

**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),

The City of Gloucester
9 Dale Avenue
Gloucester, MA 01930

is authorized to discharge from the facility located at:

Gloucester Water Pollution Control Facility
50 Essex Avenue, Gloucester, MA 01930
and from five (5) Combined Sewer Overflows (CSOs)
(see Page 8 of this permit for locations
to receiving waters named:

OUTFALLS	RECEIVING WATERS	BASINS	CLASS
WPCF outfall (outfall 001)	Massachusetts Bay	USGS HUC Code - 01090001	Class SA
5 CSOs (outfalls 002-006)	Gloucester Harbor	North Coastal Basin – MA93-18	Class SB

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

This permit shall become effective on**

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 signed on August 28, 2001 and which became effective on October 27, 2001.

This permit consists of 17 Pages in Part I including effluent limitations, monitoring requirements, etc.; Attachments A (Acute Toxicity Test Procedure and Protocol), B (Industrial Pretreatment Annual Report), C (Reassessment of Technically Based Local Limits), and D (Nine Minimum Controls Guidance); and Part II Standard Conditions.

Signed this day of , 2010

Director
Office of Ecosystem Protection
Environmental Protection Agency
Boston, MA

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

** This permit will become effective on the date of signature if no comments are received during public notice. If comments are received during public notice, this permit will become effective no sooner than 30 days after signature.

PART I

<p>A.1. During the period beginning the effective date and lasting through expiration, the permittee is authorized to discharge treated wastewater from outfall serial number 001, to Massachusetts Bay. Such discharges shall be limited and monitored as specified below.</p>							
<u>EFFLUENT CHARACTERISTIC</u>		<u>EFFLUENT LIMITS</u>			<u>MONITORING REQUIREMENTS</u>		
<u>PARAMETER</u>	<u>AVERAGE MONTHLY</u>	<u>AVERAGE WEEKLY</u>	<u>AVERAGE MONTHLY</u>	<u>AVERAGE WEEKLY</u>	<u>MAXIMUM DAILY</u>	<u>MEASUREMENT FREQUENCY</u>	<u>SAMPLE³ TYPE</u>
FLOW ²	*****	*****	7.24 mgd	*****	*****	CONTINUOUS	RECORDER
FLOW ²	*****	*****	Report mgd	*****	Report mgd	CONTINUOUS	RECORDER
BOD ₅ ⁴	1811 lbs/Day	2717 lbs/Day	30 mg/l	45 mg/l	Report mg/l	3/WEEK	24-HOUR COMPOSITE ⁵
TSS ⁴	1811 lbs/Day	2717 lbs/Day	30 mg/l	45 mg/l	Report mg/l	3/WEEK	24-HOUR COMPOSITE ⁵
pH RANGE ¹	6.5 - 8.5 SU. SEE PARAGRAPH I.A.1.b.					1/DAY	GRAB
TOTAL CHLORINE RESIDUAL ⁷	*****	*****	0.48 mg/l	*****	0.83 mg/l	3/DAY	GRAB
OIL AND GREASE ⁸	*****	*****	*****	*****	0.0 mg/l	1/WEEK	GRAB
TOTAL PETROLEUM ⁸ HYDROCARBONS	*****	*****	*****	*****	0.0 mg/l	1/WEEK	GRAB
FECAL COLIFORM ^{1,6}	*****	*****	14 MPN/100 ml	*****	28 MPN/100 ml	3/WEEK	GRAB
ENTEROCOCCI BACTERIA ^{1,6}	*****	*****	35 MPN/100 ml	*****	276 MPN/100 ml	3/WEEK	GRAB
WHOLE EFFLUENT TOXICITY SEE FOOTNOTES 9, 10, and 11	Acute LC ₅₀ ≥100%					4/YEAR	24-HOUR COMPOSITE ⁵

Footnotes:

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

The annual average flow limit is 5.15 MGD until such time as a flow increase to 7.24 MGD is: 1) deemed appropriate by a state antidegradation review, 314 CMR 4.04, 2) is supported by a comprehensive wastewater management plan (CWMP), 301 CMR 11.00, 3) is supported by a Massachusetts Environmental Policy Act (MEPA) review, M.G.L. c. 30 § 61, *et seq*, and 4) the City has obtained a Massachusetts Ocean Sanctuaries Act variance authorizing the increased discharge, M.G.L. c. 132A § 12A, *et seq* 5) and the City has completed construction of the secondary treatment facilities.

The City shall notify EPA and MassDEP **at least 60 days in advance of the expected date for completing the 7.24 MGD secondary treatment facility.**

3. All required effluent samples shall be collected at a representative point. Any change from the current sampling location must be reviewed and approved in writing by EPA and MassDEP. All samples shall be tested using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136. The permittee is required to submit the results to EPA and MassDEP of any additional testing done than that required in the permit, if it is conducted in accordance with EPA approved methods, consistent with the provisions of 40 CFR §122.41(l)(4)(ii).

