 41 percent of the facilities (32 percent as a periodic problem). [BP: Is there anything more recent?]

direct pathway for human contact with untreated wastewater. Exposure to land-based SSOs typically occurs through the skin via direct contact. The resulting diseases are often similar to those associated with exposure through drinking water and swimming (*e.g.*, gastroenteritis), but may also include illness caused by inhaling microbial pathogens. In addition to pathogens, raw sewage may contain metals, synthetic chemicals, nutrients, pesticides, and oils, which also can be detrimental to the health of humans and wildlife.

II. EPA Region 1 Past Practice of Permitting POTWs that Include Municipal Satellite Collection Systems

EPA Region 1's practice in permitting regionally integrated POTWs has developed in tandem with its increasing focus on addressing I/I in sewer collection systems, in response to the concerns outlined above. Up to the early 1990s, POTW permits issued by Region 1 generally did not include specific requirements for collection systems. When I/I and the related issue of SSOs became a focus of concern both nationally and within the region in the mid-1990s, Region 1 began adding general requirements to POTW permits that required the permittees to "eliminate excessive infiltration and inflow" and provide an annual "summary report" of activities to reduce I/I. As the Region gathered more information and gained more experience in assessing these reports and activities, it began to include more detailed requirements and reporting provisions in these permits.

MassDEP also engaged in a parallel effort to address I/I, culminating in 2001 with the issuance of MassDEP Policy No. BRP01-1, "Interim Infiltration and Inflow Policy." Among other provisions, this policy established a set of standard NPDES permit conditions for POTWs that included development of an I/I control plan (including funding sources, identification and prioritization of problem areas, and public education programs) and detailed annual reporting requirements (including mapping, reporting of expenditures and I/I flow calculations). Since September 2001, these requirements have been the basis for the standard operation and maintenance conditions related to I/I.

Regional treatment plants presented special issues as I/I requirements became more specific, as it is generally the member communities, rather than the regional sewer district, that own the collection systems that are the primary source of I/I. Before the focus on I/I, POTW permits did not contain specific requirements related to the collection system component of POTWs. Therefore, when issuing NPDES permits to authorize discharges from regionally integrated treatment POTWs, EPA Region 1 had generally only included the legal entity owning and/or operating the regionally centralized wastewater treatment plant. As the permit conditions were focused on the treatment plant itself, this was sufficient to ensure that EPA had authority to enforce the permit requirements.

In implementing the I/I conditions, Region 1 initially sought to maintain the same structure, placing the responsibility on the regional sewer district to require I/I activities by the contributing systems and to collect the necessary information from those systems for submittal to EPA. MassDEP's 2001 Interim I/I Policy reflected this approach, containing a condition for regional systems:

((FOR REGIONAL FACILITIES ONLY)) The permittee shall require, through appropriate agreements, that all member communities develop and implement infiltration and inflow control plans sufficient to ensure that high flows do not cause or contribute to a violation of the permittees effluent limitations, or cause overflows from the permittees collection system.

As existing NPDES permittees, the POTW treatment plants were an obvious locus of regulation. The Region assumed the plants would be in a position to leverage preexisting legal and/or contractual relationships with the satellite collection systems they serve to perform a coordinating function, and that utilizing this existing structure would be more efficient than establishing a new system of direct reporting to EPA by the collection system owners. The Region also believed that the owner/operator of the POTW treatment plant would have an incentive to reduce flow from contributing satellite systems because doing so would improve treatment plant performance and reduce operation costs. While relying on this cooperative approach, however, EPA Region 1 also asserted that it had the authority to require that POTW collection systems be included as NPDES permittees and that it would do so if it proved necessary. Indeed, in 2001 Region 1 acceded to Massachusetts Water Resources Authority's ("MWRA") request that the contributing systems to the MWRA Clinton wastewater treatment plant ("WWTP") be included as co-permittees, based on evidence provided by MWRA that its specific relationship with those communities would not permit it to run an effective I/I reduction program for these collection systems. EPA Region 1 also put satellite collection systems on notice that they would be directly regulated through legally enforceable permit requirements if I/I reductions were not pursued or achieved.

In time, the Region realized that its failure to assert direct jurisdiction over municipal satellite dischargers was becoming untenable in the face of mounting evidence that cooperative (or in some cases non-existent) efforts on the part of the POTW treatment plant and associated satellites were failing to comprehensively address the problem of extraneous flow entering the POTW. The ability and/or willingness of regional sewer districts to attain meaningful I/I efforts in their member communities varied widely. The indirect structure of the requirements also tended to make it difficult for EPA to enforce the implementation of meaningful I/I reduction programs.

It became evident to EPA Region 1 that a POTW's ability to comply with CWA requirements depended on successful operation and maintenance of not only the treatment plant but also the collection system. For example, the absence of effective I/I reduction and operation/maintenance programs was impeding the Region's ability to prevent or mitigate the human health and water quality impacts associated with SSOs. *See Exhibit B* (Municipal satellite collection systems with SSOs). Additionally, these excess flows stressed POTW treatment plants from a hydraulic capacity and performance standpoint, adversely impacting effluent quality. *See Exhibit C* (Analysis of extraneous flow trends for representative systems). Addressing these issues in regional systems was essential, as these include most of the largest systems in terms of flow, population served and area covered, and serve the largest population centers.

The Region's practice of imposing NPDES permit conditions on the municipal collection systems in addition to the treatment plant owner/operator represents a necessary and logical progression in its continuing effort to effectively address the serious problem of I/I in sewer collection systems.⁵ In light of its past permitting experience and the need to effectively address the problem of extraneous flow on a system-wide basis, Region 1 decided that it was necessary to refashion permits issued to regionally integrated POTWs to encompass all owners/operators of the treatment works (*i.e.*, the regional centralized POTW treatment plant and the municipal satellite collection systems).⁶ Specifically, Region 1 determined that the satellite systems should be subject as co-permittees to a limited set of O&M-related conditions on permits issued for discharges from regionally integrated treatment works. These conditions pertain only to the portions of the POTW collection system that the satellites own. This ensures maintenance and pollution control programs are implemented with respect to all portions of the POTW. Accordingly, since 2005, Region 1 has generally included municipal satellite collection systems as co-permittees for limited purposes, in addition to the owner/operator of the treatment plant as the main permittee subject to the full array of NPDES requirements, including secondary treatment and water-quality based effluent limitations. The Region has identified 25 permits issued by the Region to POTWs in New Hampshire and Massachusetts that include municipal satellite collection systems as co-permittees. *See Exhibit A.* The 25 permits include a total of 55 satellite collection systems as co-permittees.

III. Legal Authority

The Region's prior and now superseded practice of limiting the permit only to the legal entity owning and/or operating the wastewater treatment plant had never been announced as a regional policy or interpretation. Similarly, the Region's practice of imposing NPDES permit conditions on the municipal collection systems in addition to the treatment plant owner/operator has also never been expressly announced as a uniform, region-wide policy or interpretation. Upon consideration of the Board's decision, described above, EPA Region 1 has decided to supply a clearer, more detailed explanation regarding its use of a co-permittee structure when issuing NPDES permits to regionally integrated POTWs. In this section, the Region addresses the questions posed by the Board in the *Upper Blackstone* decision referenced above.

⁵ Although EPA Region 1 has in the past issued NPDES permits only to the legal entities owning and operating the wastewater treatment plant (*i.e.*, only a portion of the "treatment works"), the Region's reframing of permits to include municipal satellite collection systems does not represent a break or reversal from its historical legal position. EPA Region 1 has never taken the legal position that the satellite collection systems are beyond the reach of the CWA and the NPDES permitting program. Rather, the Region as a matter of discretion had merely never determined it necessary to exercise its statutory authority to directly reach these facilities in order to carry out its NPDES permitting obligations under the Act.

⁶ EPA has "considerable flexibility in framing the permit to achieve a desired reduction in pollutant discharges." *Natural Resources Defense Council, Inc. v. Costle*, 568 F.2d 1369, 1380 (D.C.Cir.1977). ("[T]his ambitious statute is not hospitable to the concept that the appropriate response to a difficult pollution problem is not to try at all.").

(1) Is the scope of NPDES authority limited to owners/operators of the treatment plant, or does the authority extend to owners/operators of the municipal satellite collection systems that comprise the wider POTW?

The scope of NPDES authority extends beyond the owners/operators of the treatment plant to include to owners/operators of portions of the wider POTW, for the reasons discussed below.

The CWA prohibits the “discharge of any pollutant by any person” from any point source to waters of the United States, except, *inter alia*, in compliance with an NPDES permit issued by EPA or an authorized state pursuant to Section 402 of the CWA. CWA § 301, 402(a)(1); 40 C.F.R. § 122.1(b). Where there is a discharge of pollutants, NPDES regulations require the “operator” of the discharging “facility or activity” to obtain a permit in circumstances where the operator is different from the owner. *Id.* § 122.21(b). “Owner or operator” is defined as “the owner or operator of any ‘facility or activity’ subject to regulation under the NPDES program,” and a “facility or activity” is “any NPDES ‘point source’ or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the NPDES program.” *Id.* § 122.2.

“Publicly owned treatment works” are facilities subject to the NPDES program. Statutorily, POTWs as a class must meet performance-based requirements based on available wastewater treatment technology. *See* CWA § 402(a)(1) (“[t]he Administrator may...issue a permit for the discharge of any pollutant...upon condition that such discharge will meet (A) all applicable requirements under [section 301]...”); § 301(b)(1)(B) (“In order to carry out the objective of this chapter there shall be achieved...for publicly owned treatment works in existence on July 1, 1977...effluent limitations based upon secondary treatment[.]”); *see also* 40 C.F.R. pt 133. In addition to secondary treatment requirements, POTWs are also subject to water quality-based effluent limits if necessary to achieve applicable state water quality standards. *See* CWA § 301(b)(1)(C). *See also* 40 C.F.R. § 122.44(a)(1) (“...each NPDES permit shall include...[t]echnology-based effluent limitations based on: effluent limitations and standards published under section 301 of the Act”) and (d)(1) (same for water quality standards and state requirements). NPDES regulations similarly identify the “POTW” as the entity subject to regulation. *See* 40 C.F.R. § 122.21(a), (requiring “new and existing POTWs” to submit information required in 122.21(j),” which in turn requires “all POTWs,” among others, to provide permit application information).

A municipal satellite collection system is part of a POTW under applicable law. The CWA and its implementing regulations broadly define “POTW” to include not only wastewater treatment plants but also the sewer systems and associated equipment that collect wastewater and convey it to the plants. Under NPDES regulations at 40 C.F.R. §§ 122.2 and 403.3(q), the term “Publicly Owned Treatment Works” or “POTW” means “a treatment works as defined by section 212 of the Act, which is owned by a State or municipality (as defined by section 502(4) of the Act).” Under section 212 of the Act,

“(2)(A) The term ‘treatment works’ means any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid

nature to implement section 1281 of this title, or necessary to recycle or reuse water at the most economical cost over the estimated life of the works, including intercepting sewers, outfall sewers, *sewage collection systems* [emphasis added], pumping, power, and other equipment, and their appurtenances; extensions, improvements, remodeling, additions, and alterations thereof; elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities; and any works, including site acquisition of the land that will be an integral part of the treatment process (including land used for the storage of treated wastewater in land treatment systems prior to land application) or is used for ultimate disposal of residues resulting from such treatment.

(B) In addition to the definition contained in subparagraph (A) of this paragraph, ‘treatment works’ means any other method or system for preventing, abating, reducing, storing, treating, separating, or disposing of municipal waste, including storm water runoff, or industrial waste, including waste in combined storm water and *sanitary sewer systems* [emphasis added]. Any application for construction grants which includes wholly or in part such methods or systems shall, in accordance with guidelines published by the Administrator pursuant to subparagraph (C) of this paragraph, contain adequate data and analysis demonstrating such proposal to be, over the life of such works, the most cost efficient alternative to comply with sections 1311 or 1312 of this title, or the requirements of section 1281 of this title.”

Under the NPDES program regulations, this definition has been interpreted as follows:

“The term *Publicly Owned Treatment Works* or *POTW* [emphasis in original]...includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in section 502(4) of the Act, which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.”

See 40 C.F.R. § 122.2, cross-referencing 403.3(q).

The statutory and regulatory definitions plainly encompass both the POTW treatment plant and municipal satellite collection systems. Municipal satellite collection systems are part of a POTW by definition (*i.e.*, they are “sewage collection systems” under section 212(A) and “sanitary sewer systems” under section 212(B)). They are also conveyances that send wastewater to a POTW treatment plant for treatment under 40 C.F.R. 403.3(q)). The preamble to the rule that created the regulatory definition of POTW supports the reading that the treatment plant comprises only a portion of the POTW. See 44 Fed. Reg. 62260, 62261 (Oct. 29, 1979).⁷

⁷ “A new provision...defining the term ‘POTW Treatment Plant’ has been added to avoid an ambiguity that now exists whenever a reference is made to a POTW (publicly owned treatment works). ...[T]he existing regulation defines a POTW to include both the treatment plant and the sewer pipes and other conveyances leading to it. As a result, it is unclear whether a particular reference is to the pipes, the treatment plant, or both. The term “POTW

Consistent with EPA Region 1's interpretation, courts have similarly taken a broad reading of the terms treatment works and POTW.⁸

(2) *If the latter, how far up the collection system does NPDES jurisdiction reach, i.e., where does the "collection system" end and the "user" begin?*

NPDES jurisdiction extends beyond the treatment plant to the outer boundary of the municipally-owned sewage collection systems, which are defined as sewers whose purpose is to be a common carrier of wastewater for others to a POTW treatment plant for treatment, as explained below.

As discussed in response to Question 1 above, the term "treatment works" is defined to include "sewage collection systems." CWA § 212. In order to define the extent of the sewage collection system for purposes of co-permittee regulation—i.e., to identify the boundary between the portions of the collection system that are subject to NPDES requirements and those that are not—Region 1 is relying on EPA's regulatory interpretation of the term "sewage collection system." In relevant part, EPA regulations define "sewage collection system" at 40 C.F.R. § 35.905 as:

".... each, and all, of the common lateral sewers, within a publicly owned treatment system, which are primarily installed to receive waste waters directly from facilities which convey waste water from individual structures or from private property and which include service connection "Y" fittings designed for connection with those facilities. The facilities which convey waste water from individual structures, from private property to the public lateral sewer, or its equivalent, are specifically excluded from the definition...."

Put otherwise, a municipal satellite collection system is subject to NPDES jurisdiction under the Region's approach insofar as its purpose is to be a common carrier of wastewater for others to a POTW treatment plant for treatment. The use of this primary purpose test (i.e., common sewer installed as a recipient and carrier waste water from others) allows Region 1 to draw a principled, predictable and readily ascertainable boundary between the POTW's collection system and user. This test would exclude, for example, branch drainpipes that collect and transport wastewater from fixtures in a commercial building or public school to the common lateral sewer. This type

treatment plant" will be used to designate that portion of the municipal system which is actually designed to provide treatment to the wastes received by the municipal system."

⁸ See, e.g., *United States v. Borowski*, 977 F.2d 27, 30 n.5 (1st Cir. 1992) ("We read this language [POTW definition] to refer to such sewers, pipes and other conveyances that are publicly owned. Here, for example, the City of Burlington's sewer is included in the definition because it conveys waste water to the Massachusetts Water Resource Authority's treatment works."); *Shanty Town Assoc. v. Env'tl. Prot. Agency*, 843 F.2d 782, 785 (4th Cir. 1988) ("As defined in the statute, a 'treatment work' need not be a building or facility, but can be any device, system, or other method for treating, recycling, reclaiming, preventing, or reducing liquid municipal sewage and industrial waste, including storm water runoff.") (citation omitted); *Comm. for Consideration Jones Fall Sewage System v. Train*, 375 F. Supp. 1148, 1150-51 (D. Md. 1974) (holding that NPDES wastewater discharge permit coverage for a wastewater treatment plant also encompasses the associated sanitary sewer system and pump stations under § 1292 definition of "treatment work").

of infrastructure would not be considered part of the collection system, because it is not designed to be a common recipient and carrier of wastewaters from other users. Rather, it is designed to transport its users' wastewater to such a common collection system at a point further down the sanitary sewer system.

EPA's reliance on the definition of "sewage collection system" from outside the NPDES regulations for interpretative guidance is reasonable as the construction grants regulations at 40 C.F.R. Part 35, subpart E pertain to grants for POTWs, the entity that is the subject of this NPDES policy. Additionally, the term "sewage collection systems" expressly appears in the definition of treatment works under section 212 of the Act as noted above. Finally, this approach is also consistent with EPA's interpretation in other contexts, such as the SSO listening session notice, published in the Federal Register on June 1, 2010, which describes wastewater collection systems as those that "collect domestic sewage and other wastewater from homes and other buildings and convey it to wastewater sewage treatment plants for proper treatment and disposal." See "Municipal Sanitary Sewer Collection Systems, Municipal Satellite Collection Systems, Sanitary Sewer Overflows, and Peak Wet Weather Discharges From Publicly Owned Treatment Works Treatment Plants Serving Separate Sanitary Sewer Collection Systems," 75 Fed. Reg. 30395.⁹

(3) Do municipal satellite collection systems "discharge [] a pollutant" within the meaning of the statute and regulations?

Yes, because they are a part of the POTW, municipal satellite collection systems discharge pollutants to waters of the United States through one or more outfalls (point sources).

The "discharge of a pollutant," triggers the need for a facility to obtain an NPDES permit. A POTW "discharges [] pollutant[s]" if it adds pollutants from a point source to waters of the U.S. (See 40 C.F.R. § 122.2, section (a) of the definition of "discharge of a pollutant.") As explained above, municipal satellite collection systems are part of the POTW. The entire POTW is the entity that discharges pollutants to waters of the U.S. through point source outfalls typically located at the treatment plant but also occasionally through other outfalls within the overall system. The fact that a collection system may be located in the upstream portions of the POTW and not necessarily near the ultimate discharge point at the treatment plant is not material to the question of whether it "discharges" a pollutant and consequently may be subject to conditions of an NPDES permit issued for discharges from the POTW.¹⁰

⁹ That EPA has in the past looked for guidance from Part 35 when construing the NPDES permitting program, for instance, in the context of storm water permitting, provides further support to the Region that its practice in this regard is sound. See, e.g., "National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges," 55 Fed. Reg. 47990, 47955 (looking to the definition of "storm sewer" at 40 C.F.R. § 35.2005(b)(47) when defining "storm water" under the NDPEs program).

¹⁰ This position differs from that taken by the Region in the *Upper Blackstone* litigation. There, the Region argued that the treatment plant was the sole discharging entity for regulatory purposes. The Region has revised this view upon further consideration of the statute, regulations and case law and determined that the POTW as a whole is the discharging entity.

“Discharge of a pollutant” at 40 C.F.R. § 122.2 is also defined to include “... discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person *which do not lead to a treatment works.*”(emphasis added). Some municipal collection systems have argued that this sentence means that only municipal discharges that do not lead to a “treatment plant” fall within the scope of “discharge of a pollutant.” They further argue that because discharges through satellite collection systems do lead to a treatment plant, such systems do not “discharge [] pollutant[s]” and therefore are not subject to the NPDES permit requirements. This argument is flawed in that it incorrectly equates “treatment works,” the term used in the definition above, with “treatment plant.” To interpret “treatment works” as it appears in the regulatory definition of “discharge of a pollutant” as consisting of only the POTW treatment plant would be inconsistent with the definition of “treatment works” at 40 C.F.R. § 403.3(q), which expressly includes the collection system. *See also* § 403.3(r) (defining “POTW Treatment Plant” as “*that portion* [emphasis added] of the POTW which is designed to provide treatment (including recycling and reclamation) of municipal sewage and industrial waste”).

(4) Are municipal satellite collection systems “indirect dischargers” and thus excluded from NPDES permitting requirements?

No, municipal satellite collection systems are part of the POTW, not “indirect dischargers” to the POTW.

Section 307(b) of the Act requires EPA to establish regulatory pretreatment requirements to prevent the “introduction of pollutants into treatment works” that interfere, pass through or are otherwise incompatible with such works. Section 307 is implemented through the General Pretreatment Regulations for Existing and New Sources of Pollution (40 C.F.R. Part 403) and categorical pretreatment standards (40 C.F.R. Parts 405-471). Section 403.3(i) defines “indirect discharger” as “any non-domestic” source that introduces pollutants into a POTW and is regulated under pretreatment standards pursuant to CWA § 307(b)-(d). The source of an indirect discharge is termed an “industrial user.” *Id.* at § 403.3(j). Under regulations governing the NPDES permitting program, the term “indirect discharger” is defined as “a non-domestic discharger introducing ‘pollutants’ to a ‘publicly owned treatment works.’” 40 C.F.R. § 122.2. Indirect dischargers are excluded from NPDES permit requirements by the indirect discharger rule at 40 C.F.R. § 122.3(c), which provides, “The following discharges do not require an NPDES permit: . . . The introduction of sewage, industrial wastes or other pollutants into publicly owned treatment works by indirect dischargers.”

Municipal satellite collection satellite systems are not indirect dischargers as that term is defined under part 122 or 403 regulations. Unlike indirect dischargers, municipal satellite collection systems are not “introducing pollutants” to POTWs under 40 C.F.R. § 122.2; they are, instead, part of the POTW by definition. Similarly, they are not a non-domestic *source* that introduces pollutants into a POTW within the meaning of § 403.3(j), but as part of the POTW collect and convey municipal sewage from industrial, commercial and domestic users of the POTW.

The Region’s determination that municipal satellite collection systems are not indirect dischargers is, additionally, consistent with the regulatory history of the term indirect discharger.

The 1979 revision of the part 122 regulations defined “indirect discharger” as “a non-municipal, non-domestic discharger introducing pollutants to a publicly owned treatment works, which introduction does not constitute a ‘discharge of pollutants’...” See National Pollutant Discharge Elimination System, 44 Fed. Reg. 32854, 32901 (June 7, 1979). The term “non-municipal” was removed in the Consolidated Permit Regulations, 45 Fed. Reg. 33290, 33421 (May 19, 1980) (defining “indirect discharger” as “a nondomestic discharger...”). Although the change was not explained in detail, the substantive intent behind this provision remained the same. EPA characterized the revision as “minor wording changes.” 45 Fed. Reg. at 33346 (Table VII: “Relationship of June 7[, 1979] Part 122 to Today’s Regulations”). The central point again is that under any past or present regulatory incarnation, municipal satellite collection systems, as POTWs, are not within the definition of “indirect discharger,” which is limited to dischargers that introduce pollutants to POTWs.

The position that municipal satellite collection systems are part of, rather than discharge to, the POTW also is consistent with EPA guidance. EPA’s 1994 Multijurisdictional Pretreatment Programs Guidance Manual, (EPA 833-B94-005) (June 1994), at p. 19, asserts that EPA has the authority to require municipal satellite collection systems to develop pretreatment programs by virtue of their being part of the POTW.

(5) How is the Region’s rationale consistent with the references to “municipality” in the regulatory definition of POTW found at 40 C.F.R. § 403.3(q), and the definition’s statement that “[t]he term also means the municipality....which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works?”

There is no inconsistency between the Region’s view that municipally-owned satellite collection systems are part of a POTW, and the references to municipality in 40 C.F.R. § 403.3(q), including the final sentence of the regulatory definition of POTW in the pretreatment regulations.

The Region’s co-permitting rationale is consistent with the first part of the pretreatment program’s regulatory definition of POTW, because the Region is only asserting NPDES jurisdiction over satellite collection systems that are owned by a “State or municipality (as defined by section 502(4) of the Act).” The term “municipality” as defined in CWA § 502(4) “means a city, town, borough, county, parish, district, association, or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes...” Thus, in order to qualify under this definition, a wastewater collection system need only be “owned by a State or municipality.” There is no requirement that the constituent components of a regionally integrated POTW, *i.e.*, the collection system and regional centralized POTW treatment plant, be owned by the same State or municipal entity.

Furthermore, there is no inconsistency between the Region’s view that a satellite collection system is part of a POTW, and the final sentence of the regulatory definition of POTW in the pretreatment regulations. As noted above, the sentence provides that “POTW” may “also” mean a municipality which has jurisdiction over indirect discharges to and discharges from the treatment works. This is not a limitation because of the use of the word “also” (contrast this with the “only if” language in the preceding sentence of the regulatory definition).

(6) How does the Region's rationale comport with the permit application and signatory requirements under NPDES regulations?

EPA's authority to require municipal satellite collection systems to separately comply with the permit application requirements, or to provide waivers from these requirements where appropriate, is consistent with NPDES regulations, which provide that all POTWs must submit permit application information set forth in 40 C.F.R. § 122.21(j) unless otherwise directed, and municipal satellite collection systems are part of the POTW.

EPA has the authority to require municipal satellite collection systems to submit permit applications. These entities are operators of parts of the POTW. NPDES regulations characterize the operator "of the POTW" (which by definition includes the sewage collection system) as opposed to the operator "of the POTW treatment plant" as an appropriate applicant. *Id.* § 122.21(a), (requiring applicants for "new and existing POTWs" to submit information required in 122.21(j)," which in turn requires "all POTWs," among others, to provide permit application information). This reading of the regulation is in keeping with the statutory text, which subjects the POTW writ large to the secondary treatment and water quality-based requirements. *See* CWA § 301(b)(1)(B), (C). In fact, the NPDES permit application for POTWs solicits information concerning portions of the POTW beyond the treatment plant itself, including the collection system used by the treatment works. *See* 40 C.F.R. 122.21(j)(1).

Notwithstanding that EPA could require applications for all the municipal satellite collection systems, requiring such applications may result in duplicative or immaterial information. The Regional Administrator ("RA") may waive any requirement of this paragraph if he or she has access to substantially identical information. 40 C.F.R. § 122.21(j). *See generally*, 64 Fed. Reg. 42440 (August 4, 1999). The RA may also waive any application requirement that is not of material concern for a specific permit. Region 1 believes that it will typically receive information sufficient for NPDES permitting purposes from the POTW treatment plant operator's application.

In most cases, EPA Region 1 believes that having a single permit application from the POTW treatment plant operator will be more efficient in carrying out the regulation's intent than multiple applications from the satellite systems. (The treatment plant operator would of course be required to coordinate as necessary with the constituent components of the POTW to ensure that the information provided to EPA is accurate and complete). EPA Region 1 therefore intends to issue waivers to exempt municipal satellite collection systems from permit application and signatory requirements in accordance with 40 C.F.R. § 122.21(j). To the extent the Region requires additional information, it intends to use its information collection authority under CWA § 308.

IV. Basis for the Specific Conditions to which the Municipal Satellite Collection Systems are Subject as Co-permittees

The legal authority for extending NPDES conditions to all portions of the municipally-owned treatment works to ensure proper operation and maintenance and to reduce the quantity of extraneous flow into the POTW is Section 402(a) of the CWA. This section of the Act authorizes EPA to issue a permit for the “discharge of pollutants” and to prescribe permit conditions as necessary to carry out the provisions of the CWA, including Section 301 of the Act. Among other things, Section 301 requires POTWs to meet performance-based requirements based on secondary treatment technology, as well as any more stringent requirements of State law or regulation, including water quality standards. *See* CWA § 301(b)(1)(B),(C).

The co-permittee requirements are required to assure continued achievement of secondary treatment requirements and water quality standards in accordance with sections 301 and 402 of the Act and to prevent unauthorized discharges of sewage from collection systems. With respect to secondary treatment, the inclusion of the satellite systems as co-permittees is necessary because high levels of I/I dilute the strength of influent wastewater and increase the hydraulic load on treatment plants, which can reduce treatment efficiency (*e.g.*, result in violations of technology-based percent removal limitations for BOD and TSS due to less concentrated influent, or violation of other technology effluent limitations due to reduction in treatment efficiency), lead to bypassing a portion of the treatment process, or in extreme situations make biological treatment facilities inoperable (*e.g.*, wash out the biological organisms that treat the waste).

As to water quality standards, the addition of the satellite systems as co-permittees is necessary to ensure collection system operation and maintenance, which will reduce extraneous flow entering the system and free up available capacity. This will facilitate compliance with water quality-based effluent limitations—made more difficult by reductions in treatment efficiency and also reduce water quality standard violations that result from the occurrence of SSOs. *See Exhibits B* (Municipal satellite collection systems with SSOs) and *C* (Analysis of extraneous flow trends for representative systems). SSOs that reach waters of the U.S. are discharges in violation of section 301(a) of the CWA to the extent not authorized by an NPDES permit.

Subjecting portions of an NPDES-regulated entity upstream of the ultimate discharge point is consistent with EPA’s interpretation of the CWA in other contexts. For example, it is well established that EPA has the ability to apply discharge limitations and monitoring requirements to internal process discharges, rather than to outfalls, on the grounds that compliance with permit limitations “may well involve controls applied at points other than the ultimate point of discharge.” *See Decision of the General Counsel No. 27 (In re Inland Steel Company)*, August 4, 1975 (“Limitations upon internal process discharges are proper, if such discharges would ultimately be discharged into waters of the United States, and if such limitations are necessary to carry out the principal regulatory provisions of the Act.”). In the case of regionally integrated POTWs, placing conditions on satellite collection systems—though located farther up the system than the point of discharge—is a logical implication of the regulations and serves to effectuate the statute.