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

4. Sampling required for influent and effluent.
5. 24-hour composite samples will consist of at least twenty four (24) grab samples taken during one consecutive 24 hour period, either collected at equal intervals and combined proportional to flow or continuously collected proportionally to flow.
6. Enterococci samples shall be taken concurrently with fecal coliform samples. Each bacterium sampling event will also be conducted concurrent with a required total residual chlorine sample. The monthly average limit for fecal coliform and enterococci are expressed as geometric means.
7. Chlorination and dechlorination systems shall include an alarm system for indicating system interruptions or malfunctions. Any interruption or malfunction of the chlorine dosing system that may have resulted in levels of chlorine that were inadequate for achieving effective disinfection, or interruptions or malfunctions of the dechlorination system that may have resulted in excessive levels of chlorine in the final effluent shall be reported with the monthly DMRs. The report shall include the date and time of the interruption or malfunction, the nature of the problem, and the estimated amount of time that the reduced levels of chlorine or dechlorination chemicals occurred.

8. Both total petroleum hydrocarbons (TPH) and oil and grease shall be tested using EPA Method 1664A- n-Hexane Extractable Material (HEM; Oil and Grease) and Silica Gel Treated n-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry Revision A or Standard Methods Online, Method 5520 B-01.

The permittee shall have no detectable discharge of oil and grease or TPH. Compliance shall be measured at the minimum level-ML (of detection) for the EPA approved test methods. The oil and grease and TPH ML is 5 mg/l using EPA Method 1664A, where the ML is the lowest point on the curve used to calibrate the test equipment for the pollutant of concern. If EPA approves methods under 40 CFR Part 136 for either, oil and grease or TPH that have a ML lower than 5 mg/l, the permittee shall be required to use the improved method.

9. The permittee shall conduct four acute WET tests per year. The tests use two aquatic species, mysid shrimp (*Mysidopsis bahia* or *Americamysis bahia*) and inland silverside (*Menidia beryllina*) in a definitive 48-hour test.

Toxicity test samples shall be collected on the same weeks of each of the months of March, June, September, and December. The tests must be performed in accordance with test procedures and protocols specified in **Attachment A** of this permit.

Test Dates Same Week in	Submit Results By:	Test Species	Acute Limit LC ₅₀
March	April 30 th	Mysid shrimp (<i>Mysidopsis bahia</i>) or (<i>Americamysis bahia</i>)	≥100%
June	July 31 st	Inland silverside (<i>Menidia beryllina</i>)	
September	October 31 st	See Attachment A	
December	January 30 th		

After submitting **one year** and a **minimum** of four consecutive sets of WET test results, all of which demonstrate compliance with the WET permit limits, the permittee may request a reduction in the WET testing requirements. The permittee is required to continue testing at the frequency specified in the permit until notice is received by certified mail from the EPA that the WET testing requirement has been changed.

10. 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.
11. If toxicity test(s) using receiving water as diluent show the receiving water to be toxic or unreliable, the permittee shall either follow procedures outlined in **Attachment A (Toxicity Test Procedure and Protocol) Section IV., DILUTION WATER** in order to obtain an individual approval for use of an alternate dilution water, or the permittee shall follow the Self-Implementing Alternative Dilution Water Guidance which may be used to obtain automatic approval of an alternate dilution water, including the appropriate species for use with that water. This guidance is found in Attachment G of *NPDES Program Instructions for the Discharge Monitoring Report Forms (DMRs)*, which may be found on the EPA Region I web site at <http://www.epa.gov/Region1/enforcementandassistance/dmr.html>. If this guidance is revoked, the permittee shall revert to obtaining individual approval as outlined in **Attachment A**. Any modification or revocation to this guidance will be transmitted to the permittees. However, at any time, the permittee may choose to contact EPA-New England directly using the approach outlined in **Attachment A**.

Part I.A.1. (Continued)

- a. The discharge shall not cause a violation of the water quality standards of the receiving waters.
- b. The pH of the effluent shall not be less than 6.5 nor greater than 8.5 at any time.
- c. The discharge shall not cause objectionable discoloration of the receiving waters.
- d. The effluent shall contain neither oil, foam, nor floating solids at any time.
- e. The permittee's treatment facility shall maintain a minimum of 85 percent removal of total suspended solids and biochemical oxygen demand. The percent removal shall be based on monthly average values.
- f. If the average annual flow in any calendar year exceeds 80 percent of the facility's design flow, the permittee shall submit a report to MassDEP by March 31 of the following calendar year describing its plans for further flow increases and describing how it will maintain compliance with the flow limit and all other effluent limitations and conditions
- g. The permittee shall minimize the use of chlorine while maintaining adequate bacterial control.

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

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

A.3. 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. DEVELOPMENT OF LIMITATIONS FOR INDUSTRIAL USERS:

1. The permittee shall develop and enforce specific effluent limits (local limits) for Industrial User(s), and all other users as appropriate, which together with appropriate changes in the POTW Treatment Plant's Facilities or operation, are necessary to ensure continued compliance with the POTW's NPDES permit or sludge use or disposal practices. Specific local limits shall not be developed and enforced without individual notice to persons or groups who have requested such notice and an opportunity to respond. **Within 120 days of the effective date of this permit**, the permittee shall prepare and submit a written technical evaluation to the EPA analyzing the need to revise local limits. As part of this evaluation, the permittee shall assess how the POTW performs with respect to influent of pollutants, water quality concerns, sludge quality, sludge processing concerns/inhibition, biomonitoring results, activated sludge inhibition, worker health and safety and collection system concerns. In preparing this evaluation, the permittee shall complete and submit the attached form, **Attachment 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 analysis in accordance with EPA's Local Limits Development Guidance (July, 2004).
2. **Within 120 days of the effective date of this permit**, the permittee shall develop and submit to EPA a Maximum Allowable Industrial Headworks Loading (MAIHL) for Oil and Grease. The proposed MAIHL should be submitted to EPA for approval in accordance with 40 CFR 403.18(c). Upon EPA approval, the MAIHL shall be adopted, immediately, into the City's Sewer Use Ordinance. This requirement is in addition to the evaluation of all local limits required by the preceding paragraph.