Without imposing conditions on the satellite communities, standard permit conditions applicable to all NPDES permits by regulation cannot be given full effect. To illustrate, there is no dispute

that the operator of the POTW treatment plant and outfall is discharging pollutants within the meaning the CWA and, accordingly, is subject to the NPDES permit program. NPDES permitting regulations require standard conditions that “apply to all NPDES permits,” pursuant to 40 C.F.R. § 122.41, including a duty to mitigate and to properly operate and maintain “all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of the permit.” *Id.* at § 122.41(d), (e). EPA regulations also require additional conditions applicable to specified categories of NPDES permit, including “Publicly owned treatment works.” *See id.* at § 122.42(b). A municipal satellite collection system, as demonstrated above, falls within the regulatory definition of a POTW. In light of EPA’s authority to require appropriate operation and maintenance of collection systems necessary to achieve compliance with an NPDES permit, and because the operator of the POTW treatment plant may not own or operate a significant portion of the wider treatment works (*i.e.*, the collection systems that send flow to the POTW treatment plant), it is appropriate, and in some cases necessary, to extend pertinent, mandated standard conditions to all portions of the POTW, which is subject to regulation in its entirety. The alternative of allowing state and local jurisdictional boundaries to place significant portions of the POTW beyond the reach of the NPDES permitting program would not only be inconsistent with the broad statutory and regulatory definition of the term POTW but would impede Region 1 from carrying out the objectives of the CWA. It would also, illogically, preclude the Region from imposing on POTWs standard conditions EPA has by regulation mandated for those entities.

Other Considerations Informing EPA Region 1’s Decision to Use a Co-permittee Permitting Structure for Regionally Integrated POTWs

In addition to consulting the relevant statutes, regulations, and preambles, Region 1 also considered other EPA guidance in coming to its determination to employ a co-permittee structure for regionally integrated POTWs. EPA’s 1994 Multijurisdictional Pretreatment Programs Guidance Manual, p. 19, asserts that EPA has the authority to include municipal satellite collection systems as co-permittees by virtue of their being part of the POTW:

If the contributing jurisdiction owns or operates the collection system within its boundaries, then it is a co-owner or operator of the POTW. As such, it can be included on the POTW’s NPDES permit and be required to develop a pretreatment program. Contributing jurisdictions should be made co-permittees where circumstances or experience indicate that it is necessary to ensure adequate pretreatment program implementation.

The same logic that led EPA to conclude it had authority to require municipal satellite collection systems to develop a pretreatment program pursuant to an NPDES permit supports EPA Region 1’s decision to impose permit conditions on such facilities to undertake proper O & M and to reduce inflow and infiltration.

EPA Region 1 also took notice of federal listening session materials on the June 2010 proposed SSO rule and associated model permits and fact sheet. The position articulated by EPA in these

model documents—specifically the application of standard NPDES conditions to municipal satellite collection systems—generally conform to Region 1’s co-permitting approach.

Finally, in addition to federal requirements, EPA Region 1 considered the co-permittee approach in light of state regulations and policy pertaining to wastewater treatment works. The Region found its approach to be consistent with such requirements. Under Massachusetts law, “Any person operating treatment works shall maintain the facilities in a manner that will ensure proper operation of the facilities or any part thereof,” where “treatment works” is defined as “any and all devices, processes and properties, real or personal, used in the collection, pumping, transmission, storage, treatment, disposal, recycling, reclamation or reuse of waterborne pollutants, but not including any works receiving a hazardous waste from off the site of the works for the purpose of treatment, storage or disposal, or industrial wastewater holding tanks regulated under 314 CMR 18.00” *See* 314 CMR 12.00 (“Operation and Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Dischargers”). MassDEP has also prioritized this area, issuing detailed operation and maintenance guidelines entitled “Optimizing Operation, Maintenance and Rehabilitation of Sanitary Sewer Collection Systems.”

Exhibit A

Name	Issue Date
Massachusetts Water Resources Authority – Clinton (NPDES Permit No. MA0100404)	September 27, 2000
City of Brockton (NPDES Permit No. MA0101010)	May 11, 2005
City of Marlborough (NPDES Permit No. MA0100480)	May 26, 2005
Westborough Wastewater Treatment Plant (NPDES Permit No. MA0100412)	May 20, 2005
Lowell Regional Wastewater Utilities (NPDES Permit No. MA0100633)	September 1, 2005
Town of Webster Sewer Department (NPDES Permit No. MA0100439)	March 24, 2006
Town of South Hadley, Board of Selectmen (NPDES Permit No. MA0100455)	June 12, 2006
City of Leominster (NPDES Permit No. MA0100617)	September 28, 2006
Hoosac Water Quality District (NPDES Permit No. MA0100510)	September 28, 2006
Board of Public Works, North Attleborough (NPDES Permit No. MA0101036)	January 4, 2007
Town of Sunapee (NPDES Permit No. 0100544)	February 21, 2007
Lynn Water and Sewer Commission (NPDES Permit No. MA0100552)	March 3, 2007
City of Concord (NPDES Permit No. NH0100331)	June 29, 2007
City of Keene (NPDES Permit No. NH0100790)	August 24, 2007
Town of Hampton (NPDES No. NH0100625)	August 28, 2007
Town of Merrimack, NH (NPDES No. NH0100161)	September 25, 2007
City of Haverhill (NPDES Permit No. MA0101621)	December 5, 2007
Greater Lawrence Sanitary District (NPDES Permit No. MA0100447)	August 11, 2005
City of Pittsfield, Department of Public Works (NPDES No.	August 22, 2008

MA0101681)	
City of Manchester (NPDES No. NH0100447)	September 25, 2008
City of New Bedford (NPDES Permit No. MA0100781)	September 28, 2008
Winnepesaukee River Basin Program Wastewater Treatment Plant (NPDES Permit No. NH0100960)	June 19, 2009
City of Westfield (NPDES Permit No. MA0101800)	September 30, 2009
Hull Permanent Sewer Commission (NPDES Permit No. MA0101231)	September 1, 2009
Gardner Department of Public Works (NPDES Permit No. MA0100994)	September 30, 2009

Exhibit B

I/I Flow Analysis for Sample Regional Publicly Owned Treatment Works

I. Representative POTWS

The **South Essex Sewer District (SESD)** is a regional POTW with a treatment plant in Salem, Massachusetts. The SESD serves a total population of 174,931 in six communities: Beverly, Danvers, Marblehead, Middleton, Peabody and Salem. The **Charles River Pollution Control District (CRPCD)** is a regional POTW with a treatment plant in Medway, Massachusetts. The CRPCD serves a total population of approximately 28,000 in four communities: Bellingham, Franklin, Medway and Millis. Both of these facilities have been operating since 2001 under permits that place requirements on the treatment plant to implement I/I reduction programs with the satellite collection systems, in contrast to Region 1's current practice of including the satellite collection systems as co-permittees.

II. Comparison of flows to standards for nonexcessive infiltration and I/I

Flow data from the facilities' discharge monitoring reports (DMRs) are shown in comparison to the EPA standard for nonexcessive infiltration/inflow (I/I) of 275 gpcd wet weather flow and the EPA standard for nonexcessive infiltration of 120 gallons per capita per day (gpcd) dry weather flow; the standards are multiplied by population served for comparison with total flow from the facility. See *I/I Analysis and Project Certification*, EPA Ecol. Pub. 97-03 (1985); 40 CFR 35.2005(b)(28) and (29).

Figures 1 and 2 show the Daily Maximum Flows (the highest flow recorded in a particular month) for the CRPCD and SESD, respectively, along with monthly precipitation data from nearby weather stations. Both facilities experience wet weather flows far exceeding the standard for nonexcessive I/I, particularly in wet months, indicating that these facilities are receiving high levels of inflow and wet weather infiltration.

Figure 1. CRPCD Daily Maximum Flow Compared to Nonexcessive I/I Standard

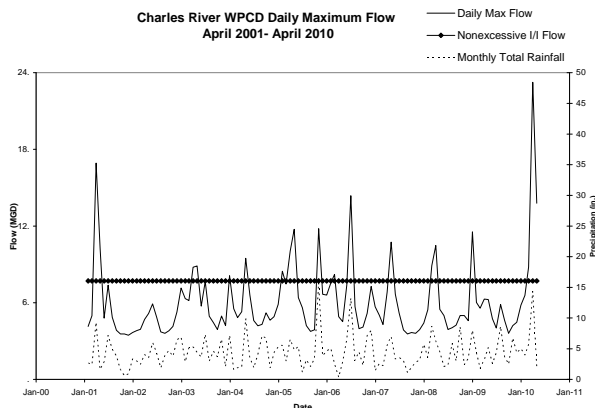
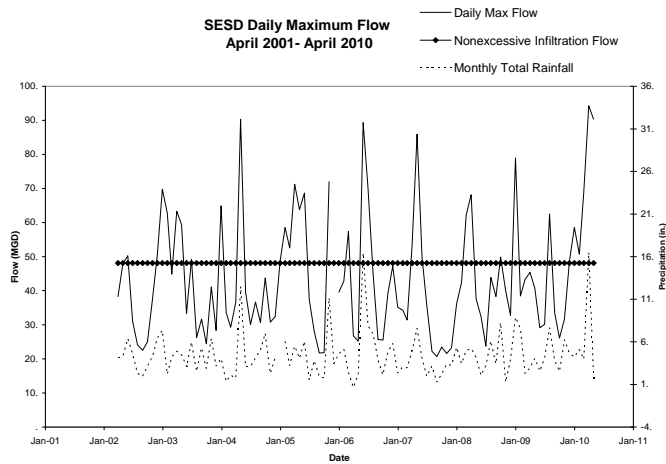


Figure 2. SESD Daily Maximum Flow Compared to Nonexcessive I/I Standard



Figures 3 and 4 shows the Average Monthly Flows for the CRPCD and SESD, which exceed the nonexcessive infiltration standard for all but the driest months. This indicates that these systems experience high levels of groundwater infiltration into the system even during dry weather.

Figure 3. CRPCD Monthly Average Flow Compared to Nonexcessive Infiltration Standard

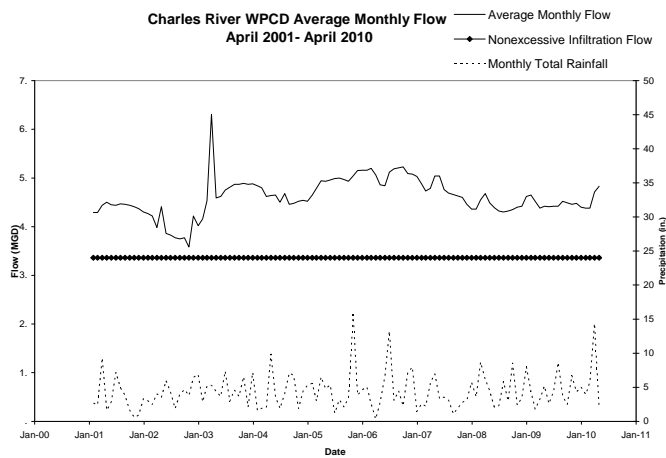
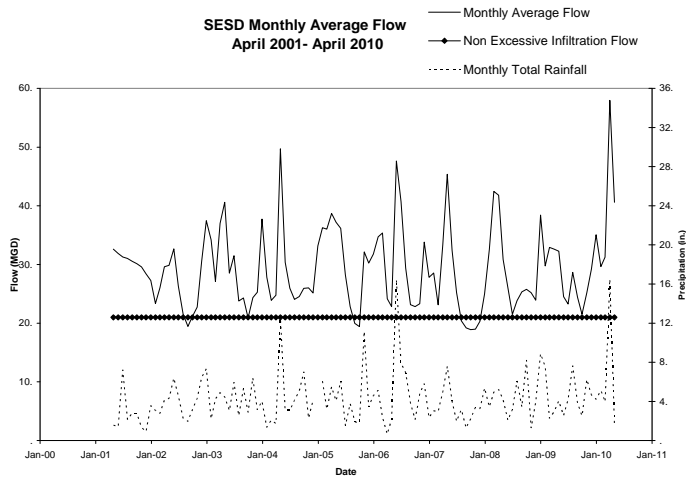


Figure 4. SESD Monthly Average Flow Compared to Nonexcessive Infiltration Standard



II. Flow Trends

Figures 5 and 6 show the trend in Maximum Daily Flows over the period during which these regional facilities have been responsible for implementing cooperative I/I reduction programs with the satellite collection systems. The Maximum Daily Flow reflects the highest wet weather flow for each month. The trend over this time period has been of increasing Maximum Daily Flow, indicating that I/I has not been reduced in either system despite the permit requirements.

Figure 5. CRPCD Daily Maximum Flow Trend

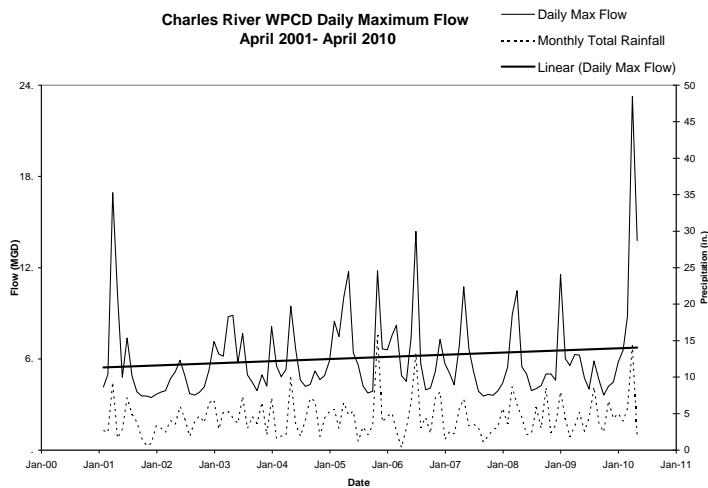
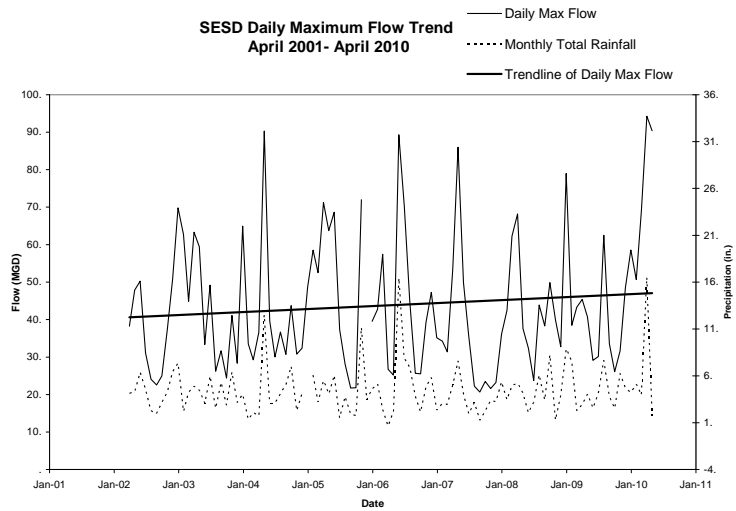


Figure 6. SESD Daily Maximum Flow Trend



III. Violations Associated with Wet Weather Flows

Both the CRPCD and SESD have experienced permit violations that appear to be related to I/I, based on their occurrence during wet weather months when excessive I/I standards are exceeded. Figure 7 shows violations of CRPCD's effluent limits for CBOD (concentration) and TSS (concentration and percent removal). Twelve of the sixteen violations occurred during months when daily maximum flows exceeded the EPA standard.

Figure 7. CRPCD CBOD and TSS Effluent Limit Violations

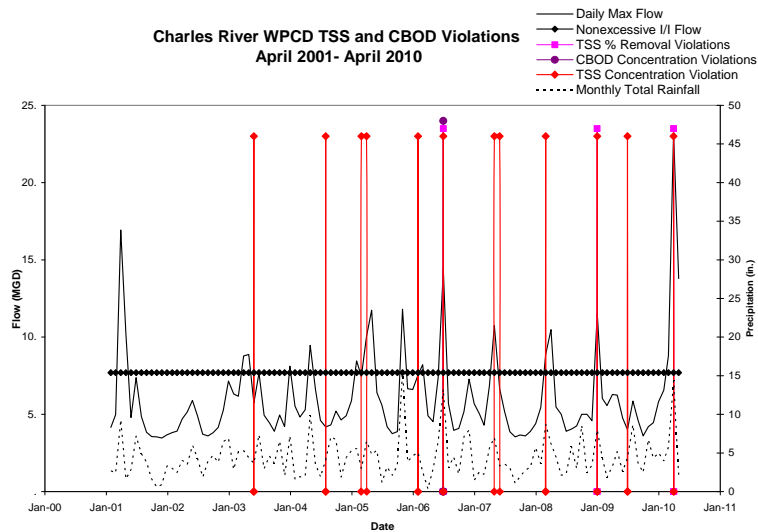
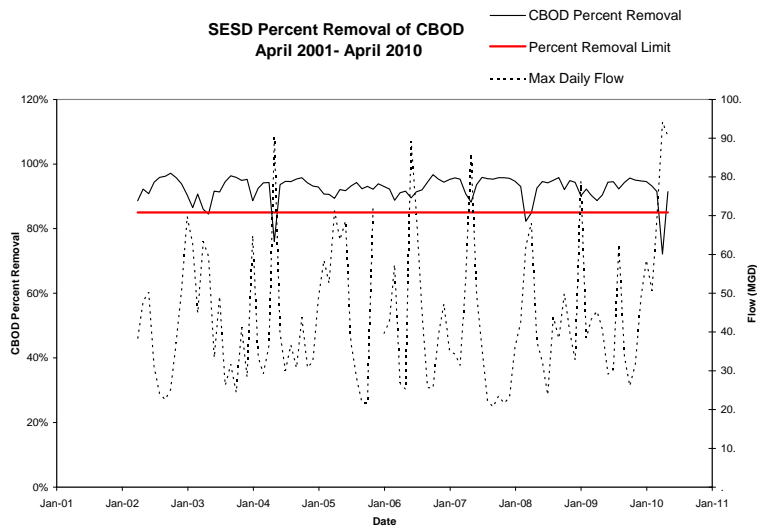


Figure 8 shows SESD's results for removal of CBOD, in percentage, as compared to maximum daily flow. SESD had three permit violations where CBOD removal fell below 85%, all during months with high Maximum Daily Flows.

Figure 8. SESD CBOD Percent Removal



In addition, both of these regional POTWs have experienced SSOs within the municipal satellite collection systems. In the SESD system, Beverly, Danvers, Marblehead and Peabody have reported SSOs between 2006 and 2008, based on data provided by MassDEP. In the CRPCD system, both Franklin and Bellingham have reported SSOs between 2006 and 2009.

Exhibit C

List of municipal satellite collection systems that have had SSOs

Exhibit D

Form of Regional Administrator's waiver of permit application requirements for municipal satellite collection systems



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

Re: Waiver of Permit Application and Signatory Requirements for [Municipal Satellite Sewage Collection System]

Dear _____:

Under NPDES regulations, all POTWs must submit permit application information set forth in 40 C.F.R. § 122.21(j) unless otherwise directed. Where the Region has “access to substantially identical information,” the Regional Administrator may waive permit application requirements for new and existing POTWs. *Id.* Pursuant to my authority under this regulation, I am waiving NPDES permit application and signatory requirements applicable to the above-named municipal satellite collection systems.

Although EPA has the authority to require municipal satellite collection systems to submit individual permit applications, in this case I find that requiring a single permit application executed by the regional POTW treatment plant owner/operator will deliver “substantially identical information,” and will be more efficient, than requiring separate applications from each municipal satellite collection system owner/operator. Municipal satellite collection system owners/operators are expected to consult and coordinate with the regional POTW treatment plant operators to ensure that any information provided to EPA about their respective entities is accurate and complete. In the event that EPA requires additional information, it may use its information collection authority under CWA § 308. 33 U.S.C. § 1318.

This notice reflects my determination based on the specific facts and circumstances in this case. It is not intended to bind the agency in future determinations where a separate permit for municipal satellites would not be duplicative or immaterial.

If you have any questions or would like to discuss this decision, please contact [EPA Contact] at [Contact Info].

Sincerely,

Regional Administrator

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION I
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912**

FACT SHEET

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

NPDES PERMIT NO: MA0100404

NAME AND ADDRESS OF PERMITTEE:

**Massachusetts Water Resources Authority
Charlestown Navy Yard
100 First Avenue
Boston, MA 02129**

The Towns of Clinton and Lancaster are co-permittees for specific activities required by the permit. See Section VI of this fact sheet and Sections I.C. and I.D. of the draft permit. The responsible municipal departments are:

**Town of Clinton
Department of Public Works
242 Church Street
Clinton, MA 01510**

**Lancaster Sewer District
P.O. Box 773
226 Main Street
South Lancaster, MA 01561**

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

**Massachusetts Water Resources Authority
Clinton Wastewater Treatment Facility
677 High Street
Clinton, MA 01510**

RECEIVING WATERS: South Branch Nashua River (MA81-09)

CLASSIFICATION: Class B - Warm Water Fishery

TABLE OF CONTENTS

I.	PROPOSED ACTION	4
II.	TYPE OF FACILITY AND DISCHARGE LOCATION	4
III.	DESCRIPTION OF DISCHARGE	4
IV.	LIMITATIONS AND CONDITIONS	4
V.	PERMIT BASIS AND EXPLANATION OF EFFLUENT LIMITATION DERIVATION	5
A.	PROCESS DESCRIPTION	5
B.	EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS	5
1.	Overview of Federal and State Regulations	5
2.	Water Quality Standards; Designated Use; Outfall 001	6
3.	Available Dilution	7
4.	Effluent Flow	8
5.	Conventional Pollutants	9
A)	Biochemical Oxygen Demand (BOD5)/ Carbonaceous Biochemical Oxygen Demand (CBOD5)	9
B)	Total Suspended Solids (TSS)	9
C)	pH	10
D)	Escherichia coli (<i>E. coli</i>)	10
E)	Dissolved Oxygen	10
6.	Non-Conventional Pollutants	11
A)	Total Residual Chlorine	11
B)	Total Phosphorus	11
C)	Aluminum	14
D)	Ammonia	16
E)	Copper	17
F)	Zinc	19
G)	Outfall 001 – Whole Effluent Toxicity	22
VI.	OPERATION AND MAINTENANCE OF THE COLLECTION SYSTEM	23
VII.	SLUDGE INFORMATION AND REQUIREMENTS	24
VIII.	PRETREATMENT	24
IX.	ESSENTIAL FISH HABITAT	25
X.	MONITORING AND REPORTING	27
XI.	STATE PERMIT CONDITIONS	28
XII.	GENERAL CONDITIONS	28
XIII.	STATE CERTIFICATION REQUIREMENTS	28
XIV.	PUBLIC COMMENT PERIOD AND PROCEDURES FOR FINAL DECISION	28
XV.	EPA CONTACT	29

Appendices

Appendix A	Effluent Characteristics 2007 - 2009
Appendix B	Aluminum Calculations
Appendix C	Copper Calculations

Figures

Figure 1	Location Map
Figure 2	Clinton Treatment Plant Flow Schematic
Figure 3	Anti-backsliding Flow Chart

Tables

Table 1.	South Nashua River Streamflow from July 12, 2008 to July 17, 2008 at the Clinton USGS Gage
Table 2.	Reported Effluent Phosphorus Concentration, Summer 2003
Table 3.	Downstream Concentration at NS19, Summer 2003
Table 4.	Average Aluminum Values in Clinton Wastewater Treatment Facility Effluent from Selected Toxicity Tests
Table 5.	Comparison of Effluent Limits and Resultant Downstream Receiving Water Concentrations of Copper

I. PROPOSED ACTION

The above named applicant has applied to the U.S. Environmental Protection Agency for the re-issuance of its National Pollutant Discharge Elimination System (NPDES) permit to discharge into the designated receiving water. The co-permittees discharge wastewater to the treatment plant owned and operated by the applicant. The current permit was signed on September 27, 2000 and became effective sixty (60) days later. The permit expired November 26, 2005. A re-application was received on May 27, 2005. The draft permit proposes an expiration date five (5) years from the effective date of the final permit.

II. TYPE OF FACILITY AND DISCHARGE LOCATION

The Massachusetts Water Resources Authority (MWRA) owns and operates the Clinton Wastewater Treatment Plant (WWTP) as part of an agreement with the Town of Clinton. In exchange for taking land to be flooded by the Wachusett Reservoir, MWRA supplies Clinton with water and treats Clinton's wastewater. The Lancaster Sewerage District also contributes a small flow to the facility. The facility is an advanced wastewater treatment plant with a permitted flow of 3.01 million gallons per day (MGD), which discharges to the South Branch of the Nashua River (Figure 1 Location Map). The WWTP serves a population of approximately 14,500 in Clinton and approximately 1,500 in Lancaster.

The facility's discharge outfalls are listed below:

<u>Outfall</u>	<u>Description of Discharge</u>	<u>Receiving Water</u>
001	Treated Effluent	South Nashua River

The Towns of Clinton and Lancaster Sewer District own and operate the collection system, with the exception of an approximately one-mile MWRA-owned interceptor sewer line that delivers wastewater to the WWTP. The collection system is 100% separate sanitary sewers. Since 2004, there have been three sanitary sewer overflows (SSOs) reported in the Town of Clinton, two of which occurred on the Weetabix property. No SSOs have been reported in the MWRA or Lancaster Sewer District collection systems.

III. DESCRIPTION OF DISCHARGE

Quantitative descriptions of the discharge in terms of significant effluent parameters, based on discharge monitoring reports (DMRs) submitted for January 2007 through December 2009, are shown in Appendix A of this fact sheet.

IV. LIMITATIONS AND CONDITIONS

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

V. PERMIT BASIS AND EXPLANATION OF EFFLUENT LIMITATION DERIVATION

A. PROCESS DESCRIPTION

The facility is an advanced activated sludge facility with year-round sodium hypochlorite disinfection and dechlorination. The facility discharges to the South Nashua River. The facility has a previously permitted flow of 3.01 MGD. In addition to the sanitary sewer flow, there are two non-categorical significant industrial dischargers users: Weetabix (non-categorical) and Central Mass Powder Coating (non-discharging metal finishing operation).

The following is a brief description of the treatment process (See Figure 2 Clinton Treatment Plant Flow Schematic): A mechanical bar screen and bar rack remove grit screenings and large floatables. Wastewater then flows into an aerated grit tank for grit removal. Collected grit is then transported to the MWRA owned landfill and covered. Grit removal is followed by primary settling and scum removal. These processes are accomplished in four primary settling tanks, where smaller floating and settleable solids are removed. Four trickling filters are available for use in initial secondary treatment. Wastewater then flows into three of six available aeration tanks where activated sludge biological treatment occurs. Nitrification also occurs in the aeration tanks. Soda ash (sodium carbonate) is used to regulate the alkalinity of the activated sludge. After biological treatment, wastewater flows to three clariflocculators, which remove biological solids. Polymers and coagulants (sodium aluminate) are added to the clariflocculators to enhance solids removal and achieve the required level of phosphorus removal. Secondary effluent is then disinfected with sodium hypochlorite, dechlorinated with sodium bisulfite, and the final effluent discharged over aeration steps into the South Nashua River.

Sludge from the primary and secondary tanks is co-thickened in a gravity thickener. The sludge then is pumped to an anaerobic digester, which provides pathogen and volume reduction. The methane gas produced in this process is recovered and used to heat the digesters and dewatering/maintenance building. Sludge is dewatered on one of two a belt filter presses then transported to an MWRA-owned landfill where it is further processed by mixing with a clean fill bulking agent and applied to the banks of the landfill and covered with a clean fill cover. The landfill was constructed with a double liner system to protect groundwater resources. It contains two separate leachate collection systems to collect and pump the leachate back to the sewer system for treatment at the plant.

B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. Overview of Federal and State Regulations

Under Section 301(b)(1)(B) of the Clean Water Act (CWA), publicly owned treatment works (POTWs) must have achieved effluent limitations based upon Secondary Treatment by July 1, 1977. Secondary treatment requirements are set forth at 40 C.F.R. Part 133.102. In addition, Section 301(b)(1)(C) of the CWA requires that effluent limitations based on water quality considerations be established for point source discharges when such limitations are necessary to

achieve state or federal water quality standards that are applicable to the designated receiving water.

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

2. Water Quality Standards; Designated Use; Outfall 001

The South Nashua River in the vicinity of the discharges is classified in the Massachusetts Surface Water Quality Standards (314 CMR 4.00) as a Class B-warm water fishery. Class B waters are designated as a habitat for fish, other aquatic life, and wildlife, and for primary and secondary contact recreation. They shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses and should have consistently good aesthetic value.

A warm water fishery is defined in the Massachusetts Surface Water Quality Standards (314 CMR 4.02) as waters in which the maximum mean monthly temperature generally exceeds 20°C (68°F) during the summer months and are not capable of supporting a year-round population of cold water stenothermal aquatic life.

Section 303(d) of the Federal Clean Water Act (CWA) requires states to identify those waterbodies that are not expected to meet surface water quality standards after the implementation of technology-based controls and, as such require the development of total maximum daily loads (TMDL). The segment of the South Nashua River from the Clinton WWTP to its confluence with the North Nashua River in Lancaster (MA81-09) is listed on the Massachusetts 2008 Integrated List of Waters (303d) as impaired and requiring the development of a TMDL. The listed impairments for this segment are nutrients and pathogens. Immediately upstream of the Clinton WWTP (MA81-08), the listed impairments for the river segment are unknown toxicity and pathogens. The specific cause(s) of these impairments are unknown.

The MassDEP 2003 Water Quality Assessment Report for the Nashua River, which is the basis for the 303(d) list, notes that the receiving water segment (MA81-09) does not support primary contact recreational use due to *E. coli* and is on alert status for high phosphorus concentrations.

3. Available Dilution

Water quality criteria in the receiving water must be met after accounting for dilution under low flow conditions. The Massachusetts Water Quality Standards (MA WQS) (310 CMR 4.00) dictate how available dilution is determined for receiving waters.

A comparison between the total dam release, which includes the daily variable release, a release to Lancaster Mills, and dam seepage; and the USGS gage shows that the watershed between the dam and the Clinton WWTP adds no additional flow to the Nashua River.

The flow of the South Nashua River at the Clinton WWTP is controlled by the Wachusett Dam, which is located 3.2 miles upstream of the treatment plant. 314 CMR 4.03(3)(b) requires that:

In waters where flows are regulated by dams or similar structures, the lowest flow condition at which aquatic life criteria must be applied is the flow equaled or exceeded 99% of the time on a yearly basis, or another equivalent flow agreed upon by the Department and the federal, state or private entity controlling the flow. The minimum flow established in such an agreement will become the critical low flow for those waters covered by the agreement.