C. INDUSTRIAL PRETREATMENT PROGRAM

1. 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 120 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; and
 - d. Maintain an adequate revenue structure for continued implementation of the Pretreatment Program.
2. The permittee shall provide the EPA and the MA DEP with an annual report describing the permittee's pretreatment program activities over the twelve month period ending 60 days prior to the due date in accordance with 403.12(i). **The annual report shall be consistent with the format described in Attachment B of this permit and shall be submitted no later than March 1, of each year.**
 3. The permittee must obtain approval from EPA prior to making any significant changes to the industrial pretreatment program in accordance with 40 CFR 403.18(c).
 4. 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.
 5. On October 14, 2005, EPA published in the Federal Register final changes to the General Pretreatment Regulations. 70 Fed. Reg 60134 (codified at 40 CFR Part 403). The final "Pretreatment Streamlining Rule" is designed to reduce the burden to industrial users and provide regulatory flexibility in technical and administrative requirements for industrial users and POTWs. To the extent that the POTW's legal authorities are not consistent with the required changes, they must be revised and submitted to EPA for review within 60 days of the effective date of this permit.
 6. The City shall operate a "fats, oil, and grease" (FOG) program to educate private and commercial sewer users about practices to eliminate fats, oils and grease at the source, rather than introducing FOG to the collection system.

D. TOXICS CONTROL

1. The permittee shall not discharge any pollutant or combination of pollutants in toxic amounts.
2. 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.
3. 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.

E. COMBINED SEWER OVERFLOWS (CSO)

1. During wet weather, the permittee is authorized to discharge stormwater/wastewater from the following combined sewer outfalls subject to the following effluent limitations:

Number	Name	Receiving Water
002	Mansfield Street Drain	Gloucester Harbor
004	Rogers Street CSO	Harbor Cove
005	Main Street CSO	Gloucester Inner Harbor
006	East Main Street CSO	Gloucester Inner Harbor
006A	East Main Street CSO	Gloucester Inner Harbor

- a. The discharges shall not cause or contribute to violations of federal or state Water Quality Standards
- b. The discharges shall receive treatment at a level providing Best Practicable Control Technology Currently Available (BPT), Best Conventional Pollutant Control Technology (BCT) to control and abate conventional pollutants and Best Available Technology Economically Achievable (BAT) to control and abate non-conventional and toxic pollutants. The EPA has made a Best Professional Judgment (BPJ) determination that BPT, BCT, and BAT for combined sewer overflow (CSO) control includes the implementation of Nine Minimum Controls (NMC) specified below and detailed further in Part I.E.2, “Nine Minimum Controls Minimum Implementation Levels” of this permit:
 - (1) Proper operation of, and regular maintenance programs for, the sewer system and the CSOs.
 - (2) Maximize the use of the collection system for storage of combined wastewater and stormwater in order to minimize CSO discharges.
 - (3) Review and, as appropriate, modify the pretreatment program to minimize the adverse effects of CSO discharges.
 - (4) Maximize the proportion of the system’s wastewater, and combined wastewater/stormwater, flow that is conveyed to the POTW for treatment.
 - (5) Dry weather overflows from CSOs are prohibited and must be eliminated.
 - (6) Minimize the discharge of solid and floatable materials in CSO discharges.
 - (7) Implement pollution prevention programs that focus on contaminant reduction activities.

- (8) Provide adequate notice to the public of CSO occurrences and CSO impacts.
 - (9) Monitor to effectively characterize CSO impacts and the efficacy of CSO controls.
2. The permittee shall continue to implement the Nine Minimum Control Program (NMC) as documented as of September, 1996, or as subsequently modified to enhance the effectiveness of the controls. **Within one year of the effective date of the permit, the permittee shall submit to EPA and MassDEP an updated NMC program, including an updated High Flow Management Plan. Annually, by March 1, the permittee shall submit to EPA and MassDEP, documentation of its implementation of the Nine Minimum Controls.** EPA and MassDEP consider that an approvable program must include the minimum requirements set forth in Part I.E.2 of this permit and additional activities the permittee can reasonably undertake. (See Permit Attachment D – Nine Minimum Controls).
- (1) Each CSO structure/regulator, pumping station and/or tidegate shall be routinely inspected to insure that they are in good working condition and adjusted to minimize combined sewer discharges and tidal surcharging. Such inspections shall occur monthly unless EPA approves a site specific inspection program which has been determined by EPA to provide an equal level of effectiveness (NMC #1, 2, and 4).
 - (2) The following inspection results shall be recorded: the date and time of the inspection, the general condition of the facility, and whether the facility is operating satisfactorily. If maintenance is necessary, the permittee shall record: the description of the necessary maintenance, the date the necessary maintenance was performed, and whether the observed problem was corrected. The permittee shall maintain all records of inspections for at least three (3) years.
 - (3) **Annually, no later than January 15th**, the permittee shall submit a certification to the State and EPA which states that the previous calendar year's monthly inspections were conducted, results recorded, and records maintained.
 - (4) The State and EPA have the right to inspect any CSO related structure or outfall, without prior notification to the permittee.
 - (5) Discharges to the combined system of septage, holding tank wastes or other material which may cause a visible oil sheen or containing floatable material are prohibited during wet weather when CSO discharges may be active. (NMC# 3, 6, and 7).