In a letter dated June 5, 2009, MWRA requested a revision in the critical low flow for the Nashua River from 2.785 cfs (cubic feet per second) to 4.27 cfs based on flow measurements at a US Geological Survey (USGS) gage upstream of the Clinton WWTP. However, a comparison of data from the USGS gage upstream of the WWTP to the water released from the dam shows that there is no significant streamflow addition (i.e. from baseflow or tributaries) between the dam and the WWTP discharge. On some dry weather days, the river flow is actually lower than MWRA's stated dam releases, perhaps due to evaporative losses or absorption into the river banks. EPA is not granting the request to increase the receiving water critical low flow, based on lack of evidence that the Nashua River flow is consistently greater than the minimum flow released from the Wachusett Dam.

The dilution has been calculated using the minimum dam release. MWRA is obligated by state law to release at least 12 million gallons per week from the Wachusett Dam (though it often releases higher volumes to manage water levels in the Wachusett Reservoir). This number can be converted to MGD as follows:

$$\text{Flow (MGD)} = \frac{12 \text{ million gallons}}{1 \text{ week}} \times \frac{1 \text{ week}}{7 \text{ days}} = 1.7 \text{ MGD}$$

The draft permit uses the 1.7 MGD as the critical low flow in accordance with the above excerpt from the Massachusetts MA WQS. This corrects the previous permit, which used 1.8 MGD as the critical low flow.

The dilution factor can then be calculated as follows:

$$\frac{\text{River flow (release from Wachusett Dam)} + \text{Daily permitted flow}}{\text{Daily permitted flow}} = \text{Dilution factor}$$

WWTP Permitted Flow = 3.01 MGD

Nashua River Critical Low Flow = 1.7 MGD

$$\text{Dilution factor} = \frac{3.01 \text{ MGD} + 1.7 \text{ MGD}}{3.01 \text{ MGD}} = 1.56, \text{ or } 1.6$$

Therefore, the dilution factor is 1.6.

EPA notes that although the Clinton WWTP has a relatively low dilution factor, this factor is within MWRA's control. The minimum release from the Wachusett Reservoir to the Nashua River could be raised by increasing the flow through the fountain or by releasing more water over the spillway.

In communications with EPA, MWRA has indicated that it is considering releasing more flow into the Nashua River from the Wachusett Dam. EPA encourages MWRA to continue these deliberations, as it will confer the positive effects mentioned above. If a formal agreement is reached, and it significantly changes the dilution factor, EPA will consider this new information, for purposes of either revising the draft permit (if the information is received prior to the final permit decision), or modifying the permit (if the information is received after the final permit decision).

4. Effluent Flow

Due to excessive I/I (infiltration/inflow – See Section VI of this document) in the Clinton collection system, the Clinton WWTP has regularly (i.e. 29 of the last 36 months) exceeded its permitted flow rate of 3.01 MGD, calculated as a 12-month rolling average. In 2000, MWRA relined its sewer interceptor and manholes to eliminate I/I in its portion of the collection system. However, there continues to be a large quantity of I/I in the Clinton collection system as shown by a comparison of average daily influent flows¹ for a dry month and a wet month in 2008. In April 2008, average daily influent flow was 3.68 million gallons, while in August 2008, during the dry season, average daily influent flow was 2.69 million gallons. Even this lower number includes some inflow/infiltration, as MWRA estimates that daily sanitary sewage flow from Clinton and Lancaster is only 1.6 million gallons.² MassDEP issued an Administrative Consent Order (ACO) on July 3, 1985 establishing a Sewer Bank for Clinton and Lancaster. Every gallon per day of new sewer construction must be offset by 2 gallons per day of I/I removal. Clinton increased this ratio in 2006 to 3 gallons I/I removed for every gallon of increased flow. Unfortunately, it does not appear that this arrangement has been effective for reducing high wet weather flows to Clinton WWTP.

¹ Average daily influent flow, as reported in Clinton MWRA's Monthly Operations Report submitted to MassDEP and EPA, should be distinguished from the 12-month rolling average flow reported in Clinton MWRA's Discharge Monitoring Reports.

² From MWRA I/I report dated January 30, 2009

In a letter dated June 5, 2009, MWRA requested a revision in the permitted flow for the Clinton WWTP from 3.01 MGD to 3.65 MGD. EPA is not granting the request at this time, because it appears that the current flow limit could be achieved by a serious effort to control I/I. Furthermore, the treatment plant flow represents a significant percentage of the receiving water dry weather flow as evidenced by the low dilution factor. An effluent flow limit increase would raise serious issues relative to consistency with water quality standards, including antidegradation provisions.

The draft permit carries forward the limit in the current permit, which is 3.01 MGD. Flow is to be measured continuously. The permittee shall report the annual average monthly flow using the annual rolling average method (See Permit Footnote 2). The average monthly and maximum daily flows shall also be reported on the federal DMR.

5. Conventional Pollutants

A) Biochemical Oxygen Demand (BOD₅)/ Carbonaceous Biochemical Oxygen Demand (CBOD₅)

The draft permit carries forward the BOD₅ limits in the current permit. The water quality-based limits were developed by MassDEP in August 1987 using a steady state water quality model, and were verified by EPA in October 1987. The mass limitations for BOD₅ are based on a 3.01 MGD permitted flow. The monitoring frequency continues to be three times per week.

$$\text{Mass Limitation (lbs/day)} = C \times PF \times 8.34$$

Where

C = Concentration Limit

PF = Permitted Flow

8.34 = Factor to convert concentration limit in mg/l and permitted flow in MGD to pounds per day.

Average Monthly Mass Limit = 20 mg/l x 3.01 MGD x 8.34 = 502 lbs/day or 500 lbs/day.

Average Weekly Mass Limit = 20 mg/l x 3.01 MGD x 8.34 = 502 lbs/day or 500 lbs/day.

In accordance with the provisions set forth at 40 CFR § 133.102(b)(3), the draft permit requires that the 30-day average percent removal of BOD₅ be no less than 85%.

B) Total Suspended Solids (TSS)

The draft permit carries forward the TSS limits in the current permit. The average monthly limit is 20 mg/l and the average weekly limit is 20 mg/l. The mass limitations for TSS are based on a 3.01 MGD permitted flow. The draft permit requires the permittee to report the maximum TSS value each month, but does not establish an effluent limit. The monitoring frequency continues to be three times per week.

Mass Limitation (lbs/day) = C x PF x 8.34

Where

C = Concentration Limit

PF = Permitted Flow

8.34 = Factor to convert concentration limit in mg/l and permitted flow in MGD to pounds per day.

Average Monthly Mass Limit = 20 mg/l x 3.01 MGD x 8.34 = 502 lbs/day or 500 lbs/day.

Average Weekly Mass Limit = 20 mg/l x 3.01 MGD x 8.34 = 502 lbs/day or 500 lbs/day.

In accordance with the provisions set forth at 40 CFR § 133.102(b)(3), the draft permit requires that the 30-day average percent removal of TSS be no less than 85%.

C) 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 C.F.R. '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.

D) Escherichia coli (*E. coli*)

The *Escherichia coli* (*E. coli*) limits for Outfall 001 are based on state water quality standards for Class B waters (314 CMR 4.05(b)(4)). The Commonwealth of Massachusetts promulgated *E. coli* criteria in the Surface Water Quality Standards (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 *E. coli* limits proposed in the draft permit for Outfall 001 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). These limits are seasonal, and the season has been extended from April 1st - October 15th to April 1st - October 31st to fully encompass the contact recreation period. The proposed *E. coli* monitoring frequency in the draft permit is daily. The draft permit requires that *E. coli* samples be collected at the same time as one of the total residual chlorine samples.

E) Dissolved Oxygen

The draft permit includes a limitation of not less than 6.0 mg/l for dissolved oxygen (DO) which is the same as the previous permit and is therefore consistent with the anti-backsliding provision of the CWA § 402(o).

6. Non-Conventional Pollutants

A) Total Residual Chlorine

Chlorine is a toxic chemical, and chlorine compounds produced from the disinfection of wastewater can be extremely toxic to aquatic life. Data reported on the facility's discharge monitoring reports (DMRs) shows total chlorine residual levels below the minimum detection level for the past 24 months. The draft permit carries forward the current total residual chlorine (TRC) limitations, which are based on state water quality standards [Title 314 CMR 4.05(5)(e)].

The acute and chronic water quality criteria for chlorine defined in the 2002 EPA National Recommended Water Quality Criteria for freshwater are 19 µg/l and 11 µg/l, respectively. Given the dilution factor of 1.6, total residual chlorine limits have been calculated as 30 µg/l maximum daily and 18 µg/l average monthly. This limit is in effect year round. Sampling will be required twice (2) per day.

Total Residual Chlorine Limitations:

(acute criteria * dilution factor) = Acute limit (Maximum Daily)
(19 µg/l x 1.6) = 30.4 µg/l

(chronic criteria * dilution factor) = Chronic limit (Monthly Average)
(11 µg/l x 1.6) = 17.6 µg/l

B) Total Phosphorus

The Massachusetts Surface Water Quality Standards (314 CMR 4.00) do not contain numerical criteria for total phosphorus. The narrative criteria for nutrients is found at 314 CMR 4.05(5) (c), which states that nutrients shall not exceed the site specific limits necessary to control accelerated or cultural eutrophication. The Standards also require that any existing point source discharges containing nutrients in concentrations which encourage eutrophication or the growth of weeds or algae shall be provided with the highest and best practicable treatment to remove such nutrients (314 CMR 4.04). MassDEP has established that a monthly average total phosphorus limit of 0.2 mg/l (200 µg/l) represents highest and best practical treatment for POTWs.

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

More recently, EPA has released Acoregional Nutrient Criteria, established as part of an effort to reduce problems associated with excess nutrients in water bodies in specific areas of the country. The published criteria represent conditions in waters in each specific ecoregion which are minimally impacted by human activities, and thus representative of waters without cultural

eutrophication. Clinton is within Ecoregion XIV, Eastern Coastal Plains. The recommended total phosphorus criteria for this Ecoregion XIV is 24 µg/l (0.024 mg/l) and can be found in the Ambient Water Quality Criteria Recommendations, Information Supporting the Development of State and Tribal Nutrient Criteria, Rivers and Streams in Ecoregion XIV, published in December 2000.

In the summer of 2003, the Clinton WWTP effluent phosphorus concentration hovered near 200 µg/l, which is much lower than the current limit (1,000 µg/l) and slightly higher than the proposed effluent limit (150 µg/l), for much of the season (see **Table 2**). Data collected for the 2003 Nashua River Water Quality Assessment (WQA) Report in the South Nashua River less than one mile downstream of the Clinton discharge at Station NS19 (Atherton Bridge in Lancaster) are presented below in **Table 3**. Although the Clinton WWTP's effluent phosphorus was well below its permit limit, all downstream ambient values exceed the Ecoregional criteria, 24 µg/l, although the lowest flow of the season was 10 times the 7Q10. Presumably, if 7Q10 conditions had occurred in 2003, downstream phosphorus levels would have been higher due to less dilution by the receiving water. This evidence indicates that a more stringent phosphorus limit is necessary to protect the receiving water from eutrophication during critical conditions.

Table 2. Reported Effluent Phosphorus Concentration, Summer 2003

Date	TP (µg/l)
May-03	399
June-03	260
July-03	210
August-03	420
September-03	189
October-03	190

(TP is Total Phosphorus)

Table 3. Downstream Concentration at NS19, Summer 2003*

Date	TP (µg/l)
4/9/2003	53
5/7/2003	64
6/11/2003	44
7/16/2003	32
8/13/2003	33
10/8/2003	37

*Data are from the Nashua River Watershed 2003 Water Quality Assessment Report.

MassDEP included the segment of the Nashua River immediately downstream of the Clinton WWTP (MA81-09) on the 2008 303(d) list for nutrients. The 2003 WQA noted moderate coverage of filamentous algae at the site on one occasion, and evidence of periphyton on another. Furthermore, the State has also documented the eutrophication of the Pepperell Impoundment, located on the North Nashua River approximately 20 miles downstream of the Clinton WWTP. The Impoundment is the downstream point of accumulation for any biomass produced upstream as the result of Clinton phosphorus inputs. The 2003 WQA reported floating algal mats at Pepperell Pond, indicating high phosphorus concentrations in the water column.

Discharge Monitoring Reports (DMRs) submitted by the permittee over the last 24 months report average monthly total phosphorus values between 170 µg/l and 600 µg/l with a maximum daily value of 960 µg/l. The calculated instream contribution at the current monthly average limit of 1,000 µg/l (1,000 µg/l divided by the dilution factor of 1.6) would be 600 µg/l, which is higher than both the ecoregion criteria and the "Gold Book" criteria.

In June 2007, MassDEP submitted a Draft Phosphorus Total Maximum Daily Load (TMDL) study for the Nashua River watershed to EPA for approval. EPA has not approved the TMDL.

Based on the downstream impairments (e.g. 303(d) listing of the South Nashua River segment MA81-09, and the documented eutrophication of the Pepperell Impoundment), the ambient total phosphorus levels, and the current nutrient criteria, EPA determined that a more stringent total phosphorus limit than that in the current permit is necessary. A limit was calculated that would result in the attainment of the Gold Book-recommended criteria of 100µg/l under 7Q10 conditions. The effluent limitation is calculated as follows:

$$C_d = \frac{(Q_r C_r - Q_s C_s)}{Q_d}$$

Where

C_d	=	Discharge concentration	=	?
C_r	=	Concentration below outfall	=	100 µg/l (Gold Book value)
Q_d	=	Discharge flow	=	3.01 MGD
Q_s	=	Upstream flow	=	1.71 MGD
C_s	=	Upstream concentration	=	12 µg/l
Q_r	=	Streamflow below outfall (effluent + upstream)	=	4.71 MGD

$$C_d = \frac{(4.71 \text{ MGD})(100 \text{ µg/l}) - (1.7 \text{ MGD})(12 \text{ µg/l})}{3.01 \text{ MGD}}$$

$$= 150 \text{ µg/l}$$

The draft permit therefore includes a water quality-based total phosphorus limit of 150 µg/l. This will be a monthly average limit and will be in effect from April 1 through October 31 of each year. In addition, the maximum daily value for each month must be reported.

The permit contains a compliance schedule for meeting the total phosphorus limits (see Section I.B. of the permit.) The schedule contains several interim milestones relative to the steps necessary to complete the design and construction of facilities necessary to meet the final limits. Final compliance with the total phosphorus limits must be achieved by the fourth anniversary of the effective date of the permit.

EPA has also included a winter effluent limitation for total phosphorus. Phosphorus discharged during the winter months could settle in downstream impoundments, particularly Pepperell Pond, and be available to support plant growth during the growing season. The permit establishes a one-year compliance schedule for meeting the November through March seasonal total phosphorus limit of 1,000 ug/l. The permit also includes a reporting requirement for dissolved orthophosphate for the winter period to confirm that the potential for phosphorus accumulation is minimized.