- (6) Dry weather overflows (DWOs) are prohibited (NMC# 5). All dry weather sanitary and/or industrial discharges from CSOs must be reported to EPA and the State within twenty four (24) hours in accordance with the reporting requirements for plant bypass (Paragraph D.1.e, of the General Requirements of this permit.
- (7) The permittee shall quantify and record discharges from the combined sewer outfalls (NMC# 9). Quantification may be through direct measurement or estimation. When estimating, the permittee shall make reasonable efforts (i.e., gaging, measurements) to verify the validity of the estimation technique. The following information must be recorded for each combined sewer outfall for each discharge event:
 - (a) Estimated duration (hours) of discharge;
 - (b) Estimated volume (gallons) of discharge; and
 - (c) National Weather Service precipitation data from the nearest gage where precipitation is available at daily (twenty four (24) hour) intervals and the nearest gage where precipitation is available at one-hour intervals.
- (8) Cumulative precipitation per discharge event shall be calculated.
- (9) The permittee shall maintain all records of discharges for at least six (6) years after the effective date of this permit, as it is collected, on an ongoing basis.
- (10) **Within 3 months of the effective date of this permit**, the permittee shall verify that identification signs are in place for all combined sewer outfall structures. The signs must be located at or near the combined sewer outfall structures and easily readable by the public. These signs shall be a minimum of twelve x eighteen (12 x 18) inches in size, with white lettering against a green background, and shall contain the following information:

**WARNING:
WET WEATHER
SEWAGE DISCHARGE
GLOUCESTER OUTFALL (No. XXX)**

3. This permit may be reopened to add additional technology-based requirements based on information assembled during Gloucester's development of a Long-Term CSO Control Plan (as required by current Consent Decree).
- 4.. The permittee may consolidate CSO reports which are on similar reporting schedules.

F. UNAUTHORIZED DISCHARGES

1. The permit only authorizes discharges in accordance with the terms and conditions of this permit and only from the outfalls listed in Parts I.A.1 and I.E.1, of this permit. Discharges of wastewater from any other point sources, including sanitary sewer overflows (SSOs) from any portion of the collection system owned and operated by the permittee or co-permittees are not authorized by this permit and shall be reported to EPA and MassDEP in accordance with Section D.1.e. (1) of the General Requirements of this permit (Twenty-four hour reporting).

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

G. OPERATION AND MAINTENANCE OF THE SEWER SYSTEM

Operation and maintenance of the sewer system shall be in compliance with the General Requirements of this permit and the following terms and conditions. The permittee shall meet the following conditions for the collection system:

1. Maintenance Staff

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

2. Preventative Maintenance Program

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

3. Infiltration/Inflow Control Plan:

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

The plan shall include:

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

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.

Reporting Requirements:

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

- ◆ A map and a description of inspection and maintenance activities conducted and corrective actions taken during the previous year.
- ◆ Expenditures for any infiltration/inflow related maintenance activities and corrective actions taken during the previous year
- ◆ A map with areas identified for I/I-related investigation/action in the coming year.
- ◆ A calculation of the annual average I/I, the maximum month I/I for the reporting year.

A report of any infiltration/inflow related corrective actions taken as a result of unauthorized discharges reported pursuant to 314 CMR 3.19(20) and reported pursuant to the Unauthorized Discharges section of this permit.

H. ALTERNATIVE POWER SOURCE

1. 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 its treatment works (as defined at 40 CFR §122.2).

I. SLUDGE CONDITIONS

1. The permittee shall comply with all existing federal and state laws and regulations that apply to sewage sludge use and disposal practices, including EPA regulations promulgated at 40 CFR Part 503, which prescribe “Standards for the Use or Disposal of Sewage Sludge” pursuant to Section 405(d) of the CWA, 33 U.S.C. § 1345(d).
2. If both state and federal requirements apply to the permittee’s sludge use and/or disposal practices, the permittee shall comply with the more stringent of the applicable requirements.
3. The requirements and technical standards of 40 CFR Part 503 apply to the following sludge use or disposal practices.
 - a. Land application - the use of sewage sludge to condition or fertilize the soil
 - b. Surface disposal - the placement of sewage sludge in a sludge only landfill
 - c. Sewage sludge incineration in a sludge only incinerator
4. The requirements of 40 CFR Part 503 do not apply to facilities which dispose of sludge in a municipal solid waste landfill. 40 CFR § 503.4. These requirements also do not apply to facilities which do not use or dispose of sewage sludge during the life of the permit but rather treat the sludge (e.g. lagoons, reed beds), or are otherwise excluded under 40 CFR § 503.6.
5. The 40 CFR Part 503 requirements including the following elements:
 - General requirements
 - Pollutant limitations
 - Operational Standards (pathogen reduction requirements and vector attraction reduction requirements)
 - Management practices
 - Record keeping
 - Monitoring
 - Reporting