C) Aluminum

Aluminum, in the form of alum or other compounds, is a commonly used chemical additive in wastewater treatment to remove phosphorus. The release of metals such as aluminum into the environment can result in levels that are highly toxic to aquatic life. Therefore, it is necessary to evaluate the downstream effects of discharges of aluminum from wastewater treatment plants. Water quality-based effluent limitations are imposed on dischargers when it is determined that limitations more stringent than technology-based limitations are necessary to achieve or maintain the water quality standards in the receiving water (40 CFR § 122.44(d)(1)). Such determinations are made when EPA finds that there is reasonable potential for the discharge to cause or contribute to an instream excursion above a water quality criterion contained within applicable state water quality standards (40 CFR § 122.44(d)(1)(i)).

In determining reasonable potential, EPA considers existing controls on point and nonpoint sources of pollution, pollutant concentration and variability in the effluent and receiving water as determined from the permittee's reissuance application, DMRs, state and federal water quality reports; and, where appropriate, the dilution of the effluent in the receiving water (see 40 CFR § 122.44(d)(1)(ii)). If EPA concludes, after using the procedures found at 40 CFR § 122.44(d)(1)(ii), toxicity testing data, or other available information, that a discharge causes or has the reasonable potential to cause or contribute to an in-stream excursion above a numeric criterion within an applicable state water quality standard, effluent limitations must be included in NPDES discharge permits to ensure that water quality standards in the receiving water are met (40 CFR § 122.44(d)(1)(v)).

The Massachusetts Surface Water Quality Standards include requirements for the regulation and control of toxic constituents and also require that EPA-recommended criteria established pursuant to Section 304(a) of the CWA be used unless site-specific criteria are established (314 CMR § 4.05(5)(e)). Massachusetts has not adopted site-specific criteria for aluminum. Therefore, the freshwater criteria for aluminum found in the *National Recommended Water Quality Criteria: 2002* (US EPA 2002 [EPA-822-R-02-047]), which are an acute concentration of 750 µg/l and a chronic concentration of 87 µg/l, apply in Massachusetts.

The potential for discharges of aluminum from the Clinton WWTP to cause or contribute to an excursion above water quality criteria was determined by statistically projecting the maximum concentration of the pollutant in the receiving water downstream from the discharge. Only values for June and September WET tests were used, because that is when Clinton WWTF currently uses alum for nutrient removal, which will likely occur year-round under the new permit. EPA projected the maximum concentration as 960 µg/l by calculating the 99th percentile measurement of the existing effluent data set, shown in Table 4. The 95th percentile concentration, 468 µg/l, was calculated for comparison with the chronic WQC (see Appendix B).

The projected pollutant level was then inserted into a steady-state mixing equation to determine if it could cause or contribute to an excursion from water quality standards under critical conditions. Background concentrations of aluminum in the Nashua River were determined from the WET Chemistry dilution water samples from 2008 and 2009.

As shown in the box below, the projected maximum aluminum effluent of 960 ug/l results in a receiving water concentration of 604 µg/l during critical conditions, below the acute criterion of 750 µg/l. A concentration of 468 ug/l, the 95th percentile concentration, results in a receiving water concentration of 317 ug/l, above the chronic criterion of 87 µg/l. Therefore, there is reasonable potential for the discharge to cause or contribute to an excursion of the chronic water quality standard for aluminum.

Table 4. Aluminum Values in Clinton Wastewater Treatment Facility Effluent from Selected Toxicity Tests

Date	Aluminum, µg/l
June 2008	206, 205, 262
September 2008	199, 297, 696
June 2009	593, 435, 457
September 2009	126, 205, 295

Reasonable Potential Analysis for Aluminum

Where

C_r	=	Concentration below outfall	
Q_d	=	Discharge flow	= 3.01 MGD
C_d	=	Discharge concentration	= 468 µg/l
Q_s	=	Upstream flow	= 1.7 MGD
C_s	=	Upstream concentration	= 50 µg/l
Q_r	=	Streamflow below outfall (effluent + upstream)	= 4.71 MGD

Therefore,

$$C_r = \frac{(3.01 \text{ MGD} \times 468 \text{ µg/l}) + (1.7 \text{ MGD} \times 50 \text{ µg/l})}{4.71 \text{ MGD}}$$

$$= 317 \text{ ug/l} > 87 \text{ µg/l (chronic criterion)}$$

Therefore, there is **reasonable potential** for the discharge to cause or contribute to an excursion from the chronic water quality criterion for aluminum.

Reasonable Potential Analysis for Aluminum

Where

C_r	=	Concentration below outfall		
Q_d	=	Discharge flow	=	3.01 MGD
C_d	=	Discharge concentration	=	960 $\mu\text{g/l}$
Q_s	=	Upstream flow	=	1.7 MGD
C_s	=	Upstream concentration	=	50 $\mu\text{g/l}$
Q_r	=	Streamflow below outfall (effluent + upstream)	=	4.71 MGD

Therefore,

$$C_r = \frac{(3.01 \text{ MGD} \times 960 \mu\text{g/l}) + (1.7 \text{ MGD} \times 50 \mu\text{g/l})}{4.71 \text{ MGD}}$$

$$= 604 \mu\text{g/l} < 750 \mu\text{g/l} \text{ (acute criterion)}$$

Therefore, there is **no reasonable potential** for the discharge to cause or contribute to an excursion from the acute water quality criterion for aluminum.

Given that the primary source of aluminum in the facility's discharge is alum used for phosphorus removal, and that the facility has a four-year compliance schedule to meet proposed phosphorus limits, the draft permit requires monitoring only for aluminum. This will give the facility the opportunity to re-evaluate use of alum in nutrient removal and will allow operational flexibility to minimize phosphorus concentrations until compliance with the new limit is possible. The permittee will report the average monthly maximum daily concentration in $\mu\text{g/l}$. Monitoring frequency will be twice per week.

D) Ammonia Nitrogen

Ammonia is unique among regulated pollutants in that it is naturally produced by fish as a waste product. High levels of ammonia in the water column make it more difficult for fish to excrete this chemical via passive diffusion from gill tissues. Ammonia toxicity also varies with pH and temperature. Since the date of the existing permit, EPA has revised water quality criteria to account for these relationships.

A review of the current seasonal effluent limitations for ammonia nitrogen indicates that they are protective of water quality and in accordance with the EPA 1999 Update of Ambient Water Quality Criteria for Ammonia. Effluent data from 2007-2009 indicate that the Clinton-MWRA WWTP has consistently met the limits in the current permit.

The draft permit includes seasonal effluent limitations for ammonia nitrogen. During the month of April, the average monthly limit for ammonia nitrogen is 10 mg/l, and the maximum daily discharge during each month must be reported. For the month of May, the average monthly effluent limit is reduced to 5 mg/l and the maximum daily discharge during each month must be reported. For the summer months, defined as June 1 through October 31, the draft permit includes an average monthly limit of 2 mg/l and a maximum daily limit of 3 mg/l. For the winter months, defined as November 1 through March 31, the average monthly limit is 10.0 with a maximum daily limit of 35.2. These limits are carried forward from the existing permit and are based on the 1981 waste load allocation. Monitoring frequency June 1 through October 31 continues to be three times per week. During the periods of November 1 through March 31, April 1 through April 30, and May 1 through May 31; monitoring frequency is once per week.

E) Copper

Certain metals, like copper, can be toxic to aquatic life. The current permit includes monthly average and daily maximum copper limits of 6.2 µg/l and 8.3 µg/l, respectively. These limits were calculated using the 1998 Water Quality criteria for copper calculated at a hardness of 35 mg/l as CaCO₃ and a dilution factor of 1.6. An examination of Clinton WWTP data from 2007-2009 indicates that effluent copper concentrations range from 4.23 – 13.1 µg/l (see Appendix A).

The Massachusetts Surface Water Quality Standards were revised in December 2006, and approved by EPA on March 26, 2007, to include a dissolved acute copper criterion of 25.7 µg/l and a dissolved chronic copper criterion of 18.1 µg/l for the Nashua River (314 CMR § 4.06, Table 28 (Site Specific Criteria)).

The new, less stringent, site specific copper criteria may allow an increase in the effluent copper limitations. However, EPA may only relax effluent limitations when consistent with anti-backsliding and antidegradation requirements. A chart from the USEPA NPDES Permit Writers Manual showing the anti-backsliding rules relating to water quality-based effluent limitations is attached (Figure 2 Anti-backsliding Flow Chart).

To determine whether a water quality-based limitation can be relaxed pursuant to anti-backsliding, it first must be determined whether a specific exception is met under 402(o). In this case, no specific exception has been met³. If there is no specific exception, water quality limits might still be relaxed, with the procedures being determined by whether the receiving water is in attainment of water quality standards for the pollutant in question. EPA therefore performed calculations to determine whether the receiving water is currently attaining the site-specific chronic copper criterion under critical conditions. Critical conditions include the treatment plant discharging at permitted flow, with an effluent copper concentration equal to the statistically-projected 99th percentile value (14.0 µg/l) and the flow in the receiving water upstream of the discharge at the minimum required flow release from the Wachusett Dam (1.71 MGD).

Under these conditions, the maximum daily instream dissolved copper concentration downstream

³ The exception relating to new information does not apply. New regulations (in this case, new water quality criteria) are specifically excluded as new information.

from the discharge is projected to be 10.88 µg/l (see **Appendix C**). The projected instream copper concentrations downstream from the discharge are less than the site-specific acute and chronic criteria, meaning that the receiving water is currently in attainment of the site specific water quality standards with respect to copper. Therefore, it is permissible to relax the monthly average and daily maximum copper limits, provided antidegradation requirements are met.

First, EPA calculated limits that would result in the concentration of copper in the receiving water downstream from the discharge being equal to the site-specific criteria (i.e., limits based on the site-specific criteria); they are 40.4 µg/l (maximum daily) and 28.0 µg/l (average monthly). These values are less stringent than those contained in the prior permit.

EPA then evaluated the level of copper removal routinely achieved by the facility in accordance with requirements in the State's *Protocol for and Determination of Site-Specific Copper Criteria for Ambient Waters in Massachusetts* (the "site-specific protocol"; MassDEP 2007). This document provides that limits adjusted pursuant to the site-specific criteria will also reflect the level of copper control routinely achieved by the facility. A statistical analysis of the effluent concentration data from 2007 to 2009 (see **Appendix A**) shows that limits based solely on past performance would result in a monthly average limit of 9.5 µg/l and a daily maximum limit of 14.0 µg/l (see **Appendix C**). These limits are less stringent than the prior permit limits, but more stringent than limits based solely on the site-specific copper criteria referenced above.

A comparison of the limits in the prior permit, the limits based on the site-specific criteria being achieved in the downstream receiving water, and the limits based on the performance of the facility are presented in **Table 5**. Also shown are the downstream receiving water concentrations of copper that would be expected under each set of limitations (see **Table 5**).

Table 5.
Comparison of Effluent Limits and Resultant Downstream Receiving Water Concentrations of Copper*

	Average Monthly (Chronic) (Total Recoverable Copper)	Maximum Daily (Acute) (Total Recoverable Copper)	Resultant Downstream Receiving Water Concentration at Acute and Chronic Limits, respectively (Dissolved Copper)⁴
Limits in Prior Permit	6.2 µg/l	8.3 µg/l	6.1 µg/l and 7.4 µg/l
Limits to Achieve Criteria⁵	28 µg/l	40 µg/l	18.1 µg/l and 25.7 µg/l
Performance-Based Limits	9.5 µg/l	14.0 µg/l	8.1 µg/l and 10.9 µg/l

In light of the above calculations, EPA proposes to increase the monthly average limit from 6.2 µg/l (contained in the prior permit) to 9.5 µg/l, and to increase the daily maximum from 8.3 µg/l (contained in the prior permit) to 14.0 µg/l. This is consistent with the State's protocol, which allows an upward adjustment of limits based on site-specific criteria, but only to the extent necessary based on past demonstrated performance of the facility. Monitoring frequency will be once per week.

These limits are more stringent than the limits calculated to achieve the site specific criteria and to protect existing uses. The instream concentration will remain substantially below the applicable instream chronic criterion (8.1 µg/l vs. 18.1 µg/l), and the new limit reflects the past performance of the Permittee's facility.

F) Zinc

A Reasonable Potential Analysis was conducted to determine the necessity of permit limits for zinc. Similar to other metals, Water Quality Criteria for zinc are dependent on the hardness of the receiving water; increasing hardness reduces the toxicity of the metal. The downstream hardness value of 47.6 mg/l was calculated using a mass balance equation to account for the

⁴ Criteria are expressed in terms of dissolved metals. However, permit limitations for metals are expressed in terms of total recoverable metals in accordance with the requirements of 40 CFR § 122.45(c). As such, conversion factors are used to develop total recoverable limits from dissolved criteria. The conversion factor reflects how the discharge of a particular metal partitions between the particulate and dissolved form after mixing with the receiving water. In the absence of site-specific data describing how a particular discharge partitions in the receiving water, a default assumption equivalent to the criteria conversion factor is used in accordance with the EPA Metal Translator Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criteria (EPA 1996 [EPA-823-B96-007]). Therefore, a conversion factor of 0.960 was applied to convert between total recoverable and dissolved copper concentrations.

⁵ The limits to achieve criteria were calculated to result in the instream copper concentration downstream from the discharge being equal to the site-specific dissolved acute copper criterion of 25.7 µg/l and the site-specific dissolved chronic criterion of 18.1 µg/l. See Appendix C for the derivation of performance-based limits.

effect of the effluent on instream hardness. The value used for upstream concentration is the average of the instream hardness values of samples collected in the Nashua River upstream from the discharge for use as dilution water for the March 2008, June 2008, and September 2008 whole effluent toxicity (WET) tests⁶. The value used for discharge concentration is the measured hardness of the effluent in the same toxicity tests.

Hardness Analysis for Zinc			
Where			
C_r	=	Concentration below outfall	
Q_d	=	Discharge flow	= 3.01 MGD
C_d	=	Discharge concentration	= 57 mg/l
Q_s	=	Upstream flow	= 1.7 MGD
C_s	=	Upstream concentration	= 30 mg/l
Q_r	=	Streamflow below outfall (effluent + upstream)	= 4.71 MGD
Therefore,			
C_r	=	$\frac{(3.01 \text{ MGD} \times 57 \text{ mg/l}) + (1.7 \text{ MGD} \times 30 \text{ mg/l})}{4.71 \text{ MGD}}$	
	=	47.6 mg/l	

Equations from the EPA 2002 National Recommended Water Quality Criteria were used to determine acute and chronic zinc criteria for the receiving water. (Note: Values for the pollutant-specific coefficients and conversion factors were taken from Appendix B of the EPA 2002 National Recommended Water Quality Criteria).

$$1. \text{ Acute Criteria (Total Recoverable)} = \exp\{m_a [\ln(h)] + b_a\} = 63.9 \mu\text{g/l}$$

Where:

$$\begin{aligned} m_a &= \text{Pollutant-specific coefficient} &= 0.8473 \\ b_a &= \text{Pollutant-specific coefficient} &= 0.884 \\ \ln &= \text{Natural logarithm} \\ h &= \text{hardness of the receiving water} &= 47.6 \text{ mg/l} \end{aligned}$$

$$2. \text{ Chronic Criteria (Total Recoverable)} = \exp\{m_c [\ln(h)] + b_c\} = 63.8 \mu\text{g/l}$$

Where:

$$m_c = \text{Pollutant-specific coefficient} = 0.8473$$

⁶ MWRA began analysis of upstream dilution water in March 2008.

$$\begin{aligned} b_c &= \text{Pollutant-specific coefficient} &= 0.884 \\ \ln &= \text{Natural logarithm} \\ h &= \text{hardness of the receiving water} &= 47.6 \text{ mg/l} \end{aligned}$$

The potential for discharges of zinc from the Clinton WWTP to cause or contribute to an excursion above water quality criteria was determined by statistically projecting the maximum concentration of the pollutant in the receiving water downstream from the discharge (similar to the analysis used for aluminum) . The following steps from the Technical Support Document (referred to as “the TSD”) led to the finding of **no reasonable potential** to cause or contribute to exceedance of water quality criteria for zinc:

Zinc effluent data from March 2007 through December 2009 quarterly toxicity testing were analyzed using the delta-lognormal statistical distribution. The 99th percentile, 95% confidence level concentration projected for effluent zinc concentrations was 43.8 µg/L.