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

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

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

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

7. Under 40 CFR § 503.9(r), the permittee is a “person who prepares sewage sludge” because it “is ... the person who generates sewage sludge during the treatment of domestic sewage in a treatment works” If the permittee contracts with *another* “person who prepares sewage sludge” under 40 CFR § 503.9(r) – i.e., with “a person who derives a material from sewage sludge” – for use or disposal of the sludge, then compliance with Part 503 requirements is the responsibility of the contractor engaged for that purpose. If the permittee does not engage a “person who prepares sewage sludge,” as defined in 40 CFR § 503.9(r), for use or disposal, then the permittee remains responsible to ensure that the applicable requirements in Part 503 are met. 40 CFR § 503.7. If the ultimate use or disposal method is land application, the permittee is responsible for providing the person receiving the sludge with notice and necessary information to comply with the requirements of 40 CFR Part 503 Subpart B.
8. The permittee shall submit an annual report containing the information specified in the 40 CFR Part 503 requirements (§ 503.18 (land application), § 503.28 (surface disposal), or § 503.48 (incineration)) by **February 19** (*see also* “EPA Region 1 - NPDES Permit Sludge Compliance Guidance”). Reports shall be submitted to the address contained in the reporting section of the permit. If the permittee engages a contractor or contractors for sludge preparation and ultimate use or disposal, the annual report need contain only the following information:
 - Name and address of contractor(s) responsible for sludge preparation, use or disposal
 - Quantity of sludge (in dry metric tons) from the POTW that is transferred to the sludge contractor(s), and the method(s) by which the contractor will prepare and use or dispose of the sewage sludge.

J. MONITORING AND REPORTING

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

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:

- a. Submittal of Reports Using NetDMR

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

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

- b. Submittal of NetDMR Opt-Out Requests

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

c. Submittal of Reports in Hard Copy Form

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

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

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

**MassDEP – Northeast Region
Bureau of Resource Protection
205B Lowell Street
Wilmington, MA 01887**

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.

K. STATE PERMIT CONDITIONS

1. This authorization to discharge includes two separate and independent permit authorizations. The two permit authorizations are (i) a federal National Pollutant Discharge Elimination System permit issued by the U.S. Environmental Protection Agency (EPA) pursuant to the Federal Clean Water Act, 33 U.S.C. §§1251 et seq.; and (ii) an identical state surface water discharge permit issued by the Commissioner of the Massachusetts Department of Environmental Protection (MassDEP) pursuant to the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53, and 314 C.M.R. 3.00. All of the requirements contained in this authorization, as well as the standard conditions contained in 314 CMR 3.19, are hereby incorporated by reference into this state surface water discharge permit.
2. This authorization also incorporates the state water quality certification issued by MassDEP under § 401(a) of the Federal Clean Water Act, 40 C.F.R. 124.53, M.G.L. c. 21, § 27 and 314 CMR 3.07. All of the requirements (if any) contained in MassDEP's water quality certification for the permit are hereby incorporated by reference into this state surface water discharge permit as special conditions pursuant to 314 CMR 3.11.
3. Each agency shall have the independent right to enforce the terms and conditions of this permit. Any modification, suspension or revocation of this permit shall be effective only with respect to the agency taking such action, and shall not affect the validity or status of this permit as issued by the other agency, unless and until each agency has concurred in writing with such modification, suspension or revocation. In the event any portion of this permit is declared invalid, illegal or otherwise issued in violation of state law such permit shall remain in full force and effect under federal law as a NPDES Permit issued by the U.S. Environmental Protection Agency. In the event this permit is declared invalid, illegal or otherwise issued in violation of federal law, this permit shall remain in full force and effect under state law as a permit issued by the Commonwealth of Massachusetts.

**PERMIT ATTACHMENT A
MARINE 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:

- Mysid Shrimp (Mysidopsis bahia or Americamysis bahia) **definitive 48 hour test.**
- **Inland Silverside (Menidia beryllina) definitive 48 hour test.**

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

II. METHODS

Methods to follow are those recommended by EPA in:

Weber, C.I. et al. Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, Fourth Edition. Environmental Monitoring Systems Laboratory, U.S. Environmental Protection Agency, Cincinnati, OH. August 1993, EPA/600/4-90/027F.

Any exceptions are stated herein.

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 the chemical and physical analyses. The remaining sample shall be 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 oxidants (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. A thiosulfate control (maximum amount of thiosulfate in lab control or receiving water) should also be run.

All samples held overnight shall be refrigerated at 4°C.

IV. DILUTION WATER

A grab sample of dilution water used for acute toxicity testing shall be collected at a point away from the discharge which is free from toxicity or other sources of contamination. Avoid collecting near areas of obvious road or agricultural runoff, storm sewers or other point source discharges. An additional control (0% effluent) of a standard laboratory water of known quality shall 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 conductivity, salinity, total suspended solids, and pH 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 alternative dilution water should be mailed with supporting documentation to the following address:

Director
Office of Ecosystem Protection
U. S. Environmental Protection Agency-New England
5 Post Office Square Suite 100
Mail Code OEP06-5
Boston, MA 02109-3912

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 AND TEST ACCEPTABILITY CRITERIA

EPA New England requires tests be performed using four replicates of each control and effluent concentration because the non-parametric statistical tests cannot be used with data from fewer replicates. The following tables summarize the accepted Mysid and Menidia toxicity test conditions and test acceptability criteria:

**EPA NEW ENGLAND RECOMMENDED EFFLUENT TOXICITY TEST CONDITIONS
FOR THE MYSID, MYSIDOPSIS BAHIA 48 HOUR TEST¹**

1. Test type	Static, non-renewal
2. Salinity	25ppt \pm 10 percent for all dilutions by adding dry ocean salts
3. Temperature ($^{\circ}$ C)	20 $^{\circ}$ C \pm 1 $^{\circ}$ C or 25 $^{\circ}$ C \pm 1 $^{\circ}$ C
4. Light quality	Ambient laboratory illumination
5. Photoperiod	16 hour light, 8 hour dark
6. Test chamber size	250 ml
7. Test solution volume	200 ml
8. Age of test organisms	1-5 days
9. No. Mysids per test chamber	10
10. No. of replicate test chambers per treatment	4
11. Total no. Mysids per test concentration	40
12. Feeding regime	Light feeding using concentrated <u>Artemia</u> nauplii while holding prior to initiating the test
13. Aeration ²	None
14. Dilution water	Natural seawater, or deionized water mixed with artificial sea salts
15. Dilution factor	\geq 0.5
16. Number of dilutions ³	5 plus a control. An additional dilution at the permitted effluent concentration (%effluent) is required if it is not included in the dilution series.
17. Effect measured	Mortality - no movement of body appendages on gentle prodding

18. Test acceptability	90% or greater survival of test organisms in control solution
19. Sampling requirements	For on-site tests, samples are used within 24 hours of the time that they are removed from the sampling device. For off-site tests, samples must be first used within 36 hours of collection.
20. Sample volume required	Minimum 1 liter for effluents and 2 liters for receiving waters

Footnotes:

1. Adapted from EPA/600/4-90/027F.
2. If dissolved oxygen falls below 4.0 mg/L, aerate at rate of less than 100 bubbles/min. Routine D.O. checks are recommended.
3. When receiving water is used for dilution, an additional control made up of standard laboratory dilution water (0% effluent) is required.

EPA NEW ENGLAND RECOMMENDED TOXICITY TEST CONDITIONS FOR THE INLAND SILVERSIDE, MENIDIA BERYLLINA 48 HOUR TEST¹

1. Test Type	Static, non-renewal
2. Salinity	25 ppt \pm 2 ppt by adding dry ocean salts
3. Temperature	20°C \pm 1°C or 25°C \pm 1°C
4. Light Quality	Ambient laboratory illumination
5. Photoperiod	16 hr light, 8 hr dark
6. Size of test vessel	250 mL (minimum)
7. Volume of test solution	200 mL/replicate (minimum)
8. Age of fish	9-14 days; 24 hr age range
9. No. fish per chamber	10 (not to exceed loading limits)
10. No. of replicate test vessels per treatment	4
11. total no. organisms per concentration	40
12. Feeding regime	Light feeding using concentrated <u>Artemia</u> nauplii while holding prior to initiating the test
13. Aeration ²	None
14. Dilution water	Natural seawater, or deionized water mixed with artificial sea salts.
15. Dilution factor	\geq 0.5
16. Number of dilutions ³	5 plus a control. An additional dilution at the permitted concentration (% effluent) is required if it is not included in the dilution series.
17. Effect measured	Mortality-no movement on gentle prodding.

- | | |
|----------------------------|--|
| 18. Test acceptability | 90% or greater survival of test organisms in control solution. |
| 19. Sampling requirements | For on-site tests, samples must be used within 24 hours of the time they are removed from the sampling device. Off-site test samples must be used within 36 hours of collection. |
| 20. Sample volume required | Minimum 1 liter for effluents and 2 liters for receiving waters. |
-

Footnotes:

1. Adapted from EPA/600/4-90/027F.
2. If dissolved oxygen falls below 4.0 mg/L, aerate at rate of less than 100 bubbles/min. Routine D.O. checks recommended.
3. When receiving water is used for dilution, an additional control made up of standard laboratory dilution water (0% effluent) is required.

VI. CHEMICAL ANALYSIS

At the beginning of the static acute test, pH, salinity, and temperature must be measured at the beginning and end of each 24 hour period in each dilution and in the controls. The following chemical analyses shall be performed for each sampling event.

<u>Parameter</u>	<u>Effluent</u>	<u>Diluent</u>	<u>Minimum Quanti- fication Level (mg/L)</u>
pH	x	x	---
Salinity	x	x	PPT(o/oo)
Total Residual Oxidants ^{*1}	x	x	0.05
Total Solids and Suspended Solids	x	x	---
Ammonia	x	x	0.1
Total Organic Carbon	x	x	0.5
<u>Total Metals</u>			
Cd		x	0.001
Cr		x	0.005
Pb		x	0.005
Cu		x	0.0025
Zn		x	0.0025
Ni		x	0.004
Al		x	0.02

Superscript:

*1 Total Residual Oxidants

Either of the following methods from the 18th Edition of the APHA Standard Methods for the Examination of Water and Wastewater must be used for these analyses:

- Method 4500-Cl E Low Level Amperometric Titration (the preferred method);
- Method 4500-CL G DPD Photometric Method.

or use USEPA Manual of Methods Analysis of Water or Wastes, Method 330.5.

VII. TOXICITY TEST DATA ANALYSIS

LC50 Median Lethal Concentration

An estimate of the concentration of effluent or toxicant that is lethal to 50% of the test organisms during the time prescribed by the test method.

Methods of Estimation:

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

See flow chart in Figure 6 on page 77 of EPA 600/4-90/027F for appropriate method to use on a given data set.