The projected pollutant level derived in Step 1 were modeled using a steady-state mixing equation to determine if it could cause or contribute to an excursion from water quality standards under critical conditions. Upstream samples taken for control WET Test renewals from the same period were averaged to determine the upstream concentration. As shown below, under critical conditions, the projected 99th percentile zinc effluent concentration results in a receiving water concentration of 30.7 µg/l, below both the acute criterion of 62.5 µg/l and the chronic criterion of 63.0 µg/l. Therefore, there is **no reasonable potential** for the discharge to cause or contribute to an excursion of water quality standards. No further analysis is needed.

Effluent limitations for zinc are not proposed in the draft permit. The permittee shall continue to monitor for zinc as part of their whole effluent toxicity (WET) testing.

Reasonable Potential Analysis for Zinc

Where

C_r	=	Concentration below outfall		
Q_d	=	Discharge flow	=	3.01 MGD
C_d	=	Discharge concentration	=	43.8 $\mu\text{g/l}$
Q_s	=	Upstream flow	=	1.7 MGD
C_s	=	Upstream concentration	=	8.8 $\mu\text{g/l}$
Q_r	=	Streamflow below outfall (effluent + upstream)	=	4.71 MGD

Therefore,

$$C_r = \frac{(3.01\text{MGD} \times 43.8 \mu\text{g/l}) + (1.7 \text{MGD} \times 8.8 \mu\text{g/l})}{4.71 \text{MGD}}$$

$$= 30.7 \mu\text{g/l} < 63.8 \mu\text{g/l} \text{ (chronic criterion)}$$

$$30.7 \mu\text{g/l} < 63.9 \mu\text{g/l} \text{ (acute criterion)}$$

Therefore, there is **no reasonable potential** for the discharge to cause or contribute to an excursion from either the acute or chronic water quality criterion for zinc.

G) Outfall 001 – Whole Effluent Toxicity

Under Section 301(b)(1)(C) of the CWA, discharges are subject to effluent limitations based on water quality standards. The Massachusetts Surface Water Quality Standards include the following narrative statement and requires that EPA criteria established pursuant to Section 304(a)(1) of the CWA be used as guidance for interpretation of the following narrative criteria: All surface waters shall be free from pollutants in concentrations or combinations that are toxic to humans, aquatic life or wildlife.

National studies conducted by the EPA have demonstrated that domestic sources contribute toxic constituents to POTWs. These constituents include metals, chlorinated solvents, aromatic hydrocarbons and others. Based on the potential for toxicity from domestic sources, the state narrative water quality criterion, the limited dilution at the discharge location, and in accordance with EPA national and regional policy and 40 C.F.R. ' 122.44(d), the draft permit includes a whole effluent chronic and acute toxicity limitations (C-NOEC = 62.5% and LC50 =100%). (See also "Policy for the Development of Water Quality-Based Permit Limitations for Toxic Pollutants", 49 Fed. Reg. 9016 March 9, 1984, and EPA's "Technical Support Document for Water Quality-Based Toxics Control", September, 1991.)

The draft permit carries forward the requirements for quarterly Chronic and Acute toxicity tests using the species Ceriodaphnia dubia, only. 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: March, June, September and December.

The LC₅₀ limit of □100% is established by EPA/MassDEP policy for facilities with less than 10:1 dilution (See MassDEP's "Implementation Policy for the Control of Toxic Pollutants in Surface Waters, February 23, 1990). The C-NOEC is established at the receiving water concentration (1/Dilution Factor = 1/1.6), which is 62.5%.

VI. OPERATION AND MAINTENANCE OF THE COLLECTION SYSTEM

The current permit includes requirement regarding the operation and maintenance of the collection system. Among other things, the permit requires the permittee, and the Town of Clinton and the Lancaster Sewer District, as limited co-permittees, to each develop and implement an inflow/infiltration control program for the portion of the collection system it owns and operates and to report unauthorized discharges from its portion of the collection system.

Infiltration is groundwater that enters the collection system through physical defects such as cracked pipes, or deteriorated joints. Inflow is extraneous flow entering the collection system through point sources such as roof leaders, yard and area drains, sump pumps, manhole covers, tide gates, and cross connections from storm water systems.

Significant I/I in a collection system may displace sanitary flow, can reduce the capacity and the efficiency of the treatment works and may cause bypasses to secondary treatment. It greatly increases the potential for sanitary sewer overflows (SSOs) in separate sewer systems. I/I in the collection system has also caused significant increase in flow to the Clinton WWTP during wet weather.

The Town of Clinton was issued an Administrative Order (AO) by MassDEP on July 3, 1985, requiring any new sewer connections to be offset through the reduction of I/I. Specific tasks required by the ACO and to be completed by the Town of Clinton, according to MassDEP, are listed below:

- Sewer moratorium;
- Construction of two manholes;
- Adoption of a User Charge System and a Sewer Use Ordinance;
- Implementation of an Inflow Detection and Elimination Program;
- Submittal of an annual plan for sewer inspection and maintenance for approval by MassDEP.
- Submittal of a semi-annual report to MassDEP summarizing inspections and repairs, including the estimated quantity of I/I removed.

The current permit requires the permittee and each co-permittee to submit an annual report to EPA and MassDEP addressing I/I removal efforts. MWRA has submitted annual reports addressing I/I reduction in its portion of the sewer system and analysis of influent flows. However, it does not appear that the Towns of Clinton or the Lancaster Sewer District submitted I/I reports to EPA or MassDEP. While the MWRA reports contain useful information in regards

to I/I quantities, they do not, and are not expected to, address Clinton's or Lancaster's I/I reduction efforts.

The draft permit continues the current permit's requirements regarding operation and maintenance of the collection system. Specifically, the permit includes the Towns of Clinton and Lancaster as limited co-permittees for conditions pertaining to operation and maintenance of the portion of the collection system each Town owns and operates, and includes the continuation of I/I control programs, and reporting of overflows.

VII. SLUDGE INFORMATION AND REQUIREMENTS

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, found at 40 CFR Part 503, regulate the use and disposal of domestic sludge that is land applied, disposed in a surface disposal unit, or fired in a sewage sludge incinerator. Part 503 regulations have a self-implementing provision; however, the CWA requires implementation through permits.

The draft permit has been conditioned to ensure that sewage sludge use and disposal practices meet the CWA Section 405(d) Technical Standards and the 40 CFR Part 503 regulations. In addition, EPA Region I has included with the draft permit a 72-page document entitled "EPA Region I NPDES Permit Sludge Compliance Guidance, November 1999" (see **Attachment B** of the draft permit) for use by the permittee in determining the appropriate sludge conditions for the chosen method of sewage sludge use or disposal practices.

The permittee is required to submit an annual report to EPA and MassDEP by **February 19th** of each year, containing the information for the permittee's chosen method of sludge disposal, as required by the Part 503 regulations. The Sludge Compliance Guidance Document may be used for guidance in determining the appropriate reporting requirements.

VIII. PRETREATMENT

The facility accepts industrial wastewater from two (2) non-categorical Significant Industrial Users (SIUs). Industrial discharges to the Clinton WWTP comprise approximately 41,000 gallons per day, or 1% of the influent.

The permittee is required to administer a pretreatment program based on the authority granted under 40 CFR '122.44(j), 40 CFR Part 403 and Section 307 of the Act. The permittee's pretreatment program received EPA approval on September 28, 1990 and, as a result, appropriate pretreatment program requirements were incorporated into the previous permit, which were consistent with that approval and federal pretreatment regulations in effect when the permit was issued.

Upon reissuance of this NPDES permit, the permittee is required to review its pretreatment program and modify it as necessary to ensure that it is consistent with current Federal Regulations. Those activities that the permittee must address include, but are not limited to, the following: (1) develop and enforce EPA approved specific effluent limits (technically-based local limits); (2) revise the local sewer-use ordinance or regulation, as appropriate, to be

consistent with Federal Regulations; (3) develop an enforcement response plan; (4) implement a slug control evaluation program; (5) track significant noncompliance for industrial users; and (6) establish a definition of and track significant industrial users.

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

Lastly, the permittee must continue to submit an annual report describing the permittee's pretreatment program activities for the twelve (12) month period ending 60 days before the due date in accordance with 403.12(i). The annual report shall be submitted **no later than October 31 of each year**.

IX. ESSENTIAL FISH HABITAT

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. ' 1801 et seq.(1998)), EPA is required to consult with the National Marine Fisheries Service (NMFS) if EPA's action or proposed actions that it funds, permits, or undertakes, may adversely impact any essential fish habitat, @ 16 U.S.C. ' 1855(b). The Amendments broadly define Aessential fish habitat@ (EFH) as: Awaters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity,@ 16 U.S.C. ' 1802(10). AAdverse impact@ means any impact which reduces the quality and/or quantity of EFH, 50 C.F.R. ' 600.910(a). Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions. Id.

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

Only Atlantic Salmon is believed to be present during one or more life stage within the EFH Area, which encompasses the existing discharge site. No "habitat area of particular concern" as defined under '600.815(a)(9) of the Magnuson-Stevens Act, has been designated for this site. 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 3.01 MGD and the effluent receives advanced secondary treatment;
- The facility withdraws no water from the South Nashua River, so 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, aluminum, chlorine and copper based on EPA water quality criteria;
- Acute and chronic toxicity testing on *Ceriodaphnia dubia* is required four (4) times per year and the recent toxicity results are in compliance with permit limits;
- 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 Atlantic salmon, the only species in the river with EFH designation. Impacts associated with this facility to the EFH species, its habitat and forage, have been minimized to the extent that no significant adverse impacts are expected. Further mitigation is not warranted. Should adverse impacts to EFH be detected as a result of this permit action, or if new information is received that changes the basis for EPA's conclusions, NMFS will be contacted and an EFH consultation will be re-initiated.

X. ENDANGERED SPECIES ACT

Section 7(a) of the Endangered Species Act of 1973, as amended (ESA) 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) typically administers Section 7 consultations for bird, terrestrial, and freshwater aquatic species. The National Marine Fisheries Service (NMFS) typically administers Section 7 consultations for marine species and anadromous fish.

EPA has reviewed the federal endangered or threatened species of fish and wildlife to determine if any listed species might potentially be impacted by the re-issuance of this NPDES permit. The review revealed that two federally protected species, the small whirled pogonia (*Isotria medeoloides*), an orchid, and the amphidromous fish species, the shortnose sturgeon (*Acipenser brevirostrum*), merited further discussion.

The small whirled pogonia orchid has been identified in Leominster, Massachusetts, which is two towns away from the Clinton WWTF. In addition, the small whorled pogonia is found in "forests with somewhat poorly drained soils and/or a seasonally high water table," according to the USFWS website. This species is not aquatic; therefore it is unlikely that it would come into contact with the facility discharge.

The Clinton WWTP discharges its effluent into the South Nashua River. This segment of the Nashua River is listed as a Class B warmwater fishery. The river system ultimately joins the Merrimack River at Nashua, New Hampshire. The lower Merrimack River has been identified as habitat for the federally protected shortnose sturgeon. However, it is unlikely that shortnose sturgeon would be able to navigate upstream, past the many anthropogenic obstacles to fish passage, leave the mainstem of the Merrimack River and travel approximately 50 river miles to reach the area of the South Nashua River influenced by the facility outfall. Based on this assessment, shortnose sturgeon are not considered to be present in the vicinity of the WWTP discharge. No other federally-listed species occur in Worcester County.

Based on the permit conditions and absence of listed species in the vicinity of the facility's discharge, EPA has determined that this permit action will have no effects on these species.

EPA is coordinating a review of this finding with USFWS and NMFS through the Draft Permit and Fact Sheet, and consultation under Section 7 of the ESA with USFWS and NMFS is not required.

XI. MONITORING AND REPORTING

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 Clean Water Act 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 can not 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.

XII. STATE PERMIT CONDITIONS

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

XIII. 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.

XIV. 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.

XV. PUBLIC COMMENT PERIOD AND PROCEDURES FOR FINAL DECISION

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to the U.S. EPA, Office of Ecosystem Protection, 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.