No Observed Acute Effect Level (NOAEL)

See flow chart in Figure 13 on page 94 of EPA 600/4-90/027F.

VIII. TOXICITY TEST REPORTING

The following must be reported:

- 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; and
- 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 toxicity test data must be included.
- Raw data and bench sheets.
- All chemical/physical data generated. (Include minimum detection levels and minimum quantification levels.)
- Provide a description of dechlorination procedures (as applicable).
- Any other observations or test conditions affecting test outcome.
- Statistical tests used to calculate endpoints.

ATTACHMENT B
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 Northampton's 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 Northampton 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 Town is under a State or Federal compliance schedule that includes steps to be taken to revise local limits.

**PERMIT ATTACHMENT C
REASSESSMENT OF TECHNICALLY BASED LOCAL LIMITS
(TBLLs)**

POTW Name & Address: _____

NPDES PERMIT #: _____

Date EPA approved current TBLLs :

Date EPA approved current Sewer Use Ordinance:

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 TBLs			
POLLUTANT	NUMERICAL LIMIT (mg/l) or (lb/day)	POLLUTANT	NUMERICAL LIMIT (mg/l) or (lb/day)

ITEM III.

Note how your existing TBLs, 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 TBLs 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 Industrial Headwork Loading (MAIHL) values used to derive your TBLLs listed in Item II. In addition, please note the Environmental Criteria for which each MAIHL value was established, i.e. water quality, sludge, NPDES etc.

Pollutant	Column (1) Influent Data Analyses		Column (2) MAHL Values Criteria	
	Maximum (lb/day)	Average (lb/day)	(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 TBLs 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) Water Quality Criteria (Gold Book) From TBLs Today (ug/l) (ug/l)	
	Effluent Data Analyses Maximum (ug/l)	Average (ug/l)		
Arsenic				
*Cadmium				
*Chromium				
*Copper				
Cyanide				
*Lead				
Mercury				
*Nickel				
Silver				
*Zinc				
Other (List)				

*Hardness Dependent (mg/l - CaCO₃)

ITEM VIII.

Using current POTW biosolids data, fill in Column (1). In Column (2A), list the biosolids criteria that were 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		Columns (2A) (2B) Biosolids Criteria	
	Average (mg/kg)	From TBLLs (mg/kg)	New (mg/kg)
Arsenic			
Cadmium			
Chromium			
Copper			
Cyanide			
Lead			
Mercury			
Nickel			
Silver			
Zinc			
Molybdenum			
Selenium			
Other (List)			

Attachment D
NINE MINIMUM CONTROLS
DOCUMENTATION AND IMPLEMENTATION GUIDANCE

The following guidance is for communities preparing documentation to demonstrate adequate implementation of the nine minimum technology based control measures for combined sewer overflows. For further information see *Combined Sewer Overflows: Guidance for Nine Minimum Controls (EPA MAY 1995)(EPA 832-B-95-003)*.

EPA has made a Best Professional Judgment (BPJ) determination that adequate implementation of technology based requirements, Best Practicable Control Technology Currently Available (BPT), Best Conventional Pollutant Control Technology (BCT) to control and abate conventional pollutants, and Best Available Technology Economically Achievable (BAT) to control and abate non-conventional and toxic pollutants, must include implementation of the nine minimum controls.

Documentation Requirements

Documentation should provide sufficient information to demonstrate:

- that alternatives were considered for each of the nine minimum control measures.
- the reasoning for the alternatives that were selected.
- that the selected alternatives have been implemented.
- that the permittee has developed a schedule for actions that have been selected but not yet fully implemented.

Nine Minimum Controls (NMC)

The following is a summary of specific information which must be included in the documentation of each of the NMCs.

- 1. Proper operation and regular maintenance programs for the sewer system and combined sewer overflow points.**
 - a. An organizational chart showing the staff responsible for operation and maintenance (O&M) of the combined sewer system. Document that organization and staffing levels are adequate.
 - b. The funding allocated for O&M of the combined sewer system. Document that funding is adequate.

- c. A list of facilities and structures that are critical to the performance of the combined sewer system, including all regulators, tide gates, pumping stations, and sections of sewer lines which are prone to sedimentation or obstruction. Include an inspection plan which identifies the locations, frequency, procedures, documentation, and reporting of periodic and emergency inspections and maintenance. Document that these facilities are adequately operated and maintained.
- d. A summary of safety training and equipment provided to inspection and maintenance personnel. For instance, workers entering sewers must be trained and equipped for confined space entry. Document that training listed is adequate.
- e. A summary of technical training and maintenance equipment provided to inspection and maintenance personnel. Document that training and equipment are adequate to maintain the facilities identified in item 1.c. above.

2. Maximum Use of the Collection System for Storage

- a. Collection system inspection: This should focus on the identification of maintenance or design deficiencies that restrict the use of otherwise available system capacity. This evaluation should document that inadequate regulators, piping bottlenecks, and pumping deficiencies have been identified and corrected, or scheduled for correction. Where increased inspection and/or maintenance is proposed, this shall be reflected in the inspection plan required in item 1.c.
- b. Tide gate maintenance and repair: Tide gates prevent significant volumes of water from entering the conveyance system, thereby freeing up system storage capacity during wet weather periods. Where appropriate, document that tide gate maintenance and repair procedures are adequate.
- c. Adjustment of regulator settings: Adjustment of regulating devices can increase in-system storage of CSO flows and maximize transport to the POTW. Care should be taken to ensure that the regulator adjustment will not result in unacceptable surcharging of the system. Document that regulators have been adjusted to optimum settings. The method by which the community determined the optimum regulator setting (e.g. modeling, trial and error) shall be included in the documentation.
- d. Removal of obstructions to flow: Document that accumulations of debris which may cause flow restrictions are identified, and debris is removed routinely. Documentation shall include a summary of the locations where sediment is removed, the number of times each year the sediment is removed and the total quantity of material removed each year.