XVI. EPA CONTACT

Additional information concerning the draft permit may be obtained between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays from:

Robin L. Johnson
EPA New England – Region 1
5 Post Office Square, Suite 100
Mail Code OEP06-1
Boston, MA 02109-3912
Telephone: (617) 918-1045
Johnson.Robin@epa.gov

Date

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

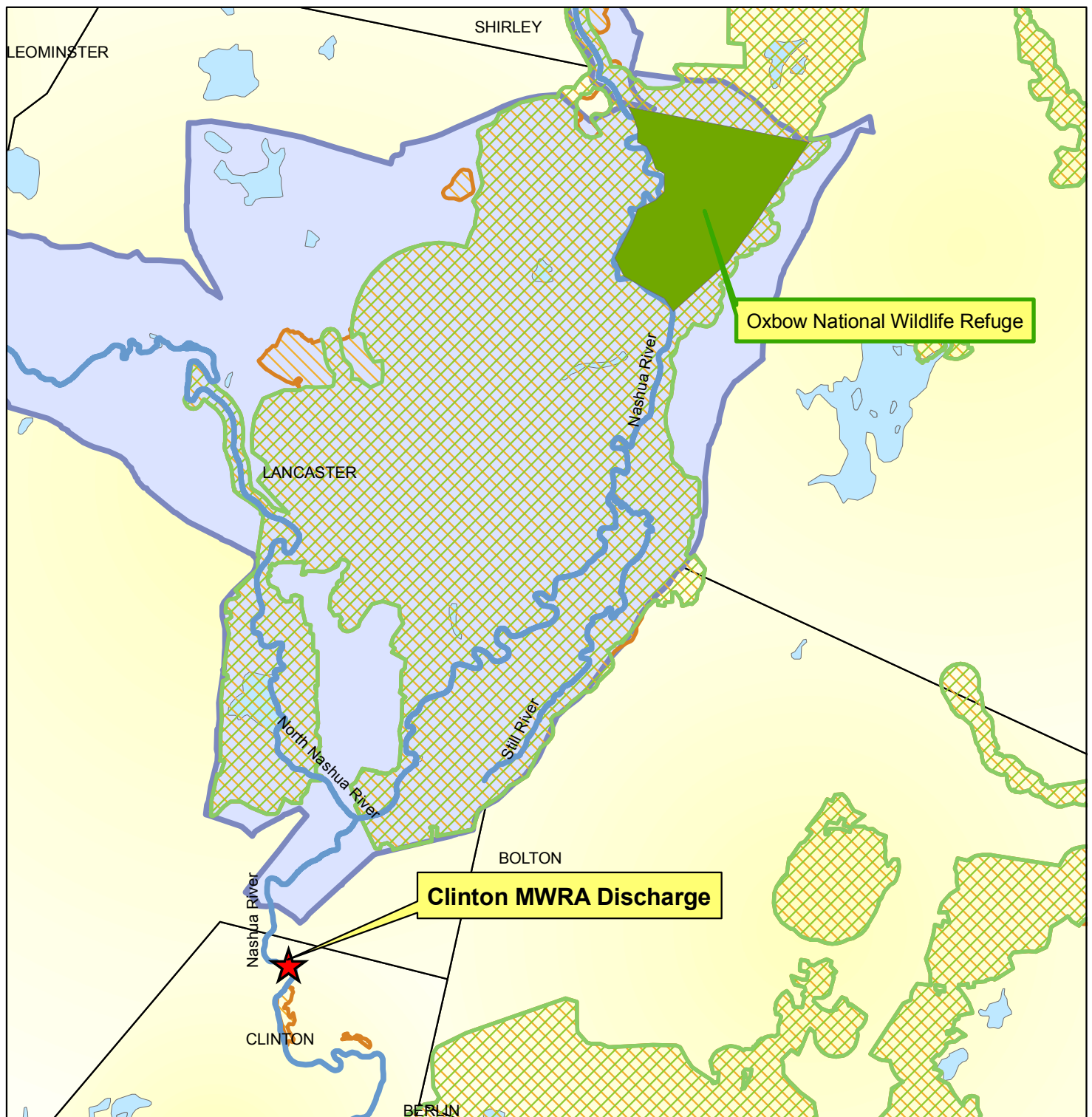
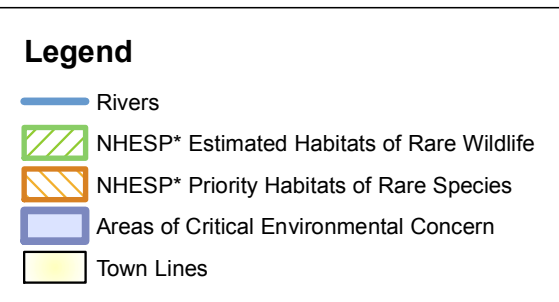


Figure 1
Clinton-MWRA WWTF
Location Map



*NHESP = Massachusetts Natural Heritage and Endangered Species Program

1 in = 1 mile

Clinton Treatment Plant Flow Schematic

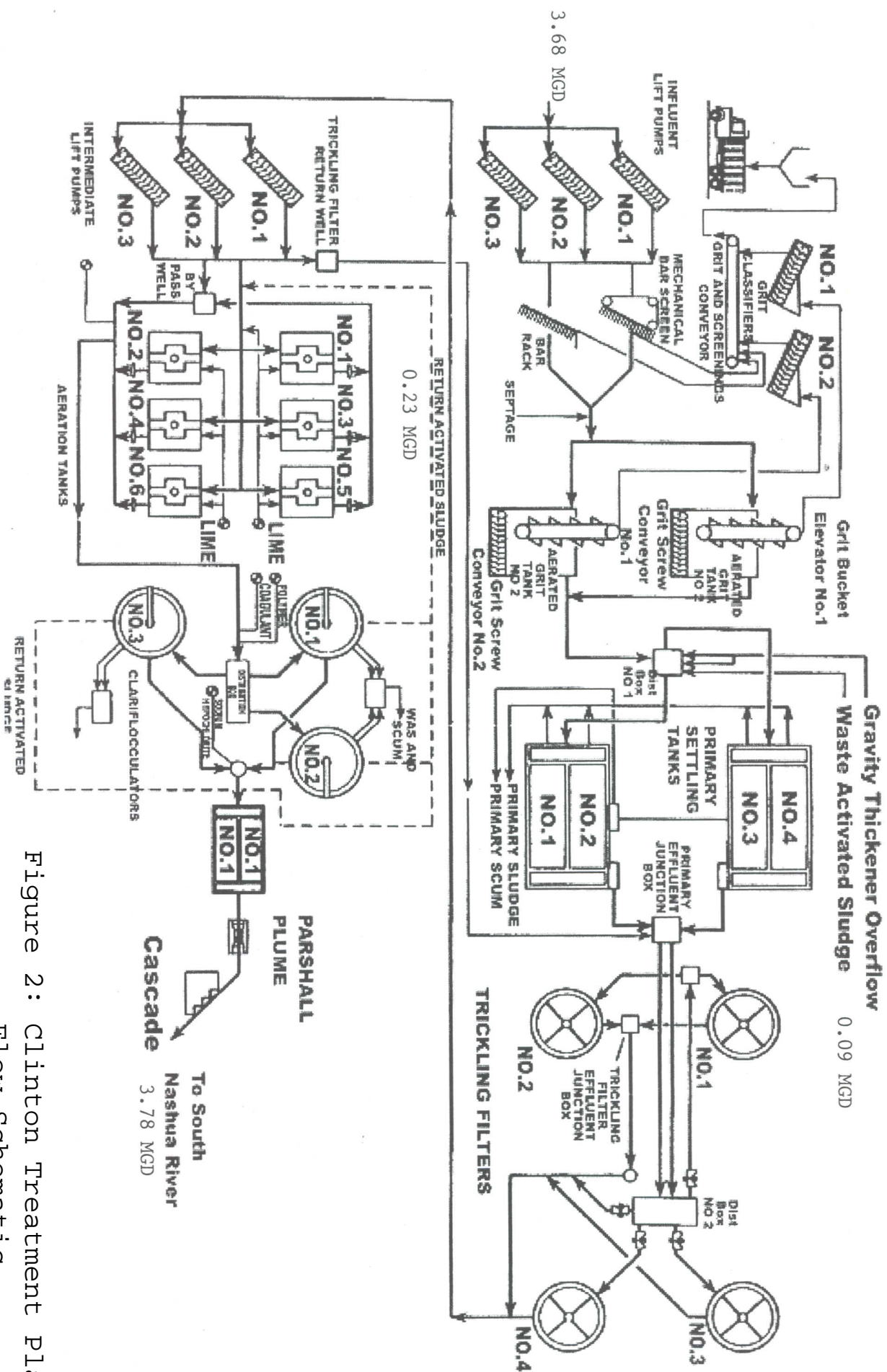


Figure 2: Clinton Treatment Plant Flow Schematic

EXHIBIT 10-1 Anti-Backsliding Rules Relating to Water Quality-Based Effluent Limitations

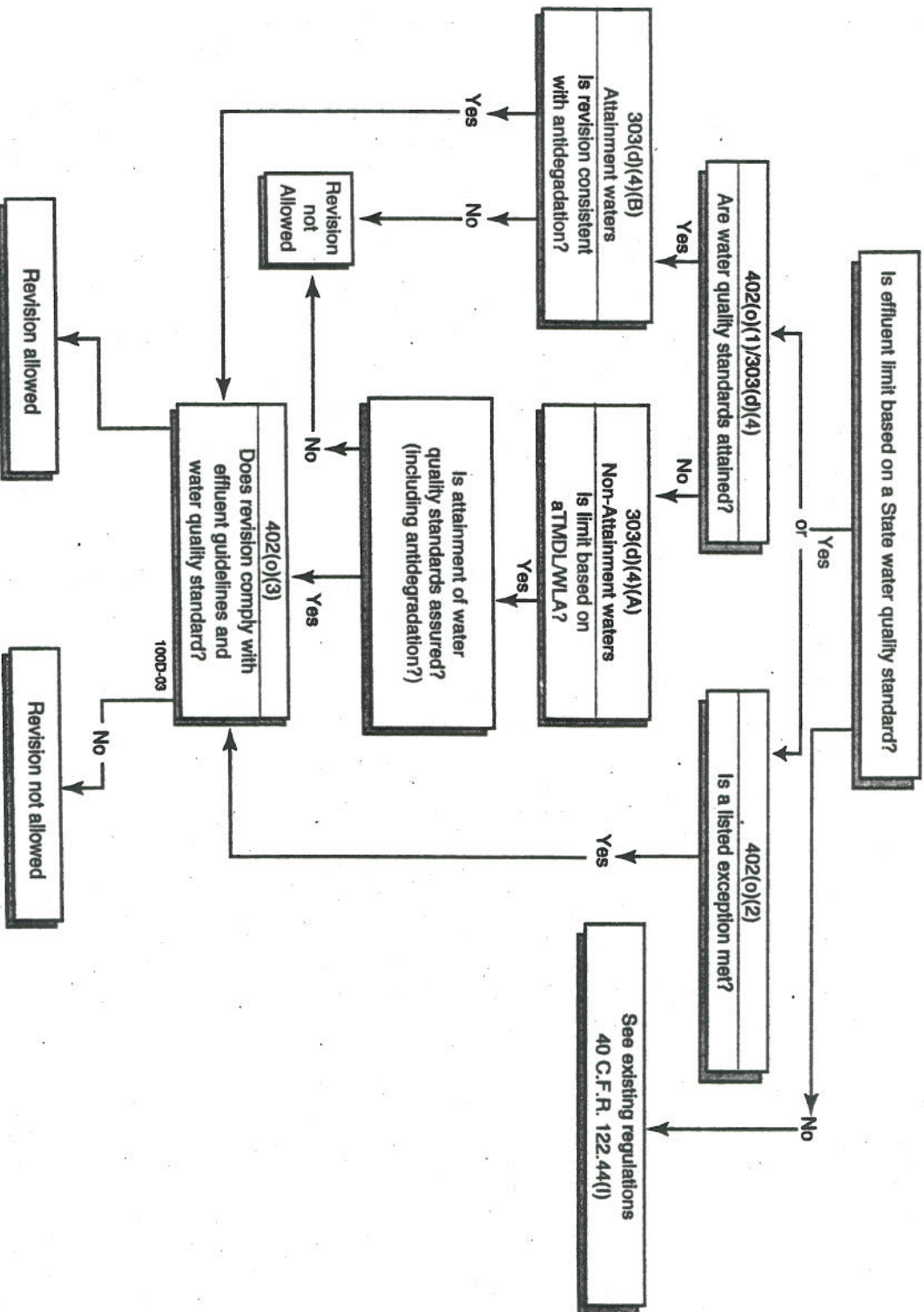


Figure 3: Anti-backsliding
Flow Chart

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

UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY – REGION 1
OFFICE OF ECOSYSTEM PROTECTION
5 POST OFFICE SQUARE
BOSTON, MASSACHUSETTS 02109

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

DATE OF NOTICE: September 18, 2013

PERMIT NUMBER: **MA0100404**

PUBLIC NOTICE NUMBER: MA-023-13

NAME AND MAILING ADDRESS OF APPLICANT:

Mr. Frederick A. Laskey
Executive Director
Massachusetts Water Resources Authority
Charlestown Navy Yard
100 First Avenue
Boston, Massachusetts 02129

NAME AND ADDRESS OF THE FACILITY WHERE DISCHARGE OCCURS:

Clinton Wastewater Treatment Plant
677 High Street
Clinton, Massachusetts 01510

RECEIVING WATER: Nashua River (Class B)

PREPARATION OF THE PARTIALLY REVISED DRAFT PERMIT:

The U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) have cooperated in the development of a partially revised National Pollutant Discharge Elimination System (NPDES) draft permit authorizing discharge from the MWRA-Clinton Wastewater Treatment Facility to the Nashua River. A draft permit was released for public notice on September 29, 2010, and the public comment period closed October 28, 2010.

EPA and MassDEP have decided to partially reopen the Draft Permit for public comment on the following requirements: an updated rationale for including co-permittees for sewer system

operation and maintenance and unauthorized discharges, recently updated operations and maintenance requirements, inclusion of separate acute and chronic whole effluent toxicity tests, an updated phosphorus compliance schedule, and a new reasonable potential analysis for aluminum.

The agencies have concluded that an opportunity for interested parties to review the partially revised Draft Permit and partially revised Fact Sheet, and to submit comments on these revisions will assist the agencies in their deliberations and improve the quality of the Final Permit decision.

Therefore, pursuant to 40 CFR § 124.14(b), public comment on the partially revised Draft Permit has been reopened. In accordance with 40 CFR § 124.14(c), comments filed during the reopened comment period shall be limited to the “substantial new questions that caused its reopening.”

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 requested that the State certify this draft permit pursuant to Section 401 of the Clean Water Act and expects that the draft permit will be certified.

INFORMATION ABOUT THE PARTIALLY REVISED DRAFT PERMIT:

A revised fact sheet (describing the basis for the revised draft permit conditions and significant factual, legal and policy questions considered in preparing the draft permit) may be obtained at no cost at http://www.epa.gov/region1/npdes/draft_permits_listing_ma.html or by contacting EPA's contact person named below:

Robin 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 including all data submitted by the applicant 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 the partially revised draft permit is inappropriate, must raise all issues and submit all available arguments and all supporting material for their arguments in full by October 17, 2013, to the address listed above. Any person, prior to such date, may submit a request in writing to EPA and MassDEP 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
EPA-REGION 1

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

UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY – REGION 1
OFFICE OF ECOSYSTEM PROTECTION
5 POST OFFICE SQUARE
BOSTON, MASSACHUSETTS 02109

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

REASON FOR EXTENDING THE PUBLIC NOTICE:

This Public Notice is hereby extended (40 C.F.R. §124.10) in response to a request by the permittee for additional time to review the draft permit and submit written comments.

DATES OF ORIGINAL NOTICE PERIOD: September 18 through October 17, 2013

DATES OF EXTENDED NOTICE PERIOD: October 29, 2013 – November 27, 2013

PERMIT NUMBER: MA0100404

PUBLIC NOTICE NUMBER: MA-002-14

**NAME AND MAILING ADDRESS OF
APPLICANT:**

**Mr. Frederick A. Laskey
Executive Director
Massachusetts Water Resources Authority
Charlestown Navy Yard
100 First Avenue
Boston, Massachusetts 02129**

**NAME AND ADDRESS OF THE FACILITY
WHERE DISCHARGE OCCURS:**

**Clinton Wastewater Treatment Plant
677 High Street
Clinton, Massachusetts 01510**

INFORMATION ABOUT THE DRAFT PERMIT:

The original public notice, which provides information about submitting public comments, public hearings, and final permit decisions, the draft permit, and the explanatory fact sheet may be obtained at no cost at http://www.epa.gov/region1/npdes/draft_permits_listing_ma.html or by contacting:

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
E-Mail: johnson.robin@epa.gov

The administrative record containing all documents relating to this draft permit including all data submitted by the applicant 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.