3. Review and Modification of the Industrial Pretreatment Program to assure CSO impacts are minimized.

- a. Review legal authority: Review the community's legal authority (i.e. pretreatment program, sewer use ordinance) to regulate non domestic discharges to its collection system. Identify those activities for which the community has or can obtain legal authority to address CSO induced water quality violations. For example, does the community have legal authority to require non domestic dischargers to store wastewater discharges during precipitation events or can the community require non domestic dischargers to implement runoff controls?
- b. Inventory non domestic dischargers: Identify those non domestic discharges that may, through quantity of flow or pollutant concentration or loadings, contribute to CSO induced water quality violations,
- c. Assess the significance of identified dischargers to CSO control issues: Assess whether the identified non domestic sources cause or contribute to CSO induced water quality standards by using monitoring, dilution calculations or other reasonable methods.
- d. Evaluate and propose feasible modifications: Identify, evaluate, and propose site-specific modifications to the pretreatment program which would address the non domestic dischargers identified as significant. Modifications which shall be considered include;
Volume-related controls: Document that detaining wastewater flows (sanitary, industrial, and/or storm water) within the industrial facility until they can be safely discharged to the POTW for treatment was considered and implemented where reasonable.

Pollutant Load-related controls: Document that reduction of concentrations of pollutants that enter the collection system during storm periods was considered and implemented where reasonable. Methods to be considered for reducing pollutant concentrations from storm water runoff controls include structural and non-structural controls such as covering material storage areas, reducing impervious area, detention structures, and good housekeeping.

4. Maximization of flow to the POTW for treatment

It is recognized that most of the actions recommended for maximization of the collection system for storage will also serve to maximize flow to the POTW. In addition to optimizing those controls to maximize flow to the POTW, the following specific controls should be evaluated and implemented where possible;

- a. Use of off-line or unused POTW capacity for storage of wet weather flows.
- b. Use of excess primary treatment for treatment of wet weather flows. If the use of excess primary capacity will result in violations of the community's NPDES permit limits, the community shall get approval of the proposed bypass from the permitting authority prior to implementation.

5. Prohibition of CSO discharges during dry weather

- a. Document that the community's monitoring and inspections are adequate to detect and correct dry weather overflows (DWOs) in a timely manner.
- b. Document that DWOs due to inadequate sewer system capacity have been eliminated. If elimination is scheduled but not yet completed, the documentation shall include the schedule.
- c. Document that DWOs due to clogging of pipes and regulators or due to other maintenance problems have been eliminated to the maximum extent practicable. Increased inspection and maintenance of problem areas must be considered as well as modification or replacement of existing structures.

6. Control of Solid and Floatable Material in CSO Discharges

Document that low cost control measures have been implemented which reduce solids and floatables discharged from CSOs to the maximum extent practicable. Alternatives which shall be considered include;

- a. baffles in regulators or overflow structures.
- b. trash racks in CSO discharge structures.
- c. static screens in CSO discharge structures.
- d. catch basin modifications.
- e. end of pipe nets.
- f. outfall booms (on surface of receiving water)

7. Pollution prevention programs that focus on contaminant reduction activities.

- a. Prevention: through public education or increased awareness. For example, a water conservation outreach effort could result in less dry weather sanitary flow to the POTW and an increase in the volume of wet weather flows that can be treated at the POTW.
- b. Control of disposal: through the use of garbage receptacles, more efficient garbage collection, or again, through public education.
- c. Anti-litter campaigns: Campaigns through public outreach and public service announcements can be employed to educate the public about the effects of littering, overfertilizing, pouring used motor oil down catch basins, etc.
- d. Illegal dumping: Programs such as law enforcement and public education can be used as controls for illegal dumping of litter, tires, and other materials into water bodies or onto the ground. Free disposal of these products at centrally located municipal dump sites can also reduce the occurrence of illegal dumping.
- e. Street cleaning
- f. Hazardous waste collection days: Communities are encouraged to schedule one or two days a year where household hazardous wastes can be brought to a common collection area for collection and environmentally safe disposal.

8. Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts.

The objective of this control element is to ensure that the public receives adequate notification of CSO impacts on pertinent water use areas. Of particular concern are beach and recreational areas that are affected by pollutant discharges in CSOs.

Where applicable, the permittee shall provide users of these types of areas with a reasonable opportunity to inform themselves of the existence of potential health risks associated with the use of the water body (bodies). The minimum control level, found in Section C.2.f. of the permit is posting of CSO discharge points.

9. Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.

As stated in the permit, in Section C.2.f. the minimum requirement is quantification and recording at the outfall. If possible, the permittee shall initiate monitoring, measuring and/or inspection activities above and beyond the minimum control levels specified in the permit. The purpose of these additional monitoring and/or inspection events is to better characterize quality of the CSOs and their impacts on all receiving waters. Examples of such events include CSO monitoring or receiving water monitoring for pollutants of particular concern